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PRESIDENT'S LETTER

Baltimore Conference a Great Success

Plan to attend the 2014 conference in Tampa

Maling Ebrahimpour, University of South Florida St. Petersburg

It has been a very interesting time here at DSI. We've experienced sad losses of dear members and our executive director. Despite these setbacks, we have moved forward and made major progress in restructuring and reorganizing DSI. One of the 2013 highlights of DSI was the successful conference in Baltimore. Thanks to Funda Sahin and her team of dedicated volunteers for pulling off a fabulous conference.

DECISION LINE

DECISION LINE is published five times a year by the Decision Sciences Institute to provide a medium of communication and a forum for expression by its members, and to provide for dialogue among academic and practitioner members in the discipline. For more information about the Institute, please call 404-413-7710.

News Items: Send your news items and announcements to the editor at the address below.

Advertising: For information on agency commissions, annual contract discounts, and camera-ready copy, contact the managing editor. Marketplace classifieds (job placement listings) are $60 per 50 words.

Membership Information/Change of Address: Contact the Decision Sciences Institute, J. Mack Robinson College of Business, Georgia State University, Atlanta, GA 30303, 404-413-7710, fax: 404-413-7714, dsi@gsu.edu.

Website: *Decision Line* feature articles and more information on the Decision Sciences Institute can be found on the DSI website at www.decisionsciences.org.

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DEADLINES: March 2014 issue .... February 10

                May 2014 issue .... April 10

Vision Statement

The Decision Sciences Institute is dedicated to excellence in fostering and disseminating knowledge pertinent to decision making.

Mission Statement

The Decision Sciences Institute advances the science and practice of decision making. We are an international professional association with an inclusive and cross-disciplinary philosophy. We are guided by the core values of high quality, responsiveness and professional development.

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FROM THE EDITOR

■ **MALING EBRAHIMPOUR, EDITOR,** University of South Florida St. Petersburg

To those who attended the 2013 DSI Annual Meeting, I am sure you enjoyed the experience and appreciate the hard work that Funda Sahin and her team put together to ensure a successful program. For those who were not able to attend the conference, I encourage you to attend the 2014 DSI Annual Meeting that is going to be held in Tampa, Florida (November 22-25, 2014).

This issue of *Decision Line* ist chockfull of news on several fronts. Funda Sahin provides the wrap up of the 2013 conference along with a couple of other articles spotlighting the Doctoral Dissertation Award and Classroom Technology Sandbox. Please read the 2014 Program Chair's message where Johnny Rungtusanatham details his plan for building an exciting program for the Tampa meeeting.

In the doctoral student feature column, Varun Grover and Ramesh Sharda provide a guide for how to be a good dissertation advisor. Of course, you may not agree with all the points they make, but their points provide a great guideline for lesser experienced dissertation advisors as well as those who are more experienced. A couple of takeaways from the article is that a good advisor doesn't implement his or her own research agenda, and a good advisor encourages communication. You'll find many more stimulating ideas in the article.

The classroom feature focuses on teaching big data. A team of writers discuss the complexity of big data, what it is,

the need for teaching it, and the perceived demand for graduates who understand big data and have the ability to analyze them. In this in-depth article, authors Sigman, Pongsajapan, Selvanadin, Garr, Bolling, and Marsh point out schools that currently offer majors in big data. They provide us with a list of lessons gleaned from their teaching experiences and conclude with a few recommendations for those who might be interested to delve into the big data area. I believe you'll find this to be an enjoyable read.

In the Ecommerce feature, Germonpez, Kendall, Kendall, and Young entitle their article "Born Free: How the Origins and Advancement of Open-Source Software through Sharing Will Upload the Values of Free Software." The authors discuss the evolution of free software and its continuum. They argue that free software is on a continuum of "free," "free with add-ons," and "not free," describing each step in the continuum. A quote form Nelson Mandela brings their discussion to a nice closure: "For to be free is not merely to cast off one's chains, but to live in a way that respects and enhances the freedom of others."

I would be remiss if I did not talk about a long-time contributor and a close friend of DSI, Hal Jacobs, who is ending his journey with DSI and moving on to pursue other professional and creative endeavors—one of DSI's unsung heroes.

Maling Ebrahimpour
is dean and professor of management at the College of Business at the University of South Florida Saint Petersburg. He is an active researcher and has authored or co-authored over 100 articles that have been published in scientific journals and proceedings. Most of his work focuses on various issues of quality in both service and manufacturing companies. He received his PhD in business administration from the University of Nebraska-Lincoln and has served on the editorial review board of several journals, including Journal of Quality Management, Journal of Operations Management, *and* International Journal of Production Research.

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Hal Jacobs at his son's 2013 wedding celebration: (from left) Henry Jacobs and friend, Vi Jacobs-Nhan, Daniel Jacobs-Nhan, Hal Jacobs and Alicia Jacobs

DSI ELECTION SPECIAL FEATURE

The two candidates for the position of DSI president-elect—Manoj Malhotra of the University of South Carolina and Morgan Swink of Texas Christian University— provide their vision statements for the 2014 election of officers.

Manoj Malhotra

I have been fortunate to have received much help and personal growth in my career from the Decision Sciences Institute (DSI) because it has been my professional home ever since my doctoral student days at the Ohio State University in the mid- to late-1980s. I was also honored as a Fellow of the Institute in 2007, a recognition that I treasure among some of the best ones I have received. In turn, I have served the Institute in several different capacities such as 2005 program chair for the annual meeting in San Francisco; at-large vice-president of the DSI board; chair and member of several standing committees; annual meetings' participant as a presenter, session chair, and track chair; and as a senior editor of the *Decision Sciences Journal* for the past several years.

I believe that I have the requisite vision, creative thinking, energy, motivation, leadership skills, and a proven track record to make significant institutional contributions. If I am elected president of DSI, the major areas that I would like to focus on for creating institutional growth and excellence are listed below.

The Annual Meeting

One of the major appeals of the Decision Sciences Institute is that it annually hosts an international conference that is open to one and all. As one of the most inclusive professional societies in the disciplines it encompasses, it welcomes researchers and teachers warmly, near and far, to facilitate exchanges of ideas in knowledge generation, knowledge codification, and knowledge delivery. I would seek to invest additional resources in order to continue to re-invigorate the conference and make it even more fun and more meaningful for its attendees. The Tampa meeting in 2014 continues and expands the innovative features that began in Baltimore in 2013, and upon which we can further build in subsequent years. The additional resources for the annual meeting could potentially be used to increase our international attendance, improve and upgrade the value of the meeting and its social functions, and bring a wider array of practicing managers and academic institutions into the fold.

Portfolio of Publications

We have two major journals that capture the essence of the scholarly and pedagogical activities of the Institute— namely, the *Decision Sciences Journal* (*DSJ*) and *Decision Sciences Journal of Innovative Education* (*DSJIE*). These journals are doing well and serving their respective constituencies admirably given their different missions. We need to continue to strongly support them. At the same time, I would like to initiate a discussion on meeting the publishing aspirations of its members that are not being served by these two journals. Not everyone can meet the research rigor demanded by *DSJ* or be working in areas aligned with its editorial philosophies, or be engaged in pedagogy-driven research demanded by *DSJIE*. Is there a room for our society to independently sponsor a new journal that may perhaps be focused on applied research, or in-depth case studies, or tutorials that make us better in research and teaching? Perhaps a new journal could cover a combination of all these focus areas? Would it be worthwhile for us to create closer affiliation with other journals in related disciplines of Operations Management, Management of Information Systems, and Supply Chain Management that may not otherwise have a professional home? I do not know the answers to all these questions, but they are worth exploring further with DSI's elected and appointed leaders. I am not advocating sacrificing quality of DSIt journals, but instead expanding the base of publication opportunities to encompass a broader set of missions such that an opportunity is created for those members of our society who are currently neither publishing in *DSJ* nor *DSJIE*.

Practitioner Outreach

The art of decision making takes place in the context of decision makers with whom we should probably interact more than we normally do in the course of our academic lives. Most academic organizations have struggled with this aspect of their functioning. I have personally found my interactions with business executives to be most rewarding. So if we can integrate practitioners into our professional activities, it would give DSI more relevance and provide a competitive edge over other societies. These interactions can be through enhanced participation in annual meetings and through providing a forum for practitioner-related work to be showcased in the Institute's publications, among other initiatives. Affiliating either formally or informally with other professional organizations such as APICS, ASQ, AIS, and CSCMP to mention a few, may go a long way in enhancing the practitioner footprint of DSI and thus create new avenues for growth and opportunity.

This will be the first election that will be taking place since Carol Latta suddenly passed away last spring. She was a personal friend who supported me strongly in various roles and positions I held for DSI over the course of years. As the long-standing executive director of the Institute, she, along with generations of outstanding scholars and leaders, was an integral part of DSI and responsible for so many great outcomes for members of our society. While her passing has cre-

Morgan Swink

My first experience with DSI was in 1990, at the national conference in San Diego. As a second-year doctoral student, I was more than a little curious about what it would be like to participate in such a large event, to present my work in front of senior professors (along with a few peers), and to see the faces of "famous" people whose papers I had read. What a great time I had! I'll confess that I was pretty intimidated at first. But I quickly got caught up in the excitement of meeting new people, and I came away solidly impressed by the spirit and the energy of the organization.

Many of us have similar fond memories of experiences with DSI, both early on and continuing through our careers. At the last few conferences, I've made a point of talking to some of the venerable "old timers" to get their perspectives on what makes and has made DSI such a great institution. Pretty consistently, they have referred to several core values that have defined the organization, including a welcoming and inclusive atmosphere, strong engagement and involvement of the members, a pursuit of excellence in the design and delivery of programs, events, and services, and fun!

As I contemplate the possibility of serving you as a future DSI president, I first believe that it is paramount that we recognize and strengthen our commitment to these core values. We are very much a "social" organization, and we should continue to acknowledge the importance of creating opportunities for networking, professional development, and interaction, along with our core commitment to the creation and dissemination of new knowledge relating to the decision sciences. Second, I believe that it will be important for us as an Institute to embrace and capitalize upon the many opportunities for growth that are currently presented

to us. Dynamics in the professional landscape, in technologies, and in the demographics of our membership might seem a bit unsettling to those of us who have been involved with DSI for many years. I believe, however, that we should be excited by the opportunities that can be found in these areas of change. In particular, I see four key areas of opportunity for the DSI community emerging over the next few years.

Opportunity #1: Integration

As an Institute, how should we view ourselves, and what do we stand for? With the growth of the functionally focused societies (e.g., POMS, AIS), these have become important questions. As I stated above, I think we have strong commitments to community and professional development, but we could probably use some better definition regarding our place and purpose in the academic world. With possibly a few exceptions, there aren't many "decision sciences" departments in business schools. From the beginning, DSI has been cross-functional and multidisciplinary in character. We should preserve this character, but we need to seek better ways of communicating integrating themes that give us focus (e.g., analytics, decision technologies, decision making in planning contexts, behavioral aspects of decision making). By developing integrative themes and associated messaging, we can further differentiate DSI from other societies, and hopefully, develop compelling reasons for why academics should want to be involved with the Institute.

Opportunity #2: Inclusiveness

In addition, we need to do a better job of reaching out, inviting, and including past and present prospects to be involved. We have seen an overall decline in both membership and conference attendance. While the numbers seem to have stabilized somewhat, there remains a great opportunity to reach out to individuals. We are not so large an organization that it is impos-

sible to make direct individual contacts, building and rebuilding relationships one by one. Last year, I did an analysis of the lists of conference attendees over the last 10 years. It was easy to identify folks who are no longer coming to DSI. Let's talk to them and invite them back! Holding to the core values of inclusiveness and engagement, we need to involve academics from various disciplines, from big schools and small schools, and with varied interests in research, teaching, and/or administration. Such diversity can truly be a source of distinction for DSI.

Opportunity #3: Innovation

Over the past few years, the DSI board has increased resources and loosened constraints for program chairs of the annual national conferences. As a result, we've seen some innovative approaches to content, session formats, and other program features. In the next few years we will see some new locations for conferences (e.g., Tampa this year for the first time!). As is the case with real innovation, some new ideas work out well and some don't. However, I see this openness to innovation as a very positive development for DSI, one that we should continue to encourage. There are many areas of opportunity to explore, including new services for members, new topics to address, and new venues for interaction (e.g., online workshops). We need to be looking for new ways to extend the reach of DSI, and to better match its offerings to the changing interests of its members.

Opportunity #4: Transformation

As most of you know, DSI is in the midst of implementing substantial changes to its governance structure. At the same time that the DSI board is being streamlined and realigned around functional duties, the home office is transitioning personnel and possibly location, and it is implementing new information systems as well. I see these changes as

ated a time of sadness and reflection, it is also important that we collectively move forward to preserve and further enhance the legacy that has been left behind by Carol and all of our past presidents, board members, home office staff, faculty, and students who have served DSI so diligently.

I see the Decision Sciences Institute as being strong and resilient. As it celebrates its 45th year of being in existence, I am optimistic about its future. Maling Ebrahimpour (current president), Marc Schniederjans (president-elect), and Powell Robinson (past president and interim executive director) have done an admirable job of working with board members to shepherd the Institute through a difficult transition. If elected, I hope to leverage my experiences as chairman of the Management Science Department at The University of South Carolina for nearly 14 years now and as the founding director of the industry-supported Center for Global Supply Chain and Process Management at the Moore School of Business, to build upon the foundations laid by my predecessors and serve the many talented individuals who call DSI their home. ∎

an opportunity to move DSI toward a truly "Glocal" organization, where we preserve and leverage the strength of the regional organizations, while also acting as a more unified, global institute. The regional structure has long been a strength that distinguishes DSI from other academic societies. In my opinion, we can improve the ways in which the central office serves the regions by identifying synergies, providing resources, and offering common processes, while preserving and even enhancing the flexibility of the regions to do innovative things that best meet the specific needs of their members. At the same time, we should encourage and create advantages for membership and participation in the global Institute, regardless of whether that involves physical attendance at a central conference. In particular, there are great opportunities in the emerging regions of our world. Academics in developing countries are looking for colleagues in more well-established areas to come alongside them. The chance to aid in their professional development represents a great growth opportunity for DSI.

These are exciting times for DSI. Like many of you, I feel a strong debt of gratitude to the Institute, and I have strong hope for its future. I have had the privilege of serving DSI in a number of capacities over the years. As an active member and leader, I've gained a great deal from these experiences, both professionally and personally. I look forward to continuing as a contributor to its growth and quality, and I would be honored to have the opportunity to serve as president-elect. My goals would be to build on the considerable strengths of the Institute, capitalize on the transformations currently underway, and actively seek new opportunities for innovation and growth. At the completion of my service in this role, I would gauge our progress using the following questions. Are leaders and members more active and engaged? Are the central and regional organizations growing stronger? Are the members better served? Have new opportunities for growth and innovation been identified and pursued? I look forward to continuing to work with the DSI leadership, and encourage you to join in helping DSI to improve in these ways! ∎

The DSI officer positions are to be filled with the terms beginning April 1, 2014. The officer position and nominees, as indicated on page one, were approved at the January 18, 2014, DSI Board Meeting. The qualification statement of each nominee will be published in the upcoming issue of *Decision Line.*

Additional nominations may be made within 30 days after publication of the slate of candidates submitted. Each additional nomination must be made by petition, signed by at least five percent (5%) of the Members, and submitted to the Secretary (through the Home Office), except in the case of the Vice Presidents for the Regional Divisions, where additional nominations may be made upon petition, signed by at least five percent (5%) of the Regional Division's Members. At the conclusion of this 30-day period (March 8, 2014), election ballots with a biographical sketch of each nominee, will be sent to the DSI membership for electronic voting. ∎

Hal Jacobs is leaving DSI after more than 28 years of service. He started as publications coordinator in the Home Office in 1986, and as managing editor of the *Decision Sciences Journal* and *Decision Line,* as well as coordinating and preparing all DSI publications. Hal also moved DSI onto the web in the late 1990s, becoming webmaster of **decisionsciences.org** and moderator of dsinfo. Those who have worked with Hal over the years know he is always friendly and ready to help. He has been a savior to many a program chair and proceedings coordinator, and also got ink on his hands working with a couple of DSI-related books: *The Dean's Perspective* (Krishna Dhir, editor) and collaborating with Dr. Andy Vazsonyi on his memoirs. We will miss Hal a great deal, and we wish him success in his future endeavors.

As always, if you have an idea that you like to share with the rest of DSI members, please write to me at **bizdean@ usfsp.edu**. ∎

■ **VARUN GROVER, FEATURE EDITOR, Clemson University**

How to Be a Good Dissertation Advisor

by Varun Grover, Clemson University, and Ramesh Sharda, Oklahoma State University

Varun Grover

is the William S. Lee (Duke Energy) Distinguished Professor of Information Systems at Clemson University. He has published extensively in the information systems field, with over 200 publications in major refereed journals. Ten recent articles have ranked him among the top four researchers based on number of publications in the top Information Systems journals, as well as citation impact (h-index). Dr. Grover is senior editor (emeritus) for MIS Quarterly, Journal of the AIS and Database. He is the recipient of numerous awards from USC, Clemson, AIS, DSI, Anbar, PriceWaterhouse, among others, for his research and teaching, and is a Fellow of the Association for Information Systems. For over 20 years, Dr. Grover has been fortunate to be integrally involved with doctoral students in various capacities.

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Ramesh Sharda

is is director of the PhD in Business for Executives Program, the Institute for Research in Information Systems (IRIS), ConocoPhillips Chair and a Regents Professor of Management Science and Information Systems in the Spears School of Business at Oklahoma State University. He has coauthored two textbooks (Business Intelligence and Analytics: Systems for Decision Support and Business Intelligence: A Managerial Perspective on Analytics. His research has been published in major journals in management science and information systems including Management Science, Operations Research, Information Systems Research, Decision Support Systems, Interfaces, INFORMS Journal on Computing, and many others. He is a member of the editorial boards of journals such as the Decision Support Systems, ACM Transactions of MIS, and Information Systems Frontiers.

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In a prior article in *Decision Line* (Vol. 34(1), 2003), Grover and Malhotra discuss how students should manage advisors of different temperaments and styles. While this is important counsel for the student, what about the other side of the coin—the responsibility of the advisor? While we know that advisors vary in their "advising" capability, what distinguishes a good advisor from a bad one?

Through our experience in advising dozens of doctoral students over the years, we have developed some normative guidelines for serving as a good advisor. There is of course a danger in doing this, since PhD experiences are very personal and the dyadic interplay between students and advisors is quite idiosyncratic. If we ask students to evaluate their advisors, the responses might vary greatly based on characteristics of the student and the perceived fit with their advisors. For instance, students who expect detailed advice that can be readily implemented will not be happy with an advisor who challenges them to find their own solutions. Similarly, advisors who see students as implementers of their research agenda will create frustration in students who are mature in research skills and prefer independence. Both types of students might evaluate their advisors poorly. If these students swap advisors, the styles are more compatible and their evaluations might be much higher.

Therefore, the normative guidelines simply reflect the lessons learned from our experiences. While we have encountered many experiences, there could be situations where doctoral programs have different assumptions or students are different, and the guidelines don't work as well. With that caveat, we offer the following 10 basic guidelines for advisors in managing their doctoral students.

A good advisor works with students who match his/her style and skills.

As pointed out above, a mismatch between an advisor's style of work and a doctoral student's skills can spell disaster for both sides. So it is crucial for an advisor to assess a student's working style and seek or accept them only if there is congruence. This can usually be done before the dissertation process starts by the advisor clearly laying out expectations for how the process will unfold and the student indicating agreement or negotiating certain aspects of the process. This concept also extends to a lesser extent to the advisor's research interests and method skills. It could be a suboptimal experience for both sides if the advisor accepted a student who was going to use method 'X' but the advisor did not feel competent or interested in that method and advice is not readily available (e.g., from another member of the committee). We do believe, however, that advisors with experience in advising doctoral students can provide excellent guidance on how to build a good research project on a variety of research topics—as long as the mismatch is not fundamental (e.g., positivist vs. interpretive research or behavioral research vs. design science). Sometimes students want to work with an advisor for pedigree or political reasons, but it

is prudent to make this choice carefully. One of us rejected a student's request to work with him because he did not feel comfortable with the research philosophy and approach being pushed by this student. Although the student was upset initially at the rejection, the end result was much better for everyone.

A good advisor does not implement "his" research agenda.

We suspect that there may be some disagreement on this point in the academic community. However, in our assessment, good advisors do not chart out their own research program and then use doctoral students to implement it by plugging them into different dissertation topics. This model might work for a large-scale funded research program, where the various projects have been charted out. However, for most business school research, finding and developing a topic is a very critical research skill that needs to be nurtured by the advisor. Further, students must be passionate about their topics so they can navigate through the "low points" and frustrations of the research process.

So, good advisors do not use doctoral students to conduct their (the advisor's) research, but adapt to topics that the student wants to do. Of course, there should be a mutual interest in the area or the research question for the student and advisor to work together. In some cases, the advisor may not have the method competence of the student or even the theoretical competence. Good advisors, however, can evaluate a research project and provide direction for its improvement, while being open to learning about a new area.

A good advisor understands scope and quality of a dissertation.

There is something to be said for experience and success. Advisors with considerable research experience and success understand what it takes to create and package research that meets the standards of premier journals. However, research success does not necessarily translate into the ability to provide good advice. Advisors that have successfully guided students who are well placed and doing well have acquired skills that facilitate translation of their research expertise into good guidance for the student. Of course, this requires dedication, an intense interest in the student's development and a willingness to invest time in pedagogical aspects of the relationship. Such advisors are better calibrated regarding the scope and quality of a dissertation, as well as how to work through the committee process. Experienced advisors have also established a process that generally works and helps them accomplish this.

In contrast, faculty colleagues who might be competent in research but have not worked with doctoral students may have overly high expectations and could get frustrated if they feel their important time is not being efficiently utilized due to student developmental investments needed. We have seen substandard dissertations emerge from haphazard processes followed by inexperienced advisors, causing frustration and tension to the student during the Q&A sessions in the proposal defense. We have also seen advisors who cannot calibrate the capabilities of the student and demand too much, don't make adjustments during the process, and get frustrated when the student cannot deliver. We also see that our role on many occasions has been to limit the scope of projects put together by overly ambitious students where we adjust tradeoffs between breadth and depth of the study.

A good advisor recognizes the point of diminishing returns.

Good advisors recognize that any research is going to be imperfect and the research process could be fraught with dead-ends and long feedback cycles. Therefore, recognition of "return on investment" of a student is a judgment that needs to be frequently made. Good advisors might push students to explore new domains (literature) but also recognize when the investment is not yielding commensurate returns. Therefore, steadfast insistence on using a theory or a literature base or a certain kind of framing might be good in principle, but it may not be good for the progress of a doctoral dissertation. We can relate the case of a very dedicated advisor who loved to engage in detailed conceptual discussions with the student. These discussions continued over a six-month period as the student was building a new conceptual model. However, the progress over the six months regarding the actual changes in the model was quite minimal. In this case, the advisor would have better served the student if the discussions (which were interesting) were postponed to a post-dissertation project, and energy focused on doing a reasonable job with the conceptualization so the student could advance. Being sensitive to the progress of the student and making adjustments to facilitate student success is the hallmark of a good advisor.

A good advisor is accessible and encourages communication.

A good advisor should be responsive to the student's needs. It should be very apparent to the advisor through prior interactions with the student or during the early stages of the dissertation, the degree of interaction a particular student requires. Some advisors have a tendency to be "hands off," while others insist on frequent meetings. However, good advisors try to adjust their natural tendencies to accommodate the needs of the student. The danger is that students can demand too much time and come to the advisor for every minor issue they face. Advisors should insist on a good faith effort by the student in trying to resolve the problem—and then indicate their availability and accessibility if the

student is unable to resolve the issue. A student should not feel that they cannot contact their advisor (via e-mail or in person) if they are at an impasse. In meetings, advisors should be good listeners—not jump to giving advice in any predetermined manner without fully understanding the problem faced by the student.

A good advisor gives well-bounded advice.

On one extreme we have seen advisors correct typographical errors on a document when giving student feedback. This level of feedback is useful if a document is in the final stages of preparation, but not the level of feedback that is typically appropriate. On the other extreme, we have seen advisors casually put cryptic words like "What" or a symbol like a "?" on entire paragraphs of a submitted document. While these comments indicate a problem, they provide very little in terms of guidance to the student. Good advisors provide advice that is well bounded. It is not too granular to be trivial and not too abstract to be immaterial. It is bounded in scope so that the student is challenged to find a resolution, but a solution is not given to the student. This type of guidance allows the student to build research skills, but does not send the student on an open-ended chase. By bounding the opportunity set, students get constructive advice but have the discretion in many cases to develop their own resolution. Good advice may consist of phrases such as: "Why don't you look at this literature stream"; or "This paper has used a similar method"; or "Find a paper using a similar method on which you can model your organization—look in this journal." In sum, good advisors give honest feedback, including pointers and directions to help the student find solutions to the issues they are facing. They advise—and do not dictate, coerce, or mandate.

A good advisor provides reasonable turnaround on feedback.

We have witnessed cases where students request feedback from an advisor and it takes months and many reminders by a frustrated student to obtain a response. Smart students when facing such situations "manage" their advisors by working in parallel as they are soliciting advice. However, despite being busy, it is important that advisors make a commitment on giving feedback to students within a reasonable timeframe. That is a fundamental responsibility of the advisor when taking on a student. The timeframe should be understood by the student so they can plan accordingly. For instance, a two-to-three week turnaround on a document where feedback and advice is solicited is not unreasonable.

A good advisor handles political issues.

On some occasions, political issues such as conflict between committee members can surface. Students can get caught between opposing currents and suffer as a consequence. Good advisors can recognize the potential for these conflicts a-priori, and provide advice on the formation of the committee. They can also actively deal with these conflicts through private conversations and persuasion, so that the student is not adversely affected. Most critically, a good advisor must not become a party in such a political situation.

A good advisor should be positive and patient.

Dissertation processes are difficult for all students, more for some than for others. While navigating this journey, the advisor should be a motivating force—encouraging students to do their best and giving them clear indications when they meet or exceed landmarks. This is what can keep students going through difficult times. While honesty is important, the advisor should try to make the distinction between substandard work and substandard effort. In the former case,

strong direction is key, along with a strong dose of patience, as the hardworking student tries to bring up the quality. In the latter case, honesty is key, as the advisor pushes the student to work harder.

A good advisor promotes student's career.

The success of an advisor is partially reflected in how well his students and graduates are doing. So it is important for an advisor to seek opportunities for advancement of their students' careers. This may include nominating them proactively for various local, regional, and national award competitions, for doctoral consortia, and introducing them to one's own professional network and service opportunities. Of course, it also includes taking a proactive role in getting the students placed at a teaching/research institution based on their interests and the level of research productivity they aspire. It is important to recognize this last issue so that the student does not get severely mismatched between the level of school the advisor wants them to join and the school and context where the student will more likely succeed.

In sum, good advisors understand what it takes to complete a quality dissertation, are sensitive to student's return on investment, are accessible when needed, provide well-bounded advice in a timely manner that challenges students, do not use students as mere implementers, are positive and patient while helping students avoid and navigate political issues. As students assess potential advisors, it might be useful for them to use these 10 basic guidelines as evaluative criteria a priori. As advisors, these guidelines can be viewed as something to strive for as they manage their doctoral students. Of course, as we indicated earlier, one shoe does not fit all, and the criteria can be adjusted to accommodate the unique context of the advisor and the student. ■

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Teaching Big Data: Experiences, Lessons Learned, and Future Directions

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What Is Big Data?

There is disagreement about what constitutes the field of Big Data. For the purposes of this paper, Big Data can be defined by these two characteristics: (1) Massive quantities of data, which may consist of flows of real-time data; and (2) various degrees of structure in the data, which may include anything from personal information stored on social networking sites to remote sensor data.

When talking about the field of Big Data, one must also talk about the tools that have arisen to analyze it. These tools include massive, inexpensive server farms and open-source software for both parallel processing on multiple servers and analyzing the data to develop insights. Wordles—word "clouds" in which the size of the word reflects its prevalence—show certain words such as Hadoop, unstructured, structured, SQL, Hive, and H-Base as prevalent in the common usage of the term "Big Data." Although there is no single agreed-upon definition, Gartner's interpretation seems to be widely accepted. It states: "Big data is high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization" (Gartner, 2013).

There is some question as to whether the term "Big Data" will stick. Gartner predicts that the term "Big Data" will become obsolete and subsumed into the term "data" by 2020 (Gartner, 2012). Large amounts of data are becoming easier and less expensive to store. Storage racks, used to hold massive amounts of data, are easier to set up and use today. And by 2020, it is estimated that a petabyte of data will cost only $4 to store (Siegele, 2011). Big Data, regardless of what it is called, is more than just a buzzword and will continue to grow in importance in the world.

Making a Case for Big Data Education

As more businesses, government agencies, non-profit organizations, and academia race to harness the much-publicized power of Big Data analytics, they look for people to fill the jobs that this analysis requires. Recently, Gartner noted in its 2013 Big Data study that 64 percent of organizations surveyed were either investing or planning to invest in Big Data technology (Gartner, 2013). The U.S. Department of Labor made the same sort of forecast, predicting that there will be a growth of 25 percent in data analytics jobs by 2018 (Bertolucci, 2013).

These organizations will need employees and/or contractors to take advantage of Big Data technology. McKinsey has famously predicted that the U.S. will be seriously short of the people needed: "By 2018, the United States alone could face a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts with the know-how to use the analysis of big data to make effective decisions" (McKinsey, 2011).

To find the right employees is not easy. Numerous sources have pointed out the variety of skills needed by data analysts and data scientists. The complete data scientist today has many chal-

lenges. He or she needs to be able to not just understand statistics, data modeling, and analytics but also information technology, computer science and machine learning. And the data scientist must also understand how to get results quickly, understand the data's business or organizational importance, and perhaps most importantly, be able to convey the results clearly to those who can use them for decision making (IBM, 2012).

Further, the need for analytical training is increasingly moving from the realm of back-office analysts to higher levels of management. Leaders increasingly need to be able to understand data and then know how to ask the right questions to get results that will enable them to get useful answers. They need to be versed in data visualization as well, so that they can quickly understand the results that managers bring to them daily. While these abilities may not always require deep technical expertise, they do require an understanding of data and how it can be used to answer questions about business and organizational processes, customers, and metrics.

The Need for Employees Who Understand Big Data: Businesses, Government, Non-Profit Organizations, and Universities

Businesses, with their bottom lines at stake, express the most immediate concerns for training and finding employees to fill Big Data positions. Gartner (2013) recently predicted that "through 2015, 85 percent of Fortune 500 organizations will be unable to exploit big data for competitive advantage." Conceivably, companies could address this gap internally, through training or hiring more employees. However, training can be expensive and take away from other concerns of the business. And the time and resources used to hire more employees can also impact a company's bottom line. Respondents at organizations "currently using or planning to use data analytics, BI or statistical analysis software" agreed that "Big Data expertise is scarce and expensive" (Information Week, 2013). To help address the gap in available talent,

IBM, Microsoft and other technology companies have begun to develop specific and detailed programs for reaching out and supporting academics incorporating Big Data in the classroom (Gardner, 2013; Fischman, 2011).

Government has always been the most prolific collector, generator, and analyzer of big data, and the most data-intensive agencies (e.g., the Bureau of Labor Statistics and the Bureau of the Census) have many computer scientists, data analysts and statisticians on staff, but they will need many more skilled employees in the near future to deal with the geometrically expanding volume of data.

Nonprofits generally have less money to spend than other similar-sized organizations, but they should also take advantage of opportunities Big Data analysis gives for better decision making and learn how to be more effective with the data resources they possess. Big Data analysis will help them with this decision-making process.

Lastly, academia has increasingly realized the significance of the role it can play in the Big Data revolution. Around 60 articles in the last few years of the *Chronicle of Higher Education* contained the phrase "Big Data." On campuses, there is a new focus on "learning analytics"—essentially Big Data techniques applied to learning—to help schools become more effective and efficient via insights produced by data analysis, as they experience increased pressures to keep from raising costs.

How Universities Are Responding to This Need

Where are organizations going to find people with the technical and analytical skills they need? While arguably a little late to the game, academia has recently begun to respond to the need for data science programs at the bachelor and masters levels (Williams, 2013), largely in part due to the widespread interest in Big Data from students in many different schools and disciplines. More universities are rolling out analytics degrees and certificates and developing data science courses (Williams, 2013). Some of these

are taught largely in the classroom (Carnegie Mellon), some are taught almost completely online (Northwestern), and many are hybrids of the two methods.

Where are these programs housed? Data is incomplete and constantly changing, due to the influx of new programs, but of the top 20 programs listed by Doug Henschen (*Information Week*, 2013), 50 percent (10) are housed in a business or management school. Others are found in engineering and computer science departments/schools (6) and statistics/analytics (2) departments. (See Appendix A.)

Many universities are still wrestling with the question of where an analytics program should be housed, but there is general agreement about the need for cross-campus collaboration when considering data analytics. In fact, that issue was one of the primary topics addressed in the recent conference, "Big Data: Educating the Next Generation," held at Georgetown University on April 3, 2013. The event brought together faculty and business people across multiple disciplines and industries to collaborate and encourage discussion about how best to educate students about Big Data (Georgetown University, 2013).

Some schools have solved this issue by creating a separate center. DePaul University, for instance, created a Center for Data Mining and Predictive Analytics, a joint venture of the Department of Marketing and the College of Computer Science and Digital Media). And at Georgetown, the McCourt School of Public Policy recently announced the addition of a Massive Data Institute, which will "train the next generation of leaders to critically analyze, extract and use these large sets of data to better inform public policy" according to President DeGioia (Georgetown University, 2013). This institute will have links to several other departments and centers across campus.

Teaching about Big Data: Bridging the Technical with the Understandable

Business professors face additional challenges as to how to address the skill gap as they attempt to fulfill the imperative

of preparing students to take meaningful jobs in business and other sectors. They are asked by the AACSB (the accreditation organization for business schools) and their own colleges and universities to give both a well-rounded business as well as liberal arts education at the undergraduate level. At the MBA level, students concentrate more exclusively on the business fields, but professors must teach students about a wide variety of business topics (finance, marketing research, operations, information systems, accounting, etc.) in a limited amount of class time.

To incorporate Big Data in the classroom, professors first must decide how to teach it in the context of the definition they have decided on. What should the goals of Big Data education be? The desire is to give our students knowledge that will allow them to understand big data and how to use it. But how deep do we want them to go?

For example, in a business school, how much statistics should be required? Most business schools require statistics, so we can usually assume some statistical knowledge, at least in an upper-level undergraduate or MBA class. But how should we further develop students' statistical skills so that they can become proficient at developing insights from data that will be useful to their employers? Students are eager to learn about those skills and insights that they can immediately apply in their professional careers, and are sometimes less enthusiastic about learning deeper technical skills.

What about data modeling? Introductory level statistics touch on this, but may not delve very deeply into it, nor give students the expertise in forecasting they need. Statistical tools, although important building blocks for working in Big Data analysis some day, have been sometimes been lessened or "watered-down," and statistics professors may struggle to make a case for the role of these courses in the business curriculum. Despite the fact that statistics and/or data science is now, much to the astonishment of career statisticians, increasingly referred to as "sexy" in the literature (*McKinsey Quarterly*, 2009), hard skills can still sometimes be a hard sell (Griffith et al., 2012).

And what of other skills, such as an understanding of information systems and machine learning? Not all schools would include this and certainly, the information systems knowledge needed for Big Data differs from the material covered in an introductory systems analysis class. Yet, to understand Big Data analysis, there is a need for some understanding of the information systems that make the analysis possible. And should Big Data education address even more complicated and technical topics—such as Hadoop programming and machine learning or is this asking too much of undergraduate students?

Finding a Platform to Use

In addition to finding the right balance between business and technical material, choosing a Big Data platform to use can be difficult. As Baru et al. (2013) put it, "New platforms with increasingly more features for managing big datasets are being announced almost on a weekly basis. Yet, there is currently a lack of any means of comparability among such platforms." For this reason, Baru et al. have supported the "Big Data 100 List," which seeks to find ways to benchmark big data platforms. Academics have an even tougher job, for they must find an appropriate platform to use to perform analytics on huge datasets, but it must also be very inexpensive or free, easy to use, and accessible by many students. The importance of minimizing the time that the instructor must allot to helping the students get up and running on the system should be underscored. Professors are too time-constrained with other duties to enable them to spend much time troubleshooting technical issues.

How Can Universities Work with Companies?

To further enhance these analytics programs and curriculum, many universities are working together with data companies to develop Big Data curricula. These companies can help to keep universities informed on the latest techniques by pointing them towards systems and methods that might not have appeared yet in academic literature, and also by sharing training manuals and tutorials that the companies use to train developers or their own employees. This is in the best interest of the companies, for they can gain converts to their particular methods and software, but it can also be in the best interest of the students, who can conceivably use software experience to help gain technical understanding, improve performance in interviews, and lessen the time it takes for them to learn job skills once they are employed.

Companies can also band together to help support Big Data education in academia today. By pooling resources, they can help support foundations and institutes to learn the best ways to efficiently inform people about Big Data analysis. They can also sponsor research that will enable academic institutions to make better decisions as to how to best educate students about Big Data. This type of collaboration will, we hope, become more frequently seen in the years ahead.

In a company-academic partnership, it is imperative that companies work closely with professors. Companies can help professors refine their own technical abilities and can save professors hours of troubleshooting time. Since Big Data skills are not yet widespread among researchers at most campuses, researchers at companies can act as valuable resources and colleagues for professors who are often teaching themselves about Big Data. One caveat is that the academics should always stay in control of the education process itself, to ensure focus on student learning and making sure materials are well suited for an academic setting.

Our Approach

In an effort to enhance the Big Data course offerings at Georgetown University, we decided to introduce a three-day module on Big Data in the fall of 2012 as part of a pre-existing undergraduate database class (OPIM 257) at Georgetown's McDonough School of Business. Plan-

ning for this class began in August 2012, three months before the scheduled class sessions in mid-November. We initially learned the basics of Hadoop and HDFS using self-guided modules at Big Data University (**bigdatauniversity.com**), and IBM's Academic Initiative site (**www-03. ibm.com/ibm/university/academic/pub/ page/academic_initiative**).

We decided to largely work with IBM InfoSphere BigInsights, which involved command-line tools. We set up three instances on the IBM Academic Skills Cloud that included a basic installation of Hadoop. The labs we created had the students connect to one of the instances, start Hadoop and its associated services, run a simple word count MapReduce job on Twitter data we obtained from Info-chimps, and review/interpret the results of the job.

We used the first day of the module to discuss Big Data terminologies and case studies, and also introduce some technical information about MapReduce and other topics. The next two class periods were hands-on sessions where we had students run the aforementioned MapReduce jobs. This seemed in alignment with our goals for the class, which were to introduce students to the concepts of Big Data and to give them hands-on experience using Big Data technologies.

We decided to conduct pre- and post-tests to gauge students' experience prior to entering the Big Data module and to obtain a measure of how our efforts were received. The results of the pre-tests for the undergraduate class show that students began the module having heard of Big Data in the news, but having little idea of what it was. After the module (which took up three class periods), they had a better idea of what it was, how it might be useful and also expressed a desire to learn more. A few of them said they would like to pursue a job in the area.

In summer 2013, we taught an Intensive Learning Experience (ILE) to MBAs for a week. This was a module that counted as a half-semester course (1.5 credits). The class included guest speakers, lectures, discussions, and hands-on exercises, which served to introduce the students to the definitions and language of Big Data. In this session, we also used IBM's Infosphere Big Insights to run through some labs, achieving our goal of giving students hands-on experience with Big Data technologies.

For both of these modules, we relied upon freely available articles and e-books. The e-books used were *Understanding Big Data* (IBM, 2012) and *Harnessing the Power of Big Data* (IBM, 2013).

Lessons Learned

The first takeaway from our experience is that students seeking an education in Big Data will often come from a wide variety of backgrounds and experiences. In our MBA class, for example, we had a student with a Ph.D. in mechanical engineering, someone who had virtually no understanding of databases, and many students whose experience was somewhere in between these two extremes. We used a survey to assess technical knowledge before the class began, but recognized later that we should have reviewed some of the basic technical database principles during the course introduction. This would have helped ensure that students had a solid foundation before getting into the rest of the course material. Students could also have been asked to complete self-guided tutorials ahead of time to help build the foundation. And we learned that if there is a mix of students with varying ability levels, the instructor should consider grouping those with more technical experience with those who have less during group activities to better balance the skill sets.

Second, because we were teaching a business class, we realized that we should have reviewed topics that were more business related as opposed to spending time on more technical principles. There is both a challenge and an opportunity to housing Big Data courses in the business school. The challenge is to find the right balance between teaching about how you actually get hands-on with Big Data, which requires statistical, computer science, and data modeling skills, and teaching about how managers should ask the appropriate questions and be able to understand the answers they receive at a more conceptual level.

At the outset, we felt a responsibility to give students at least some familiarity with the technical aspects of Big Data systems so they would have a better understanding of how to use them. But, based on feedback, we need to revisit the balance that we struck between our desire to give hands-on understanding and an approach geared to the managerial decision-making level, particularly with the MBA-level class. Focusing on the business problems that need to be solved would allow students to think of ways to use Big Data to produce better outcomes. This could help to ensure that students understand the managerial implications and how Big Data can be used as a means to make better decisions. The technology will be constantly evolving, and such an approach would better prepare students to understand the basic principles for using data for decision making.

The third key recommendation, and one that is closely related to the second, is that the professor should focus course material on specific learning objectives related to Big Data. The term can mean many different things to different people, so it is important to narrow the focus for the course and clearly state the learning objectives so students' expectations are properly set. Of course, this is true of any course topic, but it is especially true for Big Data, where there are such a wide variety of applications.

Fourth and last, the development of Big Data curricula should align with the type of careers the students are pursuing. One goal of education is to prepare students (at least to some extent) for the jobs they will take, and jobs in Big Data may be quite diverse. McKinsey did a taxonomy of career paths involving Big Data, in which they note three main categories: deep analytical, big data savvy, and supporting technology. As shown in the table below, deep analytical skills include those math, statistical, and IT skills needed for jobs as database analysts, actuaries, statisticians and the like. Big Data savvy skills are those needed by business managers, analysts, and others who need to understand how to make decisions using Big Data, but from a higher level,

decision-making perspective. Supporting technology skills are needed by those who make Big Data systems work, so results can be produced. These persons include the computer science programmers and staff to help collect, store, and develop systems that others will use to analyze Big Data and use it for decision making. In the same way instructors are well-advised to look at students' experience coming into the classroom; they are also well-advised to consider their future career goals. This will help professors better focus the material for them and help start them down an appropriate career path related to Big Data.

Recommendations for the Future

In this last section, we want to address the way we would ideally like to be able to teach a class on Big Data.

To begin with, we would like the implementation of a system to show students how to work with Big Data to be simple and clear. Big Data software is rapidly developing, in terms of more intuitive graphic user interfaces and ease of implementation, but it is still lacking in some areas. Small companies keep emerging to help satisfy the demand for new, more facile analytic tools. Some of these are acquired quickly by larger data companies trying to update the ways analysts can work with data. However, the process of getting a class to experience hands-on labs with Big Data is still nowhere near as easy to implement as it should be. Ideally, the process should involve a simple login procedure, a well-structured process to connect to streaming data or large datasets, an intuitive graphic user interface, and clear tutorials and instructions. This process should be straightforward and able to be completed in a reasonable amount of time by a class of students, with little technical support needed from the professor.

For those students who are more technically advanced, they should have opportunities to go further with the system on their own, either following online tutorials or exploring on their own. These more advanced capabilities should be clearly explained, with examples and step-by-step instructions.

Companies that produce tutorials tend to err on the side of producing point-and-click labs versus labs with robust explanations for why steps are being taken and how those steps fit the big picture of data analysis. Ideally, if academics are going to make use of these labs, they need to contain more explanations about the purpose or point of each step taken. Students need to have a deeper understanding for how to apply these tools so that when they are better understood, students can use them more intelligently and in more varying and complex ways.

The field of Big Data is growing and changing rapidly. Academics need to be prepared to incorporate these changes into their classes, so that students are better prepared for their future careers. Thus coursework needs to be designed to allow for flexibility as tools for Big Data evolve. Additionally, coursework should provide students with frameworks that will allow for problem solving using Big Data, regardless of information systems architecture. This will help them be better prepared for a variety of positions in business, government or nonprofits.

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Deep Analytical	Big Data Savvy	Supporting Technology
Database administrators and programmers	Business and functional managers	Computer and information scientists
Actuaries	Budget, credit, and financial analysts	Computer programmers
Mathematicians	Engineers	Computer software engineers for applications
Operations research engineers	Life scientists	Computer software engineers for systems software
Epidemiologists	Market research analysts	Computer systems analysts
Economists	Survey researchers	Database administrators
	Industrial organizational psychologists	

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Appendix A. Top Programs for Big Data Analytics Master's Degrees.

College or University	Degree	School	Length of Degree
Bentley	MS in Marketing Analytics	School of Business	1 to 1.5 years
Carnegie Mellon University	Masters of Information Systems Management, Concentrations in Business Intelligence and Analytics	Heinz College (Public Policy & Information Systems)	1 year Masters of Information Systems Mgt, 16 mos. for concentration in BI & Analytics
Columbia University	MS in Computer Science, Concentration in Machine Learning	The Fu Foundation School of Engineering and Applied Science	2 years
DePaul University	MS in Predictive Analytics	College of Computing and Digital Media	2 years
Drexel University	MS in Business Analytics	College of Computing and Digital Media	2 years
Harvard University	MS in Computational Science and Engineering	School of Engineering and Applied Sciences	1 year
Louisiana State Univ.	MS in Analytics	College of Business	12 months
MIT	MBA	Sloan School of Mgt.	2 years
New York University	MBA in Bus. Analytics	Stern School of Business	2 years
NC State University	MBA in Analytics	Institute for Advanced Analytics	10 mos.
Northwestern University	MS in Analytics	McCormick School of Engineering and Applied Science	15 mos.
Rutgers University	Masters of Business and MS in Operations Research	Professional Science Masters Program	1.5 to 2 years
Stanford University	MS in Computer Science, Information Management and Analytics	School of Engineering, Computer Science Dept.	2 years
University of California	Masters of Engineering, Interdisciplinary Program	College of Engineering, Electrical Engineering and Computer Sciences	10 mos.
University of Cincinnati	MS in Business Analytics	Lindner School of Bus.	9 mos. - 1 year
Univ. of Connecticut	MS in Business Analytics and Project Management	School of Business	1 year
University of Illinois	MS in Statistics, Analytics	Graduate College	3 semesters
University of Ottawa	Masters in Electonic Business Technologies	Telfer School of Mgt., Information Technology & Engineering, Faculty of Law	1 year MA in EBT, 16 mos MS in EBT
University of Tennessee	MS in Business Analytics	College of Business Admin, Statistics	2 years
York University, Toronto	MS in Business Analytics	Schulich School of Business	1 year

Source: www.informationweek.com/big-data/slideshows/big-data-analytics/big-data-analytics-masters-degrees-20/240145673?pgno=1

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Julie E. Kendall

is a professor of management in the School of Business-Camden, Rutgers University. She is a fellow of the Decision Sciences Institute, a past chair of IFIP Working Group 8.2, vice president for the Association for Information Systems, and associate editor for CAIS. *She is a co-author of the text* Systems Analysis and Design, *now in its 9th edition.*

Kenneth E. Kendall

is a Distinguished Professor of Management in the School of Business-Camden, Rutgers University. He is one of the founders of the International Conference on Information Systems (ICIS) and a Fellow of the Decision Sciences Institute. He is a past president of DSI and was awarded the Silver Core from IFIP. He was named Educator of the Year in IS for 2010 by the Association for Information Technology Professionals.

Brett Young

is an assistant professor of MIS at Georgia Gwinnett College and is a researcher on the NSF-funded "Organizational Participation in Open Communities Project." His research reflects his interests in stakeholder perceptions of technology and user contributions within online communities. He is co-chair for the 2013 International Conference on Engaged Management Scholarship and received his PhD in 2011 in computer information systems from Georgia State University.

It has been over 10 years since Decision Line *published an article on open-source software. In that 2003 article, Sameer Verma claimed that open-source development is related more closely to rapid prototyping than the traditional systems development life cycle approach. He described customized distribution, quality assurance, software licensing, business models, and communities such as SourceForge.net, but most consumers of software applications are still confused about the differences between free and open-source software. Furthermore, open-source software development has changed dramatically with the increasing involvement of for-profit corporations in open-source communities. This article reexamines free software based on Apple's recent announcement and concludes by noting that for-profit corporations participating also embrace the notion of "free."*

—*Kenneth E. Kendall, Rutgers University, Feature Editor*

Born Free: How the Origins and Advancement of Open-Source Software through Sharing Will Uphold the Values of Free Software

by Matt Germonprez, University of Nebraska at Omaha; Julie E. Kendall and Kenneth E. Kendall, Rutgers University; Brett Young, Georgia Gwinnett College

The recent announcement by Apple to provide a free upgrade to its new operating system OS X Mavericks and provide free productivity suite software has touched off a new debate about free software.

According to Rogowsky (2013), "Free software isn't new, but for Apple, it represents a sea change in how it prices such products. And while the strategy has some defensive elements, it's nothing short of a declaration of war against Microsoft."

So let's look at what has happened. In just 24 hours, the OS X Mavericks operating system was installed on 5.5 percent of all Macs (Haselton, 2013). It took 8 months for Windows 8.0 to achieve a penetration of 5 percent (Bostic, 2013). We all know that it's not just the $100 or so charge to upgrade that's stopping people from adopting Windows 8 software, but there are many advocates of free software who might use this in a misguided way to further their objectives. The purpose of this paper, however, is not to bash a developer or encourage free software advocates to gain ground. It is to review the notion of free software and try to determine what it means in today's world.

We also want to point out that there is a difference between what users commonly think of as free and what many IT professionals define as free.

The Evolution of Free Software

Life was simpler a couple of decades ago. We had freeware, shareware, and demos, and the user felt that all of these options, including open-source software, was more or less the same. It wasn't really, but that didn't matter to many. Users were geeks, and it may not have occurred to them what would happen down the road when the software required maintenance or customization. (For a different take on free software, see Kelty, 2008.)

We live in a different world now—one of viruses and malware. We demand quality and hold corporations who develop software responsible for malfunctions. When contracted software is involved, the exchange of money assumes that the software works. In 2011, New York City Mayor Michael Bloomberg demanded that SAIC, a technology integrator, pay back the city $600 million dollars because it failed to deliver a working payroll system (Kanaracus, 2011). When free software is involved, who pays when something goes wrong?

Also, the incentives for writing free software have changed as well. In "The Trade-offs of Unpaid Free Software Labor," free software activist Bradley Kuhn (2013) discusses volunteerism but notes that one of the incentives, that of "volunteering for a Free Software codebase so you can later get paid to work on it, has recently morphed into volunteer to work on Free Software so you can get a job working on some proprietary software." To someone in the free software movement this distinction means that there is corruption in the system.

Three Forms of Free Software

So free software had to evolve. Whereas once free software and open-source software were pretty much the same, now there is a great divide between various types of "free software."

We see the world today as having the following three forms of "free software": (1) free software as part of a social movement; (2) free, but limited software; and (3) open-source software.

Free software as part of a social movement

We realize that free software, in its most radical form, is part of a social movement. It is code that is developed mainly by individuals who feel that the protection of ownership of software is morally wrong.

It is, in effect, a social movement and at its extreme a movement similar to or even associated with hacktivism. In all cases it is a movement that tends to despise the corporate world and all

of its bullying. Advocates of radical free software often talk about copyleft, rather than copyright, and the copyleft movement goes beyond coding to include artists and authors (Copyleft). Interestingly, for many organizations Copyleft is an accepted part of business as well as a being part of a social movement.

Free, but limited, software

Apple's software may indeed be free of charge, but it only runs on Apple hardware. It has no value outside of propriety hardware, and the user doesn't have the freedom to modify it or redistribute it. It is software that comes at a zero cost, but in practice the cost of the software can be included in the price of the hardware.

Open-source software

Much of open-source software is free to use, but only if the user agrees to the terms of the license(s) involved. With open-source software, source code is made available and modifications are allowed. Open-source software is also redistributable.

However, there are many cases of open-source software that cost money. Open source just means that the code must be made available per the license and, in many cases, can be modified so long as certain license and creator in-

formation is maintained in the code. So, when open-source software is discussed, free stands for freedom or liberation, not for the cost.

The term open-source software is also defined as a development method (Verma, 2003) and distribution must conform to a list of criteria (Open Source Initiative).

Free vs. Not Free

While free software does exist, much of the software we use today is not free. In addition, there exists an in-between area where the original software or app is free, but additional products or services need to be purchased to fully utilize the potential of the application. Figure 1 depicts the three forms of software.

The middle ground is either welcomed by advocates or scorned by critics. Advocates cheerfully agree to pay a little bit extra to get rid of advertising or add a feature that simplifies their life (also see Dredge, 2013). Critics ague that users are misled, even deceived, by downloaded free software only to find out its functions are disabled or limited by time (also see Sipe, 2013).

So we would say that open-source software that is released under a license that requires it be used as part of a set of applications under a propriety license is not free software.

Figure 1. Forms of free software on a continuum from free to not free.

Free	Free with add-ons	Not free
Free and open-source software (e.g. software available from sourceforge.org	Free bundled with paid services (e.g. redhat)	Commercial open-source software (e.g. MySQL Enterprise from Oracle)
Free, but limited, software (e.g. OS X Mavericks, Pages, Keynote by Apple)	Premium, but limited, extensions and add-ons (e.g. xmarks bookmark sync)	Proprietary software, also limited (e.g. Microsoft Windows, Microsoft Office Suite)
Freeware (e.g. software that costs nothing including some public domain software)	Freemium apps (e.g. various games for smartphones)	Proprietary software (e.g. commercial software that can be used across platforms)

GNU.org admits there is some confusion about free software. Its website states, "The free software definition presents the criteria for whether a particular software program qualifies as free software. From time to time we revise this definition, to clarify it or to resolve questions about subtle issues. See the History section below for a list of changes that affect the definition of free software" (GNU.org).

"Thus, 'free software' is a matter of liberty, not price," according to GMU.org. "To understand the concept, you should think of 'free' as in 'free speech,' not as in 'free beer' (GMU.org).

Free and Open-source Software Development in Today's World

The idea of what free and open-source software is, and the manner in which it has evolved over time is striking. Open source is no longer the sole province of open-source communities. Developers employed by large corporations do not eschew open community participation, nor do the corporations they work for deem it to be too risky to incorporate open-source code into products they manufacture and distribute.

It may be surprising to some of you to find out that developers employed by for-profit corporations produce an increasingly large body of open-source software. These companies realize that the benefits of developing open-source software are substantial. The employees who participate in the development participate in open-source communities and work virtually, perhaps meeting only face-to-face around events such as LinuxCon.

Open-source values

We can now talk about developing open source as "shared design," a concept our research team has developed through working with numerous corporations who are participating with the Linux open-source community. We describe the workings of shared design as "enacted across an environment of collective engagement, beyond the reach of a single

individual, community, or corporation, developing principles that explain shared design and articulate participation at the interface between corporate-based and community-based views of design" (Germonprez et al., 2013a).

Open-source collaboration

While such collaboration has become an accepted business approach to designing, developing, and deploying software packages, such participation is carefully tailored to the situation at hand rather than taking a "one size fits all" approach. Indeed, shared design is not suitable for all open-source design situations, nor is it even appropriate for all corporations. But companies can use their participation in the open-source community to their advantage, leveraging it to increase their capacity to design and develop new products. Sometimes corporate participation with open-source software helps speed up the development cycle and subsequent time to market in competitive fields (Germonprez et al, 2012, p. 90).

By engaging with the open-source community, corporations can improve their capacity for design and do so rapidly. On the other side, open-source communities can enhance their ability to enter markets, expand the distribution of their code, and eventually grow their market share. So, we can turn a proclivity toward competition to one of collaboration (and competition) in certain situations where it makes business sense. Everyone who participates can win.

Sharing the Future

In this article, we attempted to reexamine the notion of free software and position it in the modern world in which our belief system supports and encourages sharing (for additional thoughts on the sharing culture, see Kendall, 2013). We see that the word *free* means different things to buyers and sellers of software, and that there are many shades of free.

In revealing three different types of free software, we note that only one—open-source software—practices sharing of ideas in open-source communities of

developers. These collaborators often turn out to be employees of for-profit corporations. We also realize that free software in an open-source software realm does not mean that it costs nothing. It does represent freedom, however.

Nelson Mandela once said, "For to be free is not merely to cast off one's chains, but to live in a way that respects and enhances the freedom of others." This is true for software development as well. Free software is only free if it respects the values of all those who contribute, use, distribute, and share it. It is not free if it comes with political biases or chains users to a particular platform.

With that in mind, we believe that we have a unique opportunity to participate in something special—open-source software development through shared design.

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Wrap-up of 7th ISDSI & 5th OSCM International Conference held in New Delhi, India

The 7th ISDSI & 5th OSCM International Conference was organized at IMI, New Delhi, during December 28-30, 2013, jointly with the support from the Indian Subcontinent Region of the Decision Sciences Institute (ISDSI), Operations and Supply Chain Management Forum (OSCM), Indonesia and Department of Business Administration, and the University of Alabama in Huntsville.

The conference proved to be a thought-provoking academic gathering with over 150 paper presentations by academicians, scholars, and industry professionals. The conference showcased scholars from 158 top-notch universities and business schools, representing 19 countries from across the globe. This event was the biggest international conference held in India in the field of management and one of the largest among all of the nine DSI regions. We received 240 papers from 19 countries and after double blind peer-review, we selected 68 international papers and 110 Indian papers for presentation.

The conference was inaugurated by Dr. Arup Roy Chaudhury, chairman and managing director of the National Thermal Power Corporation (NTPC), India. This three-day event comprised 30 technical sessions (nine doctoral sessions) covering different areas of management like Logistics and Supply Chain, algorithms, heuristics, meta-heuristics for Optimization, Innovation in Operations Management, Supply Chain Practices and Performance, Strategy and Innovation, Knowledge, Entrepreneurship, Change Management, Issues in Banks and Financial Markets and Governance, and Performance & Shareholders. With growing interest in sustainability and considering the central role of manufacturing and supply chain in the industry, the showcase track of the conference was "Green Manufacturing and Sustainable Supply Chain." The technical session had participants from the US, UK, Thailand, New Zealand, Australia and India.

In order to encourage young scholars, this conference featured nine special technical tracks solely for doctoral students from different areas of management such as Operations Management, Human Resources Management, Organization Behaviour, and Finance. Best papers from different areas were solicited with awards and certificates of appreciation from a total of 72 papers presented.

In the conference various distinguished professors and guests participated, including Prof. Sachi Sakthivel, Bowling Green State University, USA; Gurpreet Dhillon, Virginia Commonwealth University, USA; Suresh P. Sethi, Director of Center for Intelligent Supply Networks (CforiSN), University of Texas at Dallas, USA; Anu Wadhwa, EPFL, Lausanne, Switzerland; Sushil K. Gupta, Florida International University, USA; Nyoman Pujawan, Professor of Supply Chain Engineering, Department of Industrial Engineering, Sepuluh Nopember Institute of Technology, ITS; Sukolilo Surabaya, Indonesia.

For the first time, a "Distinguished Services Award" was instituted and was conferred upon Jatinder N. D. Gupta (Jeet Gupta), Associate Dean for Graduate and Sponsored Programs, Director of Integrated Enterprise Lab, The University of Alabama in Huntsville; and Professor Ram Narasimhan, John H. McConnell Endowed Professor & University Distinguished Professor, Michigan State University, for their outstanding contributions. ∎

From **ECOMMERCE**, previous page

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5th Annual Conference of the European Decision Sciences Institute in Denmark, July 2, 2104

JAN STENTOFT ARLBJØRN, EDSI President, University of Southern Denmark

ANTONY PAULRAJ, co-organizer of EDSI 2014, University of Southern Denmark

We are pleased to announce that the 5th Annual Conference of the European Decision Sciences Institute will be held June 29 - July 2, 2014, in Kolding, Denmark. The conference will be hosted by the Department of Entrepreneurship and Relationship Management, University of Southern Denmark (**www.sdu.dk**). University of Southern Denmark has campuses in six cities with more than 20,000 students and approximately 2,000 employees. A series of research activities take place on an individual basis, often in cooperation with national and international research groups. Often internal research groups, with varying composition over time, are established within the department. There is a long-standing tradition for research to take place in close interaction with companies in the area.

Conference venue and theme

The conference will take place at Hotel Koldingfjord (**www.koldingfjord.dk**) where the conference participants can also stay. The theme for the conference is *Exploring Innovations in Global Supply Chain Networks*. At the same time, papers are invited within a wide range of topics that is provided at the conferences website: **www.edsi2014.dk**. Deadline for paper submission is **March 15, 2014**.

Selected papers will be considered for a focused issue of *Decision Sciences Journal* about "Exploring Innovations in Global Supply Chain Networks" edited by Jan Stentoft Arlbjørn and Antony Paulraj, University of Southern Denmark and Ram Narasimhan, Michigan State University.

Spend some time before or after the conference in beautiful Copenhagen, the capital of Denmark. Experience Copenhagen and see some of the highlights such as The Little Mermaid, Christianshavn, Tivoli Gardens, Christiansborg Palace, Copenhagen Opera House, and the famous Freetown, Christiania. A must-see is the colourful harbor district of Nyhavn. And when you are there, do not forget to visit Amalienborg palace, residence of the Danish Royal Family. From Copenhagen, you can easily get to the rest of Scandinavia and experience the beautiful nature and historical capitals of Norway and Sweden.

Conference program

On June 28th we begin with a PhD workshop at the University Campus in Kolding. June 29th includes an optional trip to LEGOLAND®, and then a welcome reception in the evening. June 30th and July 1st are the two main conference days with keynote speeches and paper presentations.

We are honored to be able to arrange keynote speeches by Mr. Henrik Stiesdal, Chief Technology Officer, Siemens Wind Power, and Mr. Mads Nipper, Chief Marketing Officer, LEGO Group. The conference dinner in the evening on June 30th will take place at Koldinghus Castle (**www.koldinghus.dk**). On July 2nd, we have also organized an optional trip to Siemens Wind Power.

If you have any questions, please do not hesitate to contact Jan Stentoft Arlbjørn (**jar@sam.sdu.dk**) or Antony Paulraj (ap@sam.sdu.dk). ∎

The closest airport is Billund Airport, situated 45 kilometers from Kolding. Buses for Kolding leave the airport approx. once an hour (see timetable at the airport's website). It is also possible to arrive at Copenhagen Airport and then go by train to Kolding (takes approx. 3 hours). Take a taxi from the rail station to Hotel Kolding Fjord.

Special Issue on "Rethinking Undergraduate Business Education: In the Classroom and Beyond"

**Initial Deadline:
June 1, 2014**

Guest Editors:

Lynn Perry Wooten
Ross School of Business
University of Michigan

Joy Oguntebi Olabisi
Saunders College of Business
Rochester Institute of Technology

Motivation and Background

Business is the most popular undergraduate field of study in universities in the United States, with 21% of graduates receiving degrees in its various disciplines. In contrast, in 1970 only 14% of undergraduates received degrees in business. Despite this growth, critics contend that undergraduate business education is anti intellectual, provides a 'skate through' experience, and is too focused on career preparation. Research suggests that compared to students in other fields of study, undergraduate business students spend less time preparing for classes, and after two years of college have the weakest gains in writing and reasoning skills. Some educators also argue that that undergraduate business education does not have a distinct identity from MBA education. As a result, it has failed to acknowledge that students need a holistic academic education in addition to professional preparation.

In light of criticisms, a growing movement is calling for a rethink of undergraduate business education. Both critics and proponents are calling for an educational experience that extends beyond an instrumental approach that only considers value as defined as career based knowledge. Undergraduate business education needs to embrace the central tenets of liberal learning, learning that empowers students and prepares them to deal with complexity, diversity, and change, by providing them with a broad knowledge of the wider world as well as in-depth study in a specific area of interest. This should embrace:

- **Analytical Thinking**—bstracting from a particular experience to produce formal knowledge that is general in nature and independent of a particular context;
- **Multiple Framing**—The ability to work with fundamentally different and incompatible and analytical perspectives to make sense of knowledge;
- **Reflective Exploration of Meaning**—The deeper understanding of how an approach relates to students' values, identities, and how they engage with the world;
- **Practical Reasoning**—The capacity to draw upon knowledge and intellectual skills to engage concretely in the world by expanding reflection to deliberate action.

An education of this kind would equip students with the skills to draw on a diverse knowledge base to make sense of the world, their role as citizens of the world, and business as a societal institution. It would also help students develop the ability to examine issues from multiple perspectives and develop into intellectually adventurous, life-long learners.

Adding to the need to rethink undergraduate business education is the changing landscape of higher education. Professors are facing pressure to use technology innovatively and efficiently, such as through flipped classrooms and massive open online courses (MOOC). Students are seeking educational experiences that integrate different facets of college life, such as study abroad, service learning, and civic engagement. Administrators are expected to demonstrate assurance of learning of students while confronted with increasing budgetary challenges.

In response to these opportunities and challenges, this special issue solicits submissions that explore issues in undergraduate business education that include but are not limited to:

- **Identifying** pedagogies that integrate decision sciences with liberal learning;
- **Examining** how decision sciences education is employed to facilitate life long learning;
- **Exploring** the role of technology as a tool to foster innovation and student engagement;
- **Showcasing** high impact learning experiences that incorporate decision sciences withother programmatic components such as undergraduate seminars, capstone courses,themed semesters, and writing-intensive courses;
- **Demonstrating** the potential of decision sciences education for learning beyond the classroom, such as through study abroad experiences and externships/internships.

Review Process and Deadlines

Manuscripts for the special issue should be submitted after the authors have carefully reviewed *DSJIE*'s submission guidelines at dsjie.org/JournalMission/tabid/84/Default.aspx. Authors submitting a manuscript should indicate that it is for the special issue on 'Rethinking Undergraduate Education'. Deadlines for the special issue are as follows:

- **June 1, 2014:**
  Deadline for initial submission
- **September 1, 2014:**
  First-round decisions on all submitted manuscripts
- **November 1, 2014:**
  Deadline for invited revisions
- **December 1, 2014:**
  Final decisions

For more information, please contact the editor at **dsjie.editor@gmail.com**. ∎

Special Issue on "Educational Innovation and Reform in the Decision Sciences Using Multidisciplinary and Collaborative Practices"

**Initial Deadline:
August 1, 2014**

Guest Editors:

Nebil Buyurgan
Department of Engineering
Quinnipiac University

Mary J. Meixell
Department of Management
Quinnipiac University

Motivation and Background

As business practices evolve and become increasingly integrated, the boundaries between disciplines fade. As such, multiple perspectives in education become essential to adequately prepare students for the workforce, and to achieve the curricular integration that is becoming increasingly common in both business and engineering programs. Multidisciplinary education is the practice of using the approaches and methods of two or more disciplines in curriculum design, pedagogy development, and course delivery. Similarly, collaborative education refers to educational endeavors that employ instructors and students from multiple disciplines. Both approaches bring together faculty and students with diverse backgrounds and viewpoints to provide rich learning experiences. They also provide opportunities for instructors to see their disciplines from fresh perspectives, which may enhance teaching and learning.

Multidisciplinary education in the decision sciences can take on different forms. For example, it can involve closely related fields such as marketing and management, related but distinct disciplines such as entrepreneurship and engineering, or offer integration with general education topics. It can also involve different modalities. For example, technologies such as ERP and simulation, experiential approaches such as service learning, and pedagogies such as inquiry based learning or team teaching, can all be used to offer deliver diverse educational experiences that cross traditional discipline based boundaries.

This special issue solicits submissions that offer new insights or innovations in multidisciplinary or collaborative education in the decision sciences. Submissions are sought that not only explore boundary spanning initiatives within the domain of business, but those that involve other domains such as engineering, health sciences, communication, and general education. Topics of interest include but are not limited to:

- The importance of multidisciplinary and collaborative education within and across disciplines;

- Student perceptions of and attitudes to multidisciplinary education;

- Educational models, methods, and pedagogies for effective, innovative multidisciplinary education;

- Curriculum development, course objectives, learning goals and assessment;

- Developing and effectively using technology in multidisciplinary education;

- Faculty issues, i.e., instructor development, faculty evaluation

Review Process and Deadlines

Manuscripts for the special issue should be submitted after the authors have carefully reviewed *DSJIE*'s submission guidelines at **dsjie.org/JournalMission/tabid/84/Default.aspx**. Authors submitting a manuscript should indicate that it is for the special issue on 'Multidisciplinary and Collaborative Education.' Deadlines for the special issue are as follows:

- **August 1, 2014:**
  Submission deadline for initial submission

- **November 1, 2014:**
  First-round decisions on all submitted manuscripts

- **January 15, 2015:**
  Submission deadline for invited revisions

- **February 15, 2015:**
  Final decisions

For more information, please contact the editor at **dsjie.editor@gmail.com**. ∎

Institute Meetings

www.decisionsciences.org

■ **The 45th Annual Meeting** of the Institute will be held November 22-25, 2014, at the Tampa Marriott Waterside Hotel & Marina in Tampa, Florida. The theme of the conference is "Technology and the Rapidly Changing Business Landscape. Submission deadline is **May 1, 2014**.

dsi-tampa2014.org

■ **The 46th Annual Meeting** of the Institute will be held November 21-24, 2015, at the Sheraton Seattle Hotel in Seattle, Washington.

decisionsciences.org

■ **The Asia-Pacific DSI Region** will hold its 19th annual meeting July 18-24 in conjunction with ASCOM and JOMSA at Yokohama National University, Yokohama, Japan. Submission deadline is **April 4, 2014**. For more information:

www.apdsi2014.org

■ **The European Region** will hold its 5th annual conference June 29 - July 2, 2014, at the University of Southern Denmark, Kolding, at the Hotel Koldingfjord. Submission deadline is **March 15, 2014**.

edsi2014.sam.sdu.dk/index

■ The **7th Annual Meeting of the Indian Subcontinent** and 5th Annual ASCM International Conference was held in Delhi on December 28-30, 2013.

www.imi.edu/page_show/conference_show?cid=8

■ **The Mexico Region.** For more information, contact Antonio Rios, Instituto Tecnologico de Monterrey, **antonio.rios@itesm.mx**.

■ **The Midwest Region** will hold its 2014 Annual Meeting on April 11-13 in Chicago, IL, at the Allerton Hotel. Submission deadline has passed. Check the website below for more information:

www.mwdsi.org

■ **The Northeast Region** will hold its 2014 Annual Meeting on March 27-29 in Philadelphia, PA, at the Sheraton Philadelphia Society Hotel. Submission deadline has passed. Check website for details on the 2014 annual meeting:

www.nedsi.org

■ **The Southeast Region** held its **2014** Annual Meeting February 20-22 in Wilmington, NC.

www.sedsi.org

■ **The Southwest Region** will hold its **2014** Annual Meeting on March 12-15 at the Sheraton Downtown Dallas hotel in Dallas, TX. Submission deadline has passed.

www.swdsi.org

■ **The Western Region** will hold its **2014** Annual Meeting on April 1-4 at the Embassy Suites Hotel, Napa, CA. Submission deadline has passed.

www.wdsinet.org

Call for Papers

Conferences

■ **The 4th International Workshop on Information Systems and Technologies** will be held in Valencia, Spain, on **March 22-24, 2014**. Submission deadline has passed.

www.ijist.net/ICIST14/

■ **The 4th International Workshop on Model-Driven Approaches for Simulation Engineering** (part of the Symposium on Theory of Modeling and Simulation) will be help in Tampa, FL, on **April 13-16, 2014.** Submission deadline has passed.

www.sel.uniroma2.it/Mod4Sim14

■ **The 2014 International Conference of the Association of Global Management Studies** will be held **May 20-21** at the Saïd Business School, University of Oxford, Oxford, UK. Submission deadine is **March 15, 2014**.

www.association-gms.org

■ **The 2014 PMI Research and Education Conference** will take place **July 27-29** in Portland, Oregon. The theme of the 2014 conference is "Standing on the Shoulders of Giants: In Search of Theory and Evidence." Submission deadline has passed**.

www.pmi.org/REC2014submit

Publications

■ *Decision Sciences Journal of Innovative Education* will publish a special issue on "Rethinking Undergraduate Business Education: In the Classroom and Beyond." Submission deadline is **June 1, 2014**. For more information, contact the editor at:

dsjie.editor@gmail.com

■ *Decision Sciences Journal of Innovative Education* will publish a special issue on "Educational Innovation and Reform in the Decision Sciences Using Multidisciplinary and Collaborative Practices." Submission deadline is **August 1, 2014.** For information, contact the editor at:

dsjie.editor@gmail.com

■ *Maximizing Commerce and Marketing Strategies through Micro-Blogging* will be published by IGI Global. Micro-blogging platforms such as Twitter are fast becoming part of the fabric of how businesses interact with customers. Proposal deadline is **March 15, 2014**. Contact Dr. Janee Burkhalter at **jburkhal@sju.edu**.

■ *The International Journal of Advanced Computer Science and Applications* encourages submissions of papers addressing theoretical and practical implementations in information and systems applications.

www.ijasca.thesai.org

More conferences and calls for papers are listed on our website:
www.decisionsciences.org/conferences/default.asp

2014 Program Chair's Message

M. JOHNNY RUNGTUSANATHAN, The Ohio State University

DSI turns 45 in 2014! Over these last four decades we have witnessed an increasingly rapid pace of technological innovations. The technology that we now take for granted once existed only in the imagination of a few visionaries. Today's technological innovations, with many more to come, are transforming business models and business education—and these changes are not confined to the world of business (think "Arab Spring").

Against this backdrop, it seems apropos for us to not only reflect on the Institute's past but also to begin envisioning the Institute's future. What are the opportunities, challenges, and implications of the technologies already here or on the horizon . . . for DSI, individuals, creators and transmitters of knowledge, organizational leaders, and policy makers? The theme of the 2014 Annual Meeting of DSI, *Technology and the Rapidly Changing Global Business Landscape*, aims to stimulate conversations around this broad question. We invite you to join this conversation by submitting your research for presentation, as well ideas for workshops and panels. And, by the way, we hope to continue making a number of changes to the conference—from the research tracks we will have (e.g., social media, privacy and security, etc.) to the types of research presentations we will cultivate (e.g., research into how business students learn, research into how to deliver and assess business curriculum, etc.) to the professional development sessions that keep us refreshed and energized (e.g., mid-career faculty consortium, writing a great teaching case workshop, how to publish in DSJ and DSJIE workshops). These changes, we believe, will resonate with DSI members. Navigate the conference website—**DSI-Tampa2014.org**—to find out more. In the meantime, hold the dates and make plans to join us at the Tampa Marriott Waterside for these sure-to-be-interesting conversations. ∎

Submission Deadlines:

Referreed Papers and Competitions
May 1, 2014

Abstracts and Proposals
May 15, 2014

www.decisionsciences.org

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How Is the 2014 Annual Meeting Organized?

The program for the 2014 Annual Meeting of the Decision Sciences Institute is organized around three pillars, plus keynote addresses and special events.

Pillar 1—
Business Knowledge Research

invites full paper, abstract, and panel proposal submissions that speak to the generation of new knowledge pertinent to relevant business disciplines. Research presentations for this pillar are ideally positioned for publication consideration by *Decision Sciences* or related journals. Panels for this pillar focus on identifying emergent research interests and topics.

Pillar 2—
Business Learning & Education Research

invites full paper, abstract and panel proposal submissions that speak to the generation of new knowledge pertinent to the design, delivery, and evaluation of business curriculum. Research presentations for this pillar are ideally positioned for publication consideration by *Decision Sciences Journal of Innovative Education* or related journals. Panels for this pillar focus on identifying emergent research interests and topics.

Pillar 3—
Professional Development

organizes consortia (e.g., Doctoral Student Consortium for Pre-Proposal Defense Students) and competitions (e.g., Elwood S. Buffa Dissertation Award), and, equally important, invites proposals for workshops (e.g., Exciting Business Games for Enhanced Learning) and panels (e.g., Meet the Editors of DSI Journals) aiming to increase the research, teaching, and professional service capabilities of Decision Sciences Institute members. Many of the sessions for this pillar are ideally shared through *Decision Line* articles.

Tracks in the Business Knowledge Research Pillar?

• **Accounting & Finance Department**

Governance, Risk, & Control
Mark Cecchini
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Decision Models for Accounting or Finance
TBA

• **Business Analytics Department**

Big Data & Analytics
Ashish Gupta
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• **Information Systems Department**

Information Systems Strategy & Design
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Information Security & Security Risks
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Emerging Technologies
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• **Management & Organizations Department**

Organization Behavior & Human Resources Management
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North Dakota State University
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Strategic Management
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• **Marketing Department**

Marketing Strategy
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Social Media
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• **Operations Department**

Decision Models for Operations Execution
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Lean, Quality, & Six Sigma
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Thomas Kull
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Remanufacturing, Sustainable Operations, & the Environment
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Zhaohui We
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2014 DSI Annual Meeting

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• **Research & Development Department**

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New Product Development
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• **Supply Chains & Networks Dept.**

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• **Special Focus Department**

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Sharon Schweikhart
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Internet Retailing
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Project Management SIG
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Jayant V. Saraph
Metropolitan State University
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Tracks in the Business Learning and Education Pillar

• **Developing Business Curriculum**

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• **Delivering and Assessment Curriculum**

Rhonda Rhodes
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• **Predicting Student Success**

Sebastian Diaz
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• **Emerging Issues in Business & Management Education**

Kirsten Rosacker
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Activities Organized within the Professional Development Pillar

(What follows is a listing of consortia and competitions. For more information, check the annual meeting website: **dsi-tampa2014.org/program/professional-development/**.)

• **Doctoral Student Consortium for Pre-Proposal Defense Students**

Yan Dong, University of Maryland
yandong@rhsmith.umd.edu
James Hill, Ohio State University
hill.249@fisher.osu.edu

• **Doctoral Student Consortium for Post-Proposal Defense Students**

Chris Craighead
Penn State University
cwc13@psu.edu
Murat Kristal
York University
mkristal@yorku.ca

• **New Faculty Development Consortium**

Dara Schniederjans
University of Rhode Island
schniederjans@mail.uri.edu
Kaushik Sengupta
Hofstra University
kaushik.sengupta@hofstra.edu

• **Mid-Career Faculty Development Consortium**

Amit Eynan
University of Richmond
aeynan@richmond.edu
Keong Leong
University of Nevada, Las Vegas
keong.leong@univ.edu

- **Making Statistics More Effective in Schools of Business**
  Robert L. Andrews
  Virginia Commonwealth University
  randrews@vcu.edu
  Kellie Keeling
  University of Denver
  kellie.keeling@du.edu

COMPETITIONS

- **Best Paper Awards**
  Gopesh Anand
  gopesh@illinois.edu
  Ramanath Subramanyam
  rsubrama@illinois.edu
  University of Illinois,
  Champaign-Urbana

- **Best Teaching Case Studies Award**
  Matt Drake
  Duquesne University
  drake987@duq.edu

- **Elwood S. Buffa Doctoral Dissertation Award**
  John Gray
  gray.402@fisher.osu.edu
  Gokçe Esenduran
  esenduran.1@fisher.osu.edu
  The Ohio State University

- **Instructional Innovation Award**
  Bryan Ashenbaum
  ashenbb@miamioh.edu
  Miami University

WORKSHOPS

- **Leverage APICS to Grow Your OM or SCM Major**
  Sharon Rice, Executive VP
  APICS / APICS Foundation
  srice@apics.org

- **Exciting Business Games for Enhanced Learning**
  Sam Wood, President
  Responsive Learning Technologies
  wood@responsive.net

- **Service Learning Storytelling Workshop**
  David Ding
  University of Houston
  xding@uh.edu

- **Teaching an Entire Course on Supply Chain Security**
  Kevin Linderman
  University of Minnesota
  linde037@umn.edu
  Chris Swanton
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- **Teaching an Entire Course on Sustainability**
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  Ohio State University
  esenduran.1@fisher.osu.edu

- **Teaching Online Students: Why Do They Get Frustrated?**
  Dwight Smith-Daniels
  Wright State University
  dwight.smith-daniels@wright.edu

- **Writing a Great Teaching Case**
  Chris Roethlein
  croethle@bryant.edu
  John Visich
  jvisich@bryant.edu
  Bryant University

- **Innovations in Business Curriculum Pedagogy**
  Bryan Ashenbaum
  Miami University
  ashenbb@miamioh.edu

- **What's Trending: Cutting Edge Research Methods**
  TBA

- **Interdisciplinary Research Strategies**
  TBA

- **Effectively Incorporating Software in the Classroom**
  TBA

- **Designing & Structuring Course for Student-Centered Learning**
  TBA

- **Theory into Practice: Engaging Practitioners in Your Teaching**
  TBA

- **How to Review to Become an Editor of a Journal**
  Vicki Smith-Daniels, Leader
  Indiana University
  vsmithda@iupui.edu
  Thomas Choi, Co-Leader
  Arizona State University
  thomas.choi@asu.edu
  Daniel V. Guide, Co-Leader
  Pennsylvania State University
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- **Publishing in *DSJ***
  Nallan Suresh
  University of Buffalo (SUNY)
  ncsuresh@buffalo.edu

- **Publishing in *DSJIE***
  Vijay Kannan
  Utah State University
  dsjie.editor@gmail.com

PANELS

- **Meet the Editors of DSI Journals**
  Asoo Vakharia
  University of Florida
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  Vijay Kannan
  Utah State University
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- **Meet the Editors of Non-DSI Journals: What Can We Learn from Other Disciplines?**
  Craig Carter
  Arizona State University
  craig.carter@asu.edu ∎

2013 Annual Meeting Wrap-Up

FUNDA SAHIN, University of Houston

T hanks to everyone who contributed to the 2013 DSI Annual Meeting in Baltimore. I appreciate all the support that you offered for the meeting. Also, congratulations to all the award winners—you'll find their names on the following pages as well as on the DSI website.

The organizing committee did a great job by processing the submissions on time; organizing featured sessions, attracting highly visible scholars/practitioners, and higher quality submissions; and proposing and implementing several innovative ideas to this year's conference. The committee organized about 726 submissions into about 311 sessions (including DSI committee meetings). I hope you found these sessions useful and your experience in Baltimore to be rewarding. The highlights of the 2013 meeting are as follows:

- Under the conference theme of "Decision Analytics: Rediscovering Our Roots," we had a well-received showcase track, "Decision Analytics Track." The track included several featured sessions by academics and practitioners in the analytics area.
- Consistent with the conference theme, we had two keynote sessions on business analytics presented by Wayne Winston and Radhika Kulkarni.
- More practitioners attended the annual meeting this year and participated as invited speakers/panelists.
- Two Specific Interest Groups (Making Statistics More Effective in Schools of Business and Project Management) held miniconferences at the annual meeting with great success.
- The special event "Classroom Technology Sandbox" was sponsored by software firms that each had a session at the event.
- Track caucuses were held again this year.

There was representation from all six continents (see Table 1). North America still dominates in attendance, followed by Asia and Europe. The last few years' efforts to work more closely with various international DSI groups to promote participation at our annual meeting should be continued. Below is a summary by region for this year's meeting.

Table 1. Authorship by continents.

Continent/Region	# of Authors
North America	1,718
South America	12
Asia	262
Europe	163
Australia	29
Africa	5

There were 46 different countries represented in terms of authorship. The U.S. led with 1,668 authors. Taiwan and Japan followed with 75 and 50 authors, respectively. Canada, Italy, China, Korea, India, and United Kingdom were the next in line, in order.

Looking at the submissions by tracks, the highest number of submissions and sessions, in order, were in Supply Chain Management, Decision Analytics and Innovative Education tracks. Information Systems, Services Management and Strategic Management, and Organizational Behavior/Theory track also received a good number of submissions.

This year, keynote speeches were delivered by Wayne Winston (Indiana University) on Sunday and Radhika Kulkarni (SAS, Inc.) on Monday and were well-received. Both keynote sessions attracted more than 300 and 250 attendees, respectively.

Dan Guide coordinated the Doctoral Student Consortium (DSC), which was attended by 55 doctoral students. Anthony Ross served as the coordinator of the New Faculty Development Consortium (NFDC) attended by 13 participants. Both consortia were well organized and attended. In particular, the joint sessions of the NFDC with DSC were among the favorite sessions with

DECISION SCIENCES INSTITUTE
44th Annual Meeting
November 16 - 19, 2013

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participants—especially the Dean's Panel and Editors' Panel. Shawnee Vickery and Xenophon Koufteros co-coordinated the Professional Faculty Development Program, which included sessions on Structural Equation Modeling and PLS, Editors' Panel, Research Trends in SCM, Research Trends in IS, and Web-Based Teaching. Many participants of the event expressed great satisfaction with the program.

Arunachalam Narayanan served as the coordinator of the Elwood S. Buffa Doctoral Dissertation competition. There were 23 submissions from degree-granting institutions represented by six countries. The top four dissertations were selected by 27 judges after the first round of reviews. The winner was determined by a final round of review after the finalists' live presentations at the conference.

Arash Azadegan coordinated the Best Teaching Cases Award Competition that received 13 submissions in total, and 12 judges offered their services for this competition in the first round. The winner was determined by a final round of reviews by four judges after the three finalists' live presentations at the conference.

Kaushik Sengupta served as the coordinator for the Instructional Innovation Award Competition. There were 11 submissions in total, and 12 judges reviewed the submissions in the first round. The winner was determined from the four finalists by four judges after the live presentations by the authors at the conference.

As in the past, a post-conference survey was conducted this year. Overall, participants who responded to the survey were positive about their experiences at the conference. About 83% of the respondents said that they were either "satisfied" or "very satisfied" with this year's conference. The enhancements in the receptions/meals, more featured sessions with leading practitioners and researchers, more sessions that were consistent with the theme of the conference, more higher quality presentations and the dramatic changes in the conference book that many members have been complaining for years seemed to have contributed to the overall satisfaction with the conference.

It is my sincerest hope that those who attended the conference, but did not have a chance to respond to the survey also found the conference worthwhile and enjoyable. In the last few years we have putting extra effort into improving our annual conference on all dimensions. Please consider participating in making our future conferences even better.

My sincerest wishes to everyone for a great semester/year . . . I look forward to seeing you in Tampa, Florida, in November. ∎

ELWOOD S. BUFFA DOCTORAL DISSERTATION AWARD

Winner:
Network Models and Infectious Disease Control: Analysis and Insights
Eva A. Enns
(Ph.D. Stanford University, Advisor: Margaret L. Brandeau)
Currently at University of Minnesota School of Public Health

Honorable Mention:
An Agent-Based Modeling Approach to Reducing Pathogenic Transmission in Medical Facilities and Community Populations
Sean Barnes
(Ph.D. University of Maryland, Advisor: Bruce Golden)
Currently at University of Maryland

2013 *DECISION SCIENCES JOURNAL* BEST PAPER AWARDS:
This year our senior editors chose two papers for the Best Paper Award which is sponsored by Wiley-Blackwell:

Using Electronic Medical Records in Admission Decisions: A Cost Effectiveness Analysis
Ofir Ben-Assuli, Faculty of Business Administration, Ono Academic College & Faculty of Management, Tel-Aviv Univ.
Moshe Leshno, Faculty of Management & Faculty of Medicine, Tel-Aviv University
(*Decision Sciences*, Volume 44, Issue 3, April 2013, pp. 463-481)

Competition and Sustainability: The Impact of Consumer Awareness
Michael R. Galbreth, Moore School of Business, University of South Carolina
Bikram Ghosh, Moore School of Business, Univ of South Carolina
(*Decision Sciences*, Volume 44, Issue 1, February 2013, pp. 127-159)

Outstanding Senior Editor
Nallan Suresh, University of Buffalo (SUNY)

Outstanding Associate Editors
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Patrick Chau, The University of Hong Kong
Chris Craighead, Pennsylvania State University
Frederick Easton, Syracuse University
Mani Subramani, University of Minnesota

Outstanding Reviewers
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Xiuli He, University of North Carolina at Charlotte
Sriram Narayanan, Michigan State University
Carrie Queenan, University of South Carolina
Tobias Schoenherr, Michigan State University
Qinghua Zhu, Dalian University of Technology

2013 *DECISION SCIENCES JOURNAL OF INNOVATIVE EDUCATION* BEST PAPER AWARDS

2013 Best Teaching Brief
Increasing Student Interest and Engagement with Business Cases by Turning Them into Consulting Exercises
S. Sinan Erzurumlu and Keith Rollag, Babson College

2013 Best Research Article
Cultivating Student Global Competence: A Pilot Experimental Study
Yulong Li, Roger Williams University

2013 Outstanding Reviewer
J. Ben Arbaugh, University of Wisconsin, Oshkosh

2013 Outstanding Associate Editor:
Monica Adya, Marquette University

THE CAROL J. LATTA MEMORIAL DSI EMERGING LEADERSHIP AWARD FOR OUTSTANDING EARLY CAREER SCHOLAR
Aravind Chandrasekaran, Ohio State University

2013 Elwood S. Buffa Doctoral Dissertation Award Winners

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Narayanan

This year the competition attracted 23 submissions from six different countries with topics ranging from healthcare, sustainability, supply chain risk and disruptions to traditional topics such as manufacturing and transportation. The competition involved two rounds; after the first round the top four submissions (15% of the submissions) were invited to present their dissertation in Baltimore during the annual conference. A total of 27 judges (see names below) evaluated the submissions, and based on their recommendations the final winners were selected. We wish to acknowledge the judges and participants who contributed to the success of this competition.

WINNER:

EVA A. ENNS
University of Minnesota
School of Public Health
Advisor and Degree-granting institution:
Margaret L. Brandeau, Stanford University

DISSERTATION TITLE:

Network Models and Infectious Disease Control: Analysis and Insights

ABSTRACT:

Many models of infectious disease do not explicitly consider the underlying contact network through which the disease spreads. However, network structure can greatly influence the dynamics of an epidemic and has implications for infectious disease control policies. This dissertation explores two important themes of network science as it relates to infectious disease control policy: first, how to incorporate network structure into the modeling and evaluation of infectious disease control policies; and second, how to leverage network structure in the design of optimal control policies. Complete network information is rarely available. Furthermore, even when network data is available, it generally only represents a snapshot in time and does not capture population or network dynamics (e.g., the formation and dissolution of contacts).

In Chapter 2, we address these data limitations and describe a general simulation framework for modeling the spread of infectious disease in a dynamic contact network. We provide a methodology for inferring important model parameters, such as those governing network structure and network dynamics, from readily available data sources.

In Chapter 3, we present an application of this framework in evaluating the effectiveness and cost effectiveness of mass media campaigns aimed at reducing concurrent sexual partnerships in sub-Saharan Africa for HIV prevention.

In Chapter 4, we address the problem of leveraging network structure in designing infectious disease control policies. In particular, we consider the problem of identifying which links to remove from a contact network in order to maximize the number of individuals who are protected from infection. We show that this problem can be posed as a non-convex quadratically-constrained quadratic program (QCQP), from which a link removal algorithm can be derived. Evaluation of the QCQP algorithm on standard network models demonstrates that it exhibits near-optimal performance and outperforms other intuitive link removal algorithms, such as removing links in order of edge centrality. ∎

Eva A. Enns received her PhD from Stanford University and is now an assistant professor at the University of Minnesota School of Public Health. Her publications from dissertation span three different fields: mathematical epidemiology (the journal Mathematical Biosciences), health policy and communicable disease control (International Journal of STD and AIDS), and OR/MS (Health Care Management Science).

HONORABLE MENTION:

Sean Barnes
University of Maryland
Advisor and Degree-granting institution:
Bruce Golden, University of Maryland

DISSERTATION TITLE:

An Agent-Based Modeling Approach to Reducing Pathogenic Transmission

ABSTRACT:

The spread of infectious diseases is a significant problem that exists on scales ranging from individual hospital units to the increasingly connected global environment. On the hospital scale, the spread of antibiotic-resistant pathogens causes many downstream effects, including longer lengths of stay for patients, higher costs, and unexpected fatalities on the order of almost 100,000 deaths each year in the U.S. alone. On the larger scale, outbreaks in community populations–whether due to an infectious disease or a bioterrorism attack–stress the medical facilities that need to accommodate large numbers of infected patients and they can lead to the closing of schools and businesses.

Baltimore!

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Computer modeling and simulation are decision-aiding tools that can be leveraged to assist infection control professionals in developing strategies for reducing or preventing the transmission of infectious diseases. Control measures are often expensive in terms of time, money, and resources. Computational models can alleviate some of the risk in implementing intervention strategies. Agent-based modeling and simulation (ABMS) is an emerging methodology that can be used to predict system behavior through the aggregate of interactions between individuals or between individuals and their environment. Each individual agent can have different characteristics, and this heterogeneity facilitates a more realistic model of a complex system than traditional systems dynamics models. This research focuses on the use of agent-based models to better understand transmission dynamics in medical facilities and community populations and to identify the best methods for intervention. ■

Sean Barnes is an assistant professor of operations management in the Robert H. Smith School of Business at the University of Maryland. He received his PhD in scientific computation from the University of Maryland in 2012. His current research interests are modeling the transmission of infectious diseases, healthcare analytics, simulation, agent-based modeling, and network analysis. His work has been published in the INFORMS Journal of Computing, IIE Transactions on Healthcare Systems Engineering, *and* Infection Control and Hospital Epidemiology.

FINALIST:
John Gardner
Brigham Young University
Advisors and Degree-granting institution:
Ken Boyer and Peter T. Ward, Ohio State University

DISSERTATION TITLE:

Improving Hospital Quality and Patient Safety: An Examination of Organizational Culture and Information Systems

ABSTRACT:

Research indicates that substantial shortcomings remain in the delivery of safe, effective, and reliable healthcare. Unfortunately, relatively little is known about how safety culture and the use of healthcare information systems influence quality of care in different hospital settings. Yet, policy decisions and existing research have often implicitly assumed that safety culture and quality practices operate the same across varying hospital contexts.

This dissertation examines hospital safety culture and information systems across different contexts over progressive years from 2009 to 2012 through three interrelated studies. The hospital serves as the unit of analysis. Multiple sources of secondary data on hospital performance are combined with primary survey data from over 250 hospitals throughout the U.S. The data are analyzed using both split-group structural equation modeling and hierarchical regression analysis.

The first study seeks to answer questions regarding the influence of safety culture and the association of practices and climate on error reduction and process quality across large and small hospitals. The second study addresses questions regarding the interaction of adopted healthcare information technologies and various forms of data use and analysis, and their influence on process quality and patient satisfaction. The third study provides the first known empirical examination of the use of healthcare information systems (HIS) through the theoretical lens of organizational mindfulness. The influence of mindful use of HIS is studied in relation to provider adherence to specified care practices and provider workarounds to information technologies. The results of the three studies provide many examples of variability in the impact of investments in safety culture and information systems as related to contextual differences and complexities in hospitals. ■

John W. Gardner is an assistant professor of global supply chain management in the Department of Business Management at Brigham Young University. He received his PhD in management science from The Ohio State University and his MBA/MA from the Marriott School of Business at Brigham Young University. His work has been published in the Journal of Operations Management.

FINALIST:
Enrico Secchi
University of Victoria
Advisor and Degree-granting institution:
Aleda Roth, Clemson University

DISSERTATION TITLE:

Essays on Service Improvisation Competence: Evidence from the Hospitality Industry

ABSTRACT:

Service delivery in high-contact environments is often compared to a theatrical performance, in which the employees have to follow and interpret a script. Service designers face a trade-off between efficiency and reliability in service delivery processes and the deteriorating effects of excessive scripting on the quality of customer experiences. Like successful actors, service employees that possess the ability to improvise on a given script deliver a more engaging and satisfying experience, finding a "sweet spot" between standardization and personalization. This dissertation defines the

new construct of Service Improvisation Competence (Serv–IC)—the systemic ability of service employees to deviate from established processes and routines in order to timely respond to unexpected events, using available resources—and empirically tests its antecedents and outcomes in an hospitality setting.

Using two surveys of hotel managers and employees respectively, we find that Serv–IC is the result of a coherent set of service delivery system design choices, from process design to hiring and incentive practices. Furthermore, the design of service scripts is related to Serv–IC by a nonlinear relationship, indicating that increasing process standardization does not necessarily result in a more efficient and consistent service offering. Finally, we show that the effects of Serv–IC on performance are contingent on the service concept, having a positive impact only in highly experiential service environments. Taken together, these findings offer guidance to service designers on how to build an improvisation competence into service delivery systems and on when such a competence results in improved performance. ∎

Enrico Secchi is assistant professor of operations management in the Gustavson School of Business at the University of Victoria, where he teaches statistics, supply chain management, and service operations. He earned an MS in management and a Ph.D. in operations and supply chain management at Clemson University. His research interests include the study of service delivery process design and the development of process innovations.

POSITION ANNOUNCEMENT FOR SENIOR FACULTY

MALAYSIA INSTITUTE FOR SUPPLY CHAIN INNOVATION

Kuala Lumpur, Malaysia

In 2011, the Government of Malaysia, through a long-term partnership with the Massachusetts Institute of Technology Center for Transportation & Logistics (MIT CTL), established the Malaysia Institute for Supply Chain Innovation (MISI). Located in Shah Alam, just outside Kuala Lumpur, MISI is becoming a leading center of transportation, logistics, and supply chain management education and research. The institution offers two Master degree programs and is in the process of launching a Doctoral program. It conducts applied research, provides executive education programs, and works with corporations doing business in Asia.

MISI is the newest member of MIT's Global Supply Chain and Logistics Excellence (SCALE) Network of research centers in the areas of transportation, logistics, and supply chain management.

Responsibilities
Faculty members of MISI are responsible for advancing the Center's mission of excellence in education, research, and corporate involvement. All faculty members are expected to develop, design, and deliver world-class teaching material at the Master and Doctoral levels. As part of the MISI academic team, faculty members are responsible for creating, supporting, and disseminating new knowledge in logistics, supply chain management, and related fields.

Faculty members are expected to conduct high quality research in collaboration with industry and government; supervise theses; publish in top international journals, academic proceedings, and trade journals; actively participate in all programs offered and supported by MISI; and collaborate with academics and researchers at the other MIT Global SCALE Network centers.

The senior faculty member is expected to direct the academic and research activities at MISI, provide leadership in industry forums, mentor junior faculty members, and contribute to the growth of MISI.

To learn more about the job qualifications and how to apply, please visit:
http://ctl.mit.edu/about_us/misi-jobs#senior

DISSERTATION JUDGES:

Arash Azadegan, Rutgers University

Aravind Chandrasekaran, Ohio State University

Barb Flynn, Indiana University

Bimal Nepal, Texas A&M University

Brent Moritz, Pennsylvania State University

Chelliah Sriskandarajah, Texas A&M University

Chris Craighead, Pennsylvania State University

Chuck Munson, Washington State University

Constantine Bloome, Université Catholique Louvain

David Peng, University of Houston

Gopal Easwaran, St Marys University

Janelle Heineke, Boston College

Jay Jayaram, University of South Carolina

Joy Field, Boston College

Kathryn E Stecke, University of Texas, Dallas

Kaushik Sengupta, Hofstra University

Kurt Bretthauer, Indiana University

Li-Lian Gao, Hofstra University

Manoj Vanajakumari, Texas A&M University

Morgan Swink, Texas Christian University

Rafay Ishfaq, Auburn University

Roberta Russell, Virginia Tech University

Sharif Melouk, University of Alabama

Srinivas Talluri, Michigan State University

Suresh Sethi, University of Texas, Dallas

Vaidy Jayaraman, University of Miami

Xiande Zhao, China-Europe International Business School

Chair: Arunachalam Narayanan, University of Houston

Baltimore!

DECISION SCIENCES INSTITUTE
44th Annual Meeting
November 16 - 19, 2013

2013 Dennis E. Grawoig Distinguished Service Award

E. POWELL ROBINSON is professor of supply chain management and the coordinator of the supply chain program in the Decision and Information Sciences Department of C.T. Bauer College of Business at the University of Houston. He was presented the award for his unparalleled dedication and service to the Institute and its members for the past two decades as Interim Executive Director; President; At-Large Vice President; Proceedings Coordinator; Chair of the Executive Committee/Strategic Planning Committee, Nominating Committee, Programs and Meetings Committee, Best Case Studies Committee, and Doctoral Student Affairs Committee; member of the Regional Activities Committee, Member Services Committee, and Strategic Planning for International Affairs Committee; Professional and Faculty Development Program Co-Coordinator; Best Paper Award Competition Coordinator; Doctoral Student Consortium Co-Coordinator; Best Case Studies Award Competition Coordinator; Track Chair; and winner of the Best Case Studies Award and the Best Application Paper Award. Powell was the key behind the changes in DSI's Constitution and restructuring of the DSI's governing body. In appreciation of his past services, hard work and volunteering his time as the Interim Executive Director (pro bono) when DSI needed the most support, this award is highly deserved and represents the recognition and appreciation for Powell's outstanding leadership and contribution to the Decision Sciences Institute.

2013 DSI Fellow Citation

In recognition of outstanding contributions to the field of decision sciences, the designation of Fellow has been awarded to **ASOO VAKHARIA** by the Decision Sciences Institute. He is McClatchy Professor and Director of the Center for Supply Chain Management at the University of Florida, Gainesville, for his many contributions to the profession and to the Decision Sciences Institute, including outstanding service as Editor of the Decision Sciences Journal; as Professional Development Program Coordinator; as member of the ad hoc Committees on the Strategic DSI Journal Portfolio, Publications, and Doctoral Student Affairs. He has also held editorial roles for other prominent journals such as the European Journal of Operational Research, Production and Operations Management Journal, International Journal of Supply Chain Performance and Business Modeling, Operations Management Research, and Journal of Operations Management. He has published leading work in the area of pricing and coordination strategies for supply chains and has published almost 50 refereed papers and six book chapters, as well as numerous monographs and refereed proceedings. In recognition of his scholarship, prior to his McClatchy Professorship he was appointed Beall Professor of Supply Chain Management at the Warrington College of Business Administration, University of Florida, and served as Chair of the Department of Information Systems & Operations Management. He has also won numerous distinctions and awards, including the DSI Best Interdisciplinary Paper Award and the American Economic Institution's Faculty Fellowship at the University of Florida. In addition to his research, he has demonstrated a consistent commitment to teaching, as evidenced by multiple teaching awards at the University of Florida and the University of Arizona.

2013 DSI Classroom Technology Sandbox

NATALIE C. SIMPSON, University of Buffalo (SUNY), and DEREK J. SEDLACK, South University

Simpson

This year's annual meeting included DSI's first Classroom Technology Sandbox, held Sunday, November 17th, in Baltimore. This pilot event featured a full day of presentations of instructional technology set in a computer-lab style conference room that enabled attendees to interact directly with the products under discussion. To fund the rental of the computer equipment, Sandbox organizers recruited donations from a generous consortium of technology exhibitors who presented that day: SAS, Cengage, Ivy Software, and Responsive Technologies. Sessions included hands-on interaction with instructional technology products such as the following.

Preparatory Course Packages: Quantitative Pre-matriculation Materials for MBA Programs. Ivy Software presented four fully developed self-paced online courses, *Business Math and Statistics*, *Math and Statistical Concepts*, *Excel for MBAs*, and *Excel for Undergraduate Business Majors.* Each course consisted of a text and interactive software utilizing extensive assessment routines to support independent learners preparing to enter business programs.

Operations Management Gaming: Littlefield Technologies. Responsive Learning Technologies invited at-tendees into a real-time tournament, challenging them to manage the virtual world of Littlefield Technologies, an award-winning on-line competitive simulation designed to teach topics including process analysis, capacity planning and inventory control.

Data Visualization: Statistical Software for More than Just Analysis. SAS presented its JMP statistical software, guiding Sandbox participants in the rapid exploration of data sets with its advanced visualization capabilities. This process demonstrated both the ability of JMP to support the discovery process in research and its value in teaching the logic and process of statistical analysis.

Digital Homework Solutions and Publisher Support. Cengage Publishing provided two separate sessions exhibiting their portfolio of instructional products supporting their publications,

SAS Academic Ambassador Dr. Julian L. Parris guides the audience through a hands-on exploration of large data sets using the data visualization tools of JMP software.

including a tour of their intriguing new collaborative course management system, MindTap.

Thanks again to all who participated and good luck in this year's projects!

∎

The format of the Classroom Technology Sandbox allowed the demonstration and discussion of technology to be integrated with the opportunity to "test drive" the product for one's self.

2013 Sessions for the Making Statistics More Effective in Schools of Business

ROBERT ANDREWS, Virginia Commonwealth University

Andrews

A total of 10 sessions were organized for the Making Statistics More Effective in Schools of Business (MSMESB) Specific Interest Group (SIG) at the 2014 DSI meeting in Baltimore. The sessions were well-attended, with an average attendance of 29.6, which was very good given that the presenters and sessions were not listed in the main part of the printed conference program. We used all of the available sessions on Saturday, Sunday, and Monday, except for the Sunday and Monday plenary talks that fit in with our sessions by addressing analytics topics. Fortunately, we were given a larger room than we had in previous years, which provided adequate space for our maximum attendance of 49.

A MSMESB caucus meeting was held at 5:00pm on Monday after all of the other sessions. Since our caucus meeting was only announced on Monday, several people had made previous commitments with only nine people attending. Bob Andrews and Kellie Keeling agreed to serve again to co-chair MSMESB for DSI 2014. Bob will ask presenters to supply a copy of their slides to post on a webpage for this year's presentations. David Stephan expressed his willingness to put together an internet survey. Bob Andrews will add the email addresses for the people who signed up on the sheets that were circulated during the sessions to the existing list he has for the MSMESB SIG.

Below is a summary of main points/reactions from 2013 MSMESB attendees:

- The larger room for this year's meeting was greatly appreciated and our attendance again justified providing a larger room for our MSMESB sessions.

- The variety of topics addressed in the MSMESB sessions was good and all of the presentations were also good.

- The glitch in not having any MSMESB session presenters listed in printed program was disappointing but having the e-mail sent out on Friday to those on the MSMESB list providing information about all of our sessions and the program chair's daily e-mail messages to DSI members with a list of sessions for each day were very helpful.

- For next year we need to arrange for and make participants aware of a MSMESB caucus meeting so they can plan to attend.

- Appreciation was expressed to Bob Andrews, Kellie Keeling, John McKenzie, Keith Ord, and the many others who assisted and participated in putting together this year's sessions.

Bob Andrews will organize a series of MSMESB sessions for February 20 - 21, 2014, to be held in conjunction the meeting of the Southeast Region of DSI in Wilmington, NC. John McKenzie and Keith Ord will also be organizing MSMESB for the August 2 - 7, 2014, Joint Statistical Meetings in Boston, MA. ■

2013 Participants in the Doctoral Student Consortium

Muhammad Usman Ahmed

Daniel Asamoah

George Ball

Marouen Ben Jebara

David Bourrie

Steven Carnovale

Wonsuk Cha

Josey Chacko

Cherry Chen

Jimmy Chen

Young Sik Cho

Suvrat Dhanorkar

Ram Jumar Dhurkari

David Drefus

William Ellegood

Benjamin George

Varun Gupta

Sara Hajmohammad

Shih-Hui Hsiao

Janka Hujak

Behrooz Kamali

J.B. Kim

Nisha Kulangara

Gregory Larosiliere

Mohammad Merhi

Jiahui Mo

Liying Mu

Willis Mwangola

Eman Nasr

Jae-Young Oh

Mark Paddrik

Mikaella Polyviou

Fei Qin

Linda Qin

Bernie Quiroga

Vafa Saboori-Deilami

Roozmehr Safi

Ana Sariol

Sarah Schafer

Nehemiah Scott

Asad Shafiq

Luv Sharma

Sooil Shin

Cherry Singhal

Keith Skowronski

Yinliang Tan

Huay Ling Tay

Serdar Turedi

Saravanan Venkatachalam

Kim Whitehead

Lijuan Wu

Pei Xu

Sophie Yang

Zhiguo Yang

Maryam Memar Zadeh

Yu Zhao

2013 DSI Annual Meeting Awards

DECISION SCIENCES INSTITUTE
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November 16 - 19, 2013

DENNIS E. GRAWOIG DISTINGHISHED SERVICE AWARD

E. Powell Robinson, Jr., University of Houston

BEST PAPER AWARDS

Best Application Paper

Supply Chain Planning at a Chemical Process Industry
    Nils-Hassan Quttineh, Linköping University
    Helene Lidestam, Linköping University

Best Empirical/Theoretical Paper

Why Do Some Product Recalls Succeed and Others Fail?: A Grounded Theory Investigation of the Recall Process
Kaitlin Wowak, The University of Notre Dame
Christopher Craighead, The Pennsylvania State University
Dave Ketchen, Auburn University

Kaitlin Wowak

Best Student Paper

Conceptualizing Redundancy in Hospital Operations—The Key to Dynamic Balance
    Huay Ling Tay, University of Melbourne, Australia
    Vikram Bhakoo, University of Melbourne, Australia
    Prakash J. Singh, University of Melbourne, Australia

Best Interdisciplinary Paper
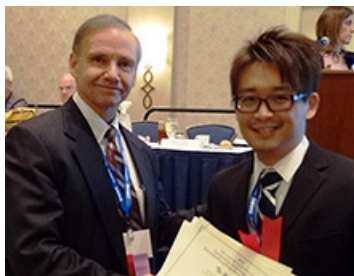
Managing Brand Equity in E-Banking: A Simultaneous Equations System Approach
Ta-Wei Kao, The State University of New York at Buffalo
Winston T. Lin, The State University of New York at Buffalo
Hsin-Hsin Chang, National Cheng Kung University

Ta-Wei Kao

INSTRUCTIONAL INNOVATION AWARD

Winner:

The Power of '20 Questions': Increasing Student Interest and Engagement with Business Cases by Turning Them into Consulting Exercises
Sinan Erzurumlu, Babson College

Sinan Erzurumlu

Honorable Mentions:

Teaching Innovations Using Active and Team-Based Learning in Business Classrooms
Brent Kitchens, University of Florida
Tawnya Means, University of Florida
Yinliang Tan, University of Florida

Yinliang Tan

Supply Chain—Marketing Shark Tank Experiential Lab Game in Interdisciplinary Business Education: Qualitative and Quantitative Analyses
Anshu Saxena Arora, Savannah State University
Amit Arora, Georgia Southern University

Anshu Saxena and Amit Arora

BEST TEACHING CASE STUDIES AWARD COMPETITION

Where in the World Is Timbuk2? Outsourcing, Offshoring, and Mass Customization
    Kyle Cattani, Indiana University
    Gérard Cachon, Wharton School, University of Pennsylvania
    Serguei Netessine, INSEAD Business School

Honorable Mention:
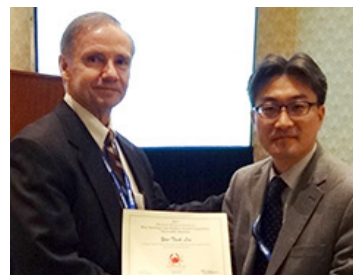
Creating Shared Values through a Socially Responsible Supple Chain: The Case of Samsung Tesco
Yoo-Taek Lee, Boston University School of Management

Yoo-Taek Lee

2013 Annual Meeting Snapshots

Baltimore!

DECISION SCIENCES INSTITUTE
44th Annual Meeting
November 16 - 19, 2013

Ram Narasimhan with Carol Latta's sisters Kathi (left) and Diane.

2013 Dennis E. Grawoig Distinguished Service Award Winner Powell Robinson

BALTIMORE

2013 DSI Fellow Asoo Vakharia

The DSI Home Office staff gather with DSI members and Carol Latta's sisters for a toast.

Post-Doctoral Positions in Logistics & Supply Chain Management Across the Entire MIT Global SCALE Network

MIT's Global Supply Chain and Logistics Excellence (SCALE) Network of research and education centers has multiple post doctoral positions in the area of transportation, logistics and supply chain management. The SCALE Network consists of four centers: MIT Center for Transportation & Logistics (Cambridge, MA, USA), Zaragoza Logistics Center (Zaragoza, Spain), Center for Latin-America Logistics Innovation (Bogotá, Colombia), and Malaysia Institute for Supply Chain Innovation (Kuala Lumpur, Malaysia). Post-doctoral positions are open in all four centers.

Responsibilities

Post-Doctoral Associates are responsible for conducting independent research, assisting and taking leadership in writing manuscripts, and meeting with project sponsors. Candidates are also expected to support educational activities and publish in top international journals. Preference will be given to those with both methodological and practical work and research experience. Post doctoral appointments will be given for one or two years, starting as early as Spring 2014.

Qualifications

Candidates should possess:

• A PhD in supply chain management, transportation, logistics, operations management, information systems, engineering, economics, business, or a related discipline;

• Ability and desire to publish in top academic journals;

• Evidence of the ability to develop and deliver lectures and class material at the graduate level (both Masters and Doctoral);

• Experience with industry, preferred.

Application

To apply, please submit a letter of interest, curriculum vita emphasizing research and teaching capability along with industry experience, and contact information for references. Please indicate your region(s) of interest (North America, Europe, Latin America or Asia) in your cover letter. Submit material to:

MIT Global SCALE Postdocs
77 Mass Ave, Room E40 275
Cambridge, MA 02139

scale-postdoc-search@mit.edu

Electronic submissions are encouraged. Review of applicants is underway and continues until **March 31st, 2014**. All positions command a competitive salary commensurate with qualifications. Starting dates are negotiable.

MIT Global SCALE centers offer a culturally diverse teaching and research environment and provide equal opportunity for all applicants. Applications from women and minorities are encouraged.

For more information about the MIT Global SCALE Network please visit **scale.mit.edu**. ∎

FUTURE DSI ANNUAL MEETINGS

2014   **November 22-25, Tampa Marriott Waterside Hotel & Marina**

2015   **November 21-24, Sheraton Seattle Hotel, Seattle, WA**

Submitting articles to *Decision Line*

Members are invited to submit essays of about 2,000 to 2,500 words in length on topics of their interest, especially articles of concern to a broad, global audience. Please send essays (including brief bio and photo) to either the respective feature editor or to Editor Maling Ebrahimpour.

Deans' Perspective & Editor
Maling Ebrahimpour, University of South Florida, Saint Petersburg
bizdean@usfsp.edu

Doctoral Student Affairs
Varun Grover, Clemson University
vgrover@clemson.edu

E-Commerce
Kenneth Kendall, Rutgers, The State University of New Jersey
ken@thekendalls.org

From the Bookshelf
James Flynn, Indiana University, Indpls.
ejflynn@iupui.edu

In the Classroom
Kathryn Zuckweiler, University of Nebraska, Kearney
zuckweilerkm@unk.edu

Information Technology and Analytics
Subhashish Samaddar, Georgia State University
s-samaddar@gsu.edu

International Issues
Andre Everett, University of Otago, New Zealand
andre.everett@otago.ac.nz

Membership Roundtable
Gyula Vastag, University of Pannonia/Corvinus University of Budapest
gyula.vastag@uni-corvinus.hu

Production/Operations Management
Daniel A. Samson, University of Melbourne, Australia
d.samson@unimelb.edu.au

Research Issues
Mahyar Amouzegar, California State Polytechnic University, Pomona
mahyar@csupomona.edu

The confere nce turned out as expected, that is, great—and some more. Some of the highlights of the conference were: authors from 46 countries submitted their work for possible presentation at the 2013 conference, with the U.S. having majority representation (80 percent), followed by Taiwan and Japan. Keynote speeches were well attended and well received by our membership. We had almost packed rooms for the two presenters. Overall, all venues and tracks of the conference were successful in attracting participants to make the experience of presenting a paper or a talk meaningful for all, including audience and presenters. The survey of participants generally concurs with the above statement. You'll find more details from Funda in this issue of *Decision Line.*

Before DSI elections take place, we usually present the nominees for presidents-elect and this year we have two very strong candidates: Manoj Malhotra and Morgan Swink. Please read their goals for DSI in their statements—ballots will be e-mailed in the upcoming weeks. In addition, due to changes in the constitution and board reorganization, members will be voting on vice presidents to represent divisions.

A word about next year's conference: the 2014 DSI Annual Meeting will be held in Tampa, Florida. I know Program Chair Johnny Rungtusanatham (Ohio State University) is already hard at work to create a very interesting and exciting program for this meeting, so please mark your calendar for November 22-25 to attend and make this a successful conference. In fact, I encourage you to plan to stay after the conference to enjoy your Thanksgiving in Saint Petersburg/Tampa area for a fabulous and relaxing time and to enjoy the many amenities that this region of Florida has to offer.

The DSI board met during the 2013 conference and discussed important issues that will impact the future of DSI. All of us hope that the end result is a stronger and a more solid organization that attracts faculty and professionals, and help sets the course for a bright future.

Marc Schneiderjans and a team comprised of board members formed the search committee for the new executive director. After much deliberations and interviews with selected individuals from the pool of applicants, it was decided to hire an operations manager for the organization and restart the search for a new executive director. Please read the minutes of November 2013 (included below)—it gives you a more accurate picture of the status of the organization.

Among the decisions that the board made was the realignment of international DSI with different divisions. In addition, we are working on a World Congress led by Barbara Flynn in 2015.

There is much to do to make DSI a stronger organization and a truly global organization—and I encourage all members to take an active role in pursing these goals. Wishing you all a very successful 2014. ∎

Decision Sciences Institute (DSI) Board of Directors Meeting, Nov. 15, 2013
Minutes of Vote of Home Office Decision

Background—By-Law Change
Following the June 2013 DSI Board of Directors Meeting, President Maling Ebrahimpour emailed the DSI membership on June 14th, asking the membership to reply if they believed that we should have a vote of the membership to approve a proposed change to ARTICLE XVI-BYLAWS.

The email indicated the changes which would be required in the bylaws if the Institute and its executive director were located somewhere other than the state of Georgia. President Ebrahimpour asked the members . . .

"Please consider this your notice of the Board of Director's "proposed change to Bylaw 1," as instructed in Article XVI. If you wish to request a vote of the membership (as stated in Article XVI, 2a), please reply to this email by no later than July 15, 2013."

The Constitution requires that if five percent or more of the membership asks for this vote, DSI would proceed with a vote of the entire membership. Only five individuals replied to the email inquiry, less than five percent. Given this response, the bylaws enable the Board of Directors to vote on this change by a two-thirds majority.

Accordingly, the Board of Directors is empowered (see Article XVI, 2a) to vote on this change to our bylaws. The Board voted on August 15, 2013 (by two-thirds majority, as required) to approve the change in the bylaws as specified below.

Background—Request for proposals for hosting DSI Home Office / Committee on Home Office Location
On Tuesday, August 6, 2013, DSI President-Elect Marc Schneiderjans emailed the membership a Request for Proposal (RFP) "to explore alternative locations for the DSI Headquarters that might enhance our opportunities for growth and better serve our future needs." We received an email stating a willingness to continue current-level support from Georgia State University (our current home office location) and a new proposal from the University of Houston.

Votes on November 15, 2013
At the meeting of the DSI Board of Directors meeting on November 15, 2013, the Board heard from the Search Committee on Home Office Location (Marc Schneiderjans (Chair), Rebecca Duray, Stuart Orr, Robert Pavur, and Jatinder Gupta). A visit was undertaken by the committee Chair to compare DSI Home Office support levels at both locations. The Search Committee members reviewed the observations made by the Chair and conducted further analysis comparing the current-level support for the DSI Home Office at Georgia State University and the proposed level of support at the University of Houston, before reaching a recommendation. Discussion took place at the November 15, 2013 DSI Board of Directors meeting, in the absence of two board members having affiliations with the University of Houston. After discussion, a vote of the full DSI Board of Directors was undertaken with a secret ballot. By a unanimous vote, the Board approved the proposal from the University of Houston and beginning the process to formally relocate the DSI Home Office from Georgia State University to the University of Houston.

Subsequently, the Board also voted to change the bylaws as described in the email to the membership on June 14, 2013. Each instance of the word "Georgia" will be replaced with the word "Texas."

Remembrances in Baltimore . . .

Note of Appreciation from Carol Latta's Family

Kathi, Tyler, Billy, Ray and I want to thank you all for having us here in Baltimore for the 44th Annual DSI Conference which not only allows us to honor Carol but also to witness the deserving young scholar who is the first recipient of the Carol J. Latta Memorial DSI Emerging Leadership Award.

I know how difficult it must be for all of you to be here yet not see Carol's beautiful, smiling face at the head table, at the various meetings, presentations and dinners. Rereading some of the heartfelt tributes many of you made in *Decision Line* and guest books these last five months has made me even more aware of how loved and respected Carol was by her DSI family. "Unforgettable," "exquisite," "compassionate," "helpful," "kind," "cheerful," "thoughtful," the "cornerstone," the "steady rudder," the "heart and soul of DSI," an "effective leader with the ability to make every person she encountered feel important" . . . these and many, many other expressions of admiration, respect, and love so well defined the person who was Carol. We thank you for letting us share these two days with you, your stories and memories of our sister, Carol.

—from Diane Brandstaetter

Carol always called me after she returned from conferences and meetings to tell me about her trip and how everything went. I believe it was just a year ago that she called me while she was still in San Francisco staying in the Presidential Suite which she called The Obama Suite, since he had stayed there the week before. She was over the moon!

One thing that was very apparent while talking to her was how much she loved the many people associated with DSI. She told me about the colleagues she had seen, what was going on with careers and families. I had met only a few of her Atlanta staff, but I felt that I knew so many people very well.

We had talked often about her retirement. She was tired and ready for it in some ways, but she was so afraid of losing contact with so many dear friends that she postponed it as long as she could. I know she announced it last February. Many times between then and her death she cried when she talked about leaving DSI.

I want to thank Carol's Atlanta staff for all you've done these past months. I know that she was extremely proud of you, and I can see why. She loved you and considered you her friends and confidants. It has been terribly hard for us, her family. I can only imagine how difficult it has been for you to carry on. Thank you for being there for her always.

—from Kathi Rivers

Reflections in about Our Friends, Carol and Linda from Mike Parent

It was an entire career ago that Linda and I met as new hires at the University of New Hampshire. In the 44 years that followed, my initial impression of her never changed. Linda's combination of wit and wisdom was a delightful modern persona of traditional New England values, and her compelling intellect was entertaining. Her stories always served a purpose and often gave new meaning to personal experiences.

In 1977, I traveled to Atlanta to meet Dennis Grawoig and outline our plan to leverage meeting location to build attendance and membership at Western DSI (then AIDS). He introduced me to Carol. She had just begun working for DSI but had such a clear understanding of what DSI was and where it was going that at the time I assumed she had always worked with Dennis. Carol's attention to detail and process made her a "go-to" person for anyone who had a DSI assignment. Carol's demeanor was one of gracious sophistication often masquerading as southern hospitality. Close your eyes and put a face on DSI; it's Carol's.

To honor the memory of Linda and Carol, and for the rest of us, I should propose a toast that grew in the same vineyard as the grapes that made this wine:

Friends are the family we get to choose for ourselves . . .

INSTITUTE CALENDAR

■ MARCH 2014

March 12 - 15
The **2014 Annual Meeting** of the Southwest DSI Region will be held in Dallas, TX, at the Sheraton Downtown.

March 27 - 29
The **2014 Annual Meeting** of the Northeastern DSI Region will be held in Philadelphia, PA, at the Sheraton Philadelphia Society Hotel.

■ APRIL 2014

April 1 - 4
The **2014 Annual Meeting** of the Western DSI Region will be held in Napa, CA, at the Embassy Suites Hotel.

April 11 - 13
The **2014 Annual Meeting** of the Midwest DSI Region will be held in Chicago, IL, at the Allerton Hotel.

■ JUNE 2014

June 1
Submission deadline for special issue of *Decision Sciences Journal of Innovative Education*. See page 21 for details.

June 29 - July 2
The European Region will hold its 5th annual conference June 29 - July 2, 2014, at the University of Southern Denmark. Submission deadline is **March 15, 2014**.

■ AUGUST 2014

August 1
Submission deadline for special issue of *Decision Sciences Journal of Innovative Education*. See page 22 for details.

■ JULY 2014

July 18 - 24
The Asia-Pacific DSI Region will hold its 19th annual meeting in conjunction with ASCOM and JOMSA at Yokohama National University, Yokohama, Japan. Submission deadline is **April 4, 2014.**

■ NOVEMBER 2014

November 22 - 25
The 45th Annual Meeting of the Decision Sciences Institute will be held in Tampa, Florida, at the Tampa Marriott Waterside Hotel and Marina. Submission deadline is **May 1, 2014**.

■ NOVEMBER 2015

November 21 - 24
The 46th Annual Meeting of the Decision Sciences Institute will be held in Seattle, Washington, at the Sheraton Seattle Hotel.

For updated 2013 regional meetings listings, visit www.decisionsciences.org/regions/default.asp

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Decision Sciences Institute
Application for Membership

_____

Name, Institution or Firm

_____

Address (☐ Home ☐ Business)

_____

_____

Phone Number

Dues Schedule: ___ Renewal ___ First Time ___ Lapsed

(circle one)   U.S./Can. International

Regular Membership ....$160 .... $160
Student Membership ....$25 .... $25
(Student membership requires signature of sponsoring member.)

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(Emeritus membership requires signature of member as a declaration of emeritus status.)

Institutional Membership ....$160 .... $160
(You have been designated to receive all publications and special announcements of the Institute.)

Please send your payment (in U.S. dollars) and application to:
Decision Sciences Institute, Georgia State University, J. Mack Robinson College of Business, University Plaza, Atlanta, GA 30303. For more information, call 404-413-7710 or email dsi@gsu.edu.

CREDIT CARD INFORMATION: ❏ Visa ❏ MC ❏ AmEx ❏ Disc.

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Card No. _____ Expires: ___/___

Card Holder's Name _____

Signature_____
(Please Print)