A Scholarly Magazine of the Decision Sciences Institute

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DECISIONSME

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Decision Line: A Legacy and Rebirth

In 1969, soon after the American Institute for Decision Sciences was formed, Decision Line was born as a 'newsletter for the decision scientist'.... While it may no longer be attached to a publication, it will live on as the name of the news section of the DSI website. >> More

2020 DSI ANNUAL CONFERENCE



Message from the 2020 Conference Chair

More than before, we think that this year it is also important for the DSI community to reflect together on the future of academia..... We hope students and faculty will enjoy the selection of educational and research workshops we have organized. New this year, the Doctoral Symposium takes place as a separate full-day event the day before the conference. >> More

2020 DSI DOCTORAL SYMPOSIUM

NFORMATION TECHNOLOGY



Doctoral Symposium

The Doctoral Symposium will consist of an Opening Panel, a Meet the Editors Interactive session, three professional development workshops focused on research running concurrently with three professional development workshops focused on teaching, and a final wrap-up session. .>> More



A New Paradigm of Organizations is Here

It has been a privilege to serve as the Feature Editor - Information Technology for the Decision Line during the past four years. I have thoroughly enjoyed my role to do some careful research on the most current topics or issues dealing with IT and its applications for value creation in organizations and implications for individuals and society at large. >> More

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 by Mehmet Yalcin
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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 713-743-4815.

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

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ISSUE MONTH DEADLINES FOR AUTHORS
January issue December 10th (prior year)
March issue February 10th

May April 10th
July issue June 10th
October issue September 10th

VISION STATEMENT

Decision Sciences Institute will be recognized globally as a scholarly professional association that creates, develops, fosters and disseminates knowledge to improve managerial decisions.

MISSION STATEMENT

Decision Sciences Institute provides forums to create, disseminate and use knowledge to improve managerial decision making involving systems and people.

Vijay R. Kannan 2020- 2021 DSI President

As summer turns to fall (or winter to spring for those in the southern hemisphere!) business schools across the globe continue to navigate the challenges of CO-VID-19. It is a source of inspiration to see colleagues adjust courses and pedagogies to fit the circumstances while remaining responsive to student needs. It is equally rewarding to see how they are balancing additional teaching demands resulting from the pandemic with the need to remain productive in scholarly pursuits. Out of a crisis we are seeing individuals rise to the occasion and show what can be done under challenging conditions. This is also apparent in the efforts of many within DSI as we strive to keep moving forward.

I am delighted to announce the addition of two new international chapters to the DSI family. Conversations that began more than a year ago have culminated in the DSI Board approving China DSI and Qatar DSI chapters. Thanks to the efforts of Antony Paulraj (Nottingham University Business School China) and Khaled AlShare (Qatar University), we are starting a new page in DSI's international engagement. I am excited about the opportunities that lie ahead in building DSI's presence in China and Qatar and in becoming the organization of choice for decision science educators there.

Things are shaping up well for the first virtual DSI annual conference. A total of 867 submissions were received, an exciting number considering submission numbers for recent physical conferences have typically been in the 805 - 1,050 range. At the time of writing, 805 registrations have been received for the conference and an additional 168 for the Doctoral Consortium. One of the innovations from taking

the conference virtual this year is that the consortium is a standalone event the day before the main conference. Now these attendees can participate in the consortium, and should they choose, register for the conference as well to take advantage of all three days of the main event.

The main conference will have all the usual elements including more than 260 regular and award sessions, 19 professional development workshops, and 3 keynote sessions. The keynotes will feature tech industry leaders Sudhi Ranjan Sinha and Michael Casale on 'Reimagining Business with Al' and 'Training with Virtual Reality Technology', respectively, and an interview with President and CEO of AACSB International, Caryn Beck-Dudley, on 'Business Schools in Transition'. In a featured panel, 'State of Academia in Business Schools', Deans Sanjay Gupta, Manoj Malhotra, Amy Hillman, Stephen Mangum, and Paul Pavlov will discuss the impacts of the pandemic on the decision sciences community. A working group is also developing a program of social activities and virtual site tours. I encourage you to let colleagues outside DSI know about the conference and nudge them towards registering for what will be an excellent event.

On the subject of conferences, conversations have been taking place regarding region/division conferences in the spring of 2021. NEDSI will hold their virtual conference in March, MWDSI is planning a spring virtual event, and EDSI is moving forward with plans for their conference in May. Given uncertainties regarding the pandemic and budget restrictions, WDSI will not hold their conference in 2021, and SWDSI is still to make a final decision.

As mentioned in the July letter, DSI is undertaking a comprehensive brand analysis. While this has been discussed by prior boards, it is the first time in recent history that we have moved forward in critically assessing the DSI brand, the effectiveness of our messaging, and the alignment of the brand and organizational identity with our strategic plan and stakeholder interests. Many of this year's committee charges were designed to provide insights which, when coupled with the results of the brand analysis, will inform future decisions about service offerings and communication in a holistic manner. An RFP yielded several proposals that are currently being evaluated, with a recommendation and decision

anticipated next month. Expectations are that the analysis will be completed in early spring and provide input to committee charges for the 2021-2022 board year.

This is indeed an exciting time for DSI. We continue to make progress on several fronts and to build an increasingly sound foundation for the future. Despite the challenges around us, I am confident about the direction we are headed and optimistic about what is to come, starting with our annual conference next month. I look forward to 'seeing' you there.

Vijay R. Kannan President

The DSI member management system, Growth-Zone, enables DSI to better manage and track membership renewal dates, payments and provides invoices in the member's portal for payment, download and printing. The process for member



renewal is as follows: 30 days from member renewal due date, an email is sent to the member with an invoice attached. The date of the invoice is the renewal date/ deadline. Members may pay

directly from the invoice via a link embedded within. Or pay from their DSI member portal. If payment is not received by the due date, a reminder email is sent. If payment is not received within 30 days after the renewal date, one last email is sent asking the member to confirm they wish to continue their membership and allows another seven days for a response/payment. If no response is received, it is assumed the member no longer wishes to continue as a DSI member and the membership is automatically discontinued. This will void the invoice. Should a member wish to renew at a later date, they simply JOIN again and the old record will be attached to the new membership to preserve the history.

Questions? Contact the Home Office at 713-743-4815 or email info@decisionsciences.org.



Maling Ebrahimpour is the Dean and Professor of Supply Chain in the College of Business at The University of Rhode Island. He is an active researcher and has authored or coauthored 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 University of Nebraska-Lincoln and has served on the editorial review board of several iournals. including Journal of Quality Management, Journal of Operations Management, and International Journal of Production Research. mebrahimpour@uri.edu

Dear readers,

First, when we published our previous issue, we were hopeful that the COVID19 might subside or might be over by the time we prepared our October issue. Well, it did not turn out as expected. Indeed, COIVD19 impacted more families and took more lives. I am sure you can identify at least one person in and around your network that has been impacted by the pandemic. It is indeed a time that most decisions are made under very high levels of uncertainty. All of us in higher education have been impacted by COVID19, personally and professionally.

Since March of 2020 the USA, and before that the world, started changing. We are now living in a new paradigm, an unfamiliar territory, an experience that we do not want to have, but we have no choice. I am a believer that we as a human race are the most resilient and not only will we survive, we will thrive. In fact, I believe because of our experience with COVID19, humanity will be gentler and kinder and our creative mind and imagination will create ample opportunities for us to find ways to do even better on this planet and even beyond. History provides us with many examples of our survival during many different pandemics, disasters (either caused by humans or by nature) and at the end, we came out of each one with more resiliency. Our creative minds always find solutions. It is not different this time. It may take longer, but it will happen. Things will be different, but it will be for the better. We learn from our mistakes and sometimes it takes a major disaster for us to learn, and the lesson is happening now.

This is the last issue of *Decision Line* in its current format. We have seen 51 years of the *Decision Line* as the Scholarly Magazine of the Decision Sciences Institute. It is now changing and morphing into two separate news avenues - an online publication and an online blog feature. The DSI Board envisioned the breakup of the current format of *Decision Line* last year at their board meeting. *Decision Line* sections related to the news from our various regions, conferences, membership news, etc. will be presented on the DSI

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website as a blog and in various announcements through emails to the membership. The second aspect of the current Decision Line which focuses on articles, written or solicited by different Feature Editors, will continue in a completely new format. The focus of this new online publication will be on professional development for our membership. The new online publication will present ideas about our professions in the form of published articles, videos, and a variety of other technologies that are now readily available to us. It will be focused on professional development relevant to the interest of DSI's different stakeholders such as doctoral students, early career members, and more seasoned members. This new publication will be more interactive and contain not only research and professional articles, but also may contain videos, the latest technology about research, teaching, and other relevant topics in higher education. For more detail about this exciting idea and the new publication, please read the *Invitation to Apply for the Editorship*

on page 18 I urge you, if you are interested in taking a more active role in your professional organization (DSI) you might want to apply for the editorship of the newly conceived publication. I promise you it will be fun.

With this issue, my role as the editor with the current format of Decision Line comes to an end. As your editor from 2012 to 2020, I would like to say that it was a privilege and a great honor to serve our professional organization and our membership for eight years. I had the privilege of working with the most wonderful individuals who supported the *Decision Line* for many years, namely, Feature Editors. I am humbled by their hard work, dedication, and knowledge that they devoted their most precious resources, their time, in supporting Decision Line by writing meaningful, interesting, and thought-provoking articles or soliciting these articles from other members. Feature Editors are the lifeline of this magazine. My sincere thanks go to all of them who served for many years during the life of Decision Line. I would be remiss if I did not call names of those who directly worked with me. In this last issue, I personally thank them for all they have done. Most of these feature editors worked with me during the last eight years and some of them have served even before I joined as the editor of Decision Line.

Special thanks go to Varun Grover, Doctoral Students Affairs; Kenneth Kendall, ecommerce; Kathryn Zuckweiler, In Classroom; Mehmet Yalcin, From the Bookshelf; Silvana Trimi, Information Technology; Subhashish Samaddar, Analytics and Data Science; Vivian Landrum, In the News; Minoo Tehrani, International Issues; Gyula Vastag, Membership Roundtable; Daniel Samson, Production/ Operations Management; and Mahyar Amouzegar, Research Issues.

Let me give you an example of the dedication of our feature editors. Based on the review of the list of feature editors, Ken Kendall is the longest serving Feature Editor in the history of *Decision Line*. He has worked as the feature editor with several editors before me. He is the feature editor for the ecommerce

and helped define the field of ecommerce over the last 20 years. He contributed a total of 54 articles in the *Decision Line's* ecommerce column. In his articles Ken explored concepts and philosophies, informed us about innovations that made ecommerce possible, enlightened us to what was happening in practice, and expressed opinions about the past, present, and future of ecommerce. This is just one example of one feature editor.

In this issue, an article titled "DECISION LINE: A LEGACY AND REBIRTH," will share how DL evolved to be what it is now and what it will be. You will read how *Decision Line* changed from a simple newsletter to what it is now, The Scholarly Magazine of Decision Line.

Now let's talk about the content of the last issue. As it has been tradition, the October issue heavily focuses on the upcoming Annual DSI Conference that is held every year in November. Well, the last issue of DL is no exception. This issue is packed with news and information about the conference. I'd like to bring your attention to the three keynotes. As the brief description indicates, they are promising to be very informative. I encourage you to attend these virtual keynotes at the conference.

The articles in this issue cover a gamut of topics. In "A NEW PARADIGM OF ORGANIZATIONS IS HERE," Silvana Trimi discusses how the 4th Industrial Revolution (4IR) along with digital transformation has changed the organization's paradigm and how CO-VID19 expedited this change from the primary focus on financial outcome for the major stakeholders in the old paradigm to creating value for the greater good for society and humanity well beyond just for the immediate stakeholders in the new paradigm. Varun Grover, Feature Editor for Doctoral Issues article titled "MAK-ING AN IMPRESSION WITH YOUR RESEARCH PITCH." discusses several critical success factors and how these factors can make a very positive impression of the author's work on the audience. He defines critical success factors as the ability to communicate

that the topic is something to care about personally and/or societally, to communicate simply, communicating depth of your work without going into depth, and to communicate your return on investment in the project by cherry picking the most interesting findings. These critical factors are all well recognized by experienced authors /researchers. He states that the key is to link these three factors such that they "tell a story" of interest to the reader.

In Supply Chain Management, Danny Samson's article titled "NEW CHALLENGES, NEW RESEARCH PROBLEMS AND OPPORTUNITIES," discusses the new challenges facing the SCM area. Challenges such as strategic and political changes (trade wars, intensification of nationalism), the avalanche of new technologies involving digitization, and environmental and climate change concerns. He then questions if the current research approaches are appropriate to deal with the new problems that supply chain managers will face during the next few decades. He concludes that researchers must do more than modelling and performing empirical research. He states that we must innovate new approaches that will be viable in a radically new condition.

Probably, the most in-depth article in this final issue of Decision Line in its current format is by Ken Kendall. In his article "ECOMMERCE IS BECOMING MIDDLE AGED: A RETROSPECTIVE OF ECOMMERCE RESEARCH, OPINIONS, AND PRACTICE IN DECISION LINE," Kendall summarizes his view of the ecommerce and reviews and summarizes the contribution of articles in the ecommerce area in the following categories:

- Philosophical Arguments, Opinions, and Predictions regarding Ecommerce
- Innovation that Supported Ecommerce
- Surveys and Observations about Ecommerce
- Perspectives on Practice in Ecommerce
- Theories and Opinions Based on My Personal Experiences with Ecommerce

I encourage you to read this article to get a thorough understanding of the shaping of ecommerce, as Kendall explains the advent of the new age of ecommerce.

Under From the Bookshelf, Mehmet Yalcin provide us with a detailed review of a book titled "THE HUMA-CHINE: HUMANKIND, MACHINES, AND THE FUTURE OF ENTERPRISE." This book is authored by Nada R. Sanders and John D. Wood, Esq. This book is published by Routledge (Taylor & Francis Group) in 2019. In his review, Yalcin tell us of the optimistic view of the authors about the impact of AI that will lead to the global distribution of automated rational thought, the same way that the printing press led to the global distribution of knowledge. Yalcin highly recommends this book to all those who seek a better understanding of the Humachine processes.

Kathryn Zuckweiler, the Feature Editor of the "In the Classroom" column reflects on her experience as the feature editor and she encourages readers to remember that teaching has the most potential to impact students. Like Zuckweiler, Gyula Vastag, in his article, "TEMPURA MUTANTUR," provides a nostalgic recount of his experience as a contributor and then as a feature editor, showing a deep connection and advocacy for his favorite professional organization, i.e., the Decision Sciences Institute. He recounts his experience and reminds us that time changes and with the changes, new ideas come to life. In fact, this issue truly shows the important role of the feature editors and their adoration for DSI.

As the last editor of the Decision Line in its current format, I like to thank all feature editors who collaborated with me, all contributors and all those who helped the DL to be a part of the DSI. A very special thanks to Krishna Dhir who encouraged me to serve as the editor of DL when his term ended. I never knew this endeavor would last for eight years and how fast these eight years have gone by (Tempus Fugit).

I know the direction for the new publication is right and will strengthens DSI and will be a positive modification of current DL and as it was stated, DL legacy

will always be part of DSI's history. The rebirth of the new DL under a new title will enlighten our membership with a focus on Professional Development. I am looking forward to reading the first issue of the new publication, whatever its title may be.

I thank you, the DSI board, for your dedication and wisdom to look into the future and identify the needs of our members. A special thanks to Vivian Landrum, Executive Director, and Cris Hafner who supported me with the design and set up of the many issues of *Decision Line*.

It is time to say goodbye to the current format of Decision Line and say hello to DSI's new vision for the dissemination of DSI news with its members and beyond, as well as the new professional development publication.

My most sincere thanks to all readers. Without your readership and your continued support of DSI, the publication of *Decision Line* would not have been possible for 51 years.

THANK YOU AND FAREWELL.

Maling Ebrahimpour, PhD Editor

Carmela Di Mauro 2020 Program Chair

THE 51ST ANNUAL CONFERENCE OF THE DECISION SCIENCES INSTITUTE

DECISION SCIENCES IN THE AGE OF CONNECTIVITY

NOVEMBER 20 - 23

MESSAGE FROM THE 2020 CONFERENCE CHAIR

By Carmela Di Mauro

Dear DSI members,

I am delighted to invite you to the 51st Annual Conference of the Decision Sciences Institute!

The conference theme for the 2020 DSI conference is "Decision Sciences in the Age of Connectivity". This theme was chosen as a platform to discuss the challenges that accompany the connected world, requiring us to rethink structures and processes within organizations and networks and the ways we make decisions.

When the conference theme was selected, little did we know that our world was on the verge of a dramatic change, and that the theme of connectivity would herald the first virtual conference in the history of DSI. Last April, with the support of the DSI community and DSI leadership, the conference program team decided to take the challenge and move on to organize a large scale online event. While being acutely aware that no virtual conference can replicate the opportunities to meet new and old colleagues offered by a face-to-face event, we believe that we can exploit the current realities to innovate and use technology in creative ways to benefit our members and create more inclusive conference events. We are deeply grateful to DSI members who supported this decision and provided inspiration.

In keeping with DSI conference tradition, the conference schedule includes keynote speakers, workshops,



panels, and paper sessions. In spite of the virtual format, we received 900+ submissions.

Keynote events include presentations on how new technologies are shaping business: "Reimagining Business with AI" by Sudhi Ranjan Sinha, author and former executive with Johnson Controls, and "Training with Virtual Reality Technology (VR): Improving and Predicting Workplace Behaviors" by Michael Casale, chief scientist with Strivr.

More than before, we think that this year it is also important for the DSI community to reflect together on the future of academia. For this reason, we have organized two other keynote events: "Business Schools in Transition: Perspectives from AACSB" by Caryn Beck-Dudley, Int. President & CEO, AACSB, and "State of Academia in business schools", a panel featuring the deans of five key business schools in the US.

We hope students and faculty will enjoy the selection of educational and research workshops we have organized. New this year, the Doctoral Symposium takes place as a separate full-day event the day before the conference (Nov 20). This exciting event is offered free to all DSI members. We have also introduced a new type of session during the conference, called "showcases", where presenters are matched to expert discussants who will provide feedback on their

submissions. The showcases are especially targeted towards strengthening our connections with doctoral student and emerging market communities.

I hope you will find the conference sessions thoughtprovoking and that they will offer opportunities to advance scientific inquiry, share new research methods with students, and improve our teaching via new pedagogical approaches.

We wanted to provide you not only an educational and enlightening conference, but a fun and unique event as well. As networking has always been an important component, we offer our "DSI Conversation Café", where you can meet up with friends and colleagues to 'have coffee' or catch up. Simply message them within the platform and set the time. Also new this year, we offer a "Break Arcade" featuring exercise, music, videos and other fun options to give you a respite from the thought-provoking sessions.

My sincere thanks go to the associate conference chairs, Rebecca Duray, Sriram Narayanan, Wendy Tate, CMS manager Stephen Ostrom and Executive Director Vivian Landrum for their tireless work and commitment to this event. I also thank the keynote speakers, track chairs, session chairs, panel and workshop organizers, panelists, and the presenters for their contributions that are invaluable to the creation of a high quality and successful program. I would also like to recognize the painstaking and dedicated work of the administrative staff and all the volunteers who are supporting the conference.

I hope to see you at the conference!

Carmela Di Mauro 2020 DSI Conference Chair

CONFERENCE KEYNOTES

Keynotes are an integral and important component to the DSI Annual Conferences. They motivate and

inspire while also providing valuable information that can be incorporated into attendees' daily lives.

KEYNOTE #1

Reimagining Business with AI

Sudhi Ranjan Sinha

Saturday, November 21

Sinha, a business and technology leader, kicks off the conference with the first keynote. Titled "Reimagining Business with AI," it fits well into the conference theme of Decision Sciences in the Age of Connectivity.



Sinha shares the following regarding his presentation: "We live in the algorithmic age today where AI impacts nearly all aspects of our lives and work. AI has existed as a discipline for more than 60 years. Its recent rejuvenation is driven by the advances in digital capabilities around IoT, big data management, cloud computing, and communication technologies. As per a recent McKinsey study, by the end of 2030, the impact of AI is expected to be about \$13 trillion with over 70% of companies impacted by AI. While AI brings a lot of new possibilities, it also brings new problems because businesses have to now reinvent themselves in this new world order. The keynote address will explore this topic and its implications for academia."

Topics to be covered in the keynote address:

- · Dawn of the algorithmic age
- Reimagining businesses with AI and digital technologies
- The evolving intelligent society
- The emerging research challenges
- Renewed role of academia in lifelong learning in decision sciences

Sudhi is a business and technology leader with over 22 years of experience. He presently serves on the Boards of several digital start-ups. Previously he was the VP and GM of Digital Solutions for Johnson Controls (JCI) building new data-enabled businesses. Prior to working for JCI, Sudhi spent 11 years with Tata Consultancy Services in various leadership roles. Sudhi has several granted and pending patents in smart building technologies and has published two books on big data and IoT. Sudhi has worked in the US, Europe, and Asia; he currently lives in Mumbai, India and holds a bachelor's degree in Engineering from Jadavpur University, India.

dean at the College of Business at Florida State University and at the John M. Huntsman School of Business at Utah State University. Before her academic career, she was an attorney working in commercial and corporate law. In addition to teaching business



law, employment law, and business ethics, she has made many public presentations to large and small audiences on a variety of leadership and legal/ethical topics. Her work is published in several journals, including the American Business Law Journal, where she served on the editorial board.

KEYNOTE #2

Business Schools in Transition: Perspectives from AACSB

Caryn Beck-Dudley, International President & CEO, AACSB

Sunday, November 22

Business schools continue to operate in turbulent times. Issues such as COVID-19, rapid technological change, the challenges of globalization, and questions of opportunity, inclusion, and societal impact shape not only the business landscape but how business schools respond in preparing the workforce and leaders of tomorrow. AACSB International provides guidance to business schools as they strive to offer innovative and impactful programming that engages students, faculty, and the business community. AACSB International President and CEO, Caryn Beck-Dudley, will share her perspectives on where business education is, where it is headed, and the role of accreditation in raising the bar and positioning for the future.

About Caryn Beck-Dudley

Caryn Beck-Dudley became AACSB's new president and CEO in June 2020. She most recently served as the seventh dean of the Leavey School of Business at Santa Clara University. Beck-Dudley also served as

Beck-Dudley served two previous terms on the AACSB board of directors, and served as the 2018-19 board chair. She is currently the immediate past chair of AACSB. She interacts frequently with Silicon Valley companies and works with leaders in reimagining how higher education can serve the workforce needs of the future.

KEYNOTE #3

Training with Virtual Reality Technology (VR): Improving and Predicting Workplace Behaviors

Dr. Michael Casale, Chief Science Officer at Strivr Sunday, November 22

The last 10 years have seen a proliferation of Virtual Reality (VR) and Augmented Reality (AR) technologies, making it readily adaptable to a variety of remote and decentralized training and learning applications. Given the real world simulation capability of VR

experience, it's no surprise that companies from all over the Fortune 500 space have adopted VR and AR training for a variety of applications. In this talk, Dr. Casale will describe the work of STRIVR



OCTOBER 2020

with several fortune 500 organizations, specifically focusing on the novel data and analytics that have emerged from these workplace applications. These VR and AR technologies offer new and insightful window into workplace behaviors that can be used to better evaluate current workplace best practices as well as help predict future ROI.

Stephen Mangum, University of Tennessee, Knoxville

Paul Pavlov, University of Houston

This invited panel session will be offered Sunday, November 22. This panel features **Deans Sanjay Gupta**, Eli Broad College of Business, Michigan State

About Dr. Casale

Compelled by all things brain and behavior, I have focused my career on the science of the mind. From PhD work in the cognitive neurosciences to more applied research in healthcare and marketing, my applied quantitative background can turn insight into action. I've applied my years of behavioral expertise to a variety of domains, including optimizing work and home environments for motivation

and learning, understanding the behavior of consumer adoption, or bridging the gap between people and technology.

About Strivr

STRIVR's product is grounded in the science of VR and the numerous studies that have been done that prove VR to be a useful and powerful tool for learning and development. http://www.strivr.com/

FEATURED PANEL

State of Academia in Business Schools

Sunday, November 22

Moderator: Wendy Tate, University of Tennessee

Panelists: Sanjay Gupta, Michigan State University

Manoj Malhotra, Case Western Reserve

University

Amy Hillman, Arizona State University



University; Manoj Malhotra, Weatherhead School of Management, Case Western Reserve University; Amy Hillman, W.P. Carey School of Business, Arizona State University; Stephen Mangum, Haslam College of Business, University of Tennessee, Knoxville; and Paul Pavlou, Bauer College of Business, University of Houston. Moderated by Wendy Tate, University of Tennessee, Knoxville and 2020 Program Chair of Professional Development, this session will feature impacts of the pandemic on the decision sciences community, insights into the coming year, and challenges/opportunities anticipated.

PROFESSIONAL DEVELOPMENT WORKSHOPS AND PANELS

A wide array of professional development workshops and panels are scheduled for the conference, ten research PDW's and nine teaching PDW's. These workshops were featured in the May/July issue of *Decision Line*. Full descriptions can also be found on

the conference website - https://decisionsciences.org/ publications/decision-line/.

NEW THIS YEAR - SHOWCASES

Doctoral Research Showcase

Doctoral students are the future scholars of our field. This year the 2020 Decision Sciences Institute Conference introduces a new track to showcase doctoral research papers. This new track is distinguished from other regular tracks in several important ways.

First, it is exclusively for doctoral student papers that are in advanced stages of conceptualization with a view to mentoring and providing feedback on the papers. Second, each presenting paper is matched with appropriate discussants by the track chair to provide high-quality feedback, in addition to traditional audience feedback that the conference presentation provides. Only two to three papers allowed per session with a view to provide the audience and students time to discuss papers. Third, given the inaugural nature of this track, only twenty papers were accepted. Preference was given to candidates that are in the job-market, or close to the job-market. Any remaining papers were directed to a general track. This will be highly beneficial to students in the job market. Fourth, all presentations will be scheduled in order to maximize exposure for the doctoral students.

A \$300 prize will be awarded to the best paper submitted to the showcase.

EMERGING MARKETS SHOWCASE

Increasing attention and focus on emerging markets' issues and opportunities motivates the need to publish more research focusing on emerging markets' issues in mainstream journals. This year at the 2020 Decision Sciences Institute Conference, a new track is introduced on Emerging Markets which will be comprised of showcase and regular sessions.

The showcase is intended to provide mentorship and constructive feedback to researchers from emerging markets for development purposes. This new track will distinguish from other regular tracks in several important ways.

First, it is exclusively for researchers from emerging markets. Emerging markets generally include countries in sub-Saharan Africa, Middle East & North Africa, Latin America & the Caribbean and Asia (excluding Japan, China, Hong Kong, Singapore, Korea and Taiwan). Submitted manuscripts could be workin-progress papers or at advanced stages of conceptualization or development. Second, each presenting paper will be matched with appropriate mentors or discussants by the track chair to provide high-quality feedback, in addition to traditional audience feedback that the conference presentation provides. Only two to three papers per session will be scheduled with a view to provide the audience and researchers time to discuss papers. Third, given the inaugural nature of this track, only twenty papers were accepted into this special showcase. Preference was given to research papers that focused on emerging markets' issues and were at relatively advanced stages of development. Fourth, all presentations will be in a roundtable discussion format to foster interactive discussions and maximize the benefit for the presenting researcher. All other papers were routed to the regular track.

A \$300 prize will be awarded to the best paper submitted to the showcase.

SPECIAL EVENTS - NEW FEATURES

Pre-Conference Site Tour Adelsheim Vineyard Virtual Tour Friday, November 20

Join DSI on Friday November 20, 2:00-3:30 PST for a virtual pre-conference tour of Adelsheim Vineyard, a founding winery of the Willamette Valley and <u>Chehalem Mountains</u>' first winery. Adelsheim has played

an instrumental role in nearly every aspect of the Oregon wine story.

The tour will be followed by a Q&A with founder, David Adelsheim, and winemaker, Gina Hennen, and an optional (but highly recommended!) virtual wine tasting will take place at the



Registration for the tour is required in advance to participate. You must be registered for the DSI Annual Conference to be able to participate in this pre-conference site tour.

tors that are present within each step. Have all of your

questions answered by winery experts, and at the end,

enjoy a virtual tasting admiring the fruits of their labor!

Click here to register for the tour: https://forms.gle/ FwKEvopP2EEg8xKfA

We encourage you to order wines from Adelsheim prior to the tour to participate in the virtual wine tasting. Order by October 30 for delivery before November 20 (U.S. continental locations only).

Click here to order your wine for the virtual wine tasting: https://www.adelsheim.com/dsi.

Welcome from DSI President Kannan Saturday November 21, 10:15 – 10:45 am PT

President Vijay Kannan officially opens this year's



conference with a warm welcome for all attendees. Even though we are online, we can still come together to appreciate this annual conference.

DSI Annual Business Meeting Monday, November 23, 7:30 - 8:45 am PT

Make plans to attend the DSI Annual Business Meeting taking place at 7:30 am. Here President Kannan will provide an update on DSI activities, including financial, membership and general Institute activities. Members are encouraged to attend and will have the opportunity to exchange information and raise questions.

Awards Banquet Monday November 23, 10:30 - 11:45 am PT

Join President Kannan, Conference Chair Di Mauro and the entire Program Team as this event will feature all conference and Institute awards. Highlights include DSI Fellow, Best Paper, Doctoral Dissertation, Best Case Studies, Best Regional Paper and Journal awards.



Conversation Cafe

While physical hugs and warm handshakes cannot take place, networking with friends and colleagues will be possible via the DSI Conversation Café. Open during conference hours, attendees can message friends



or colleagues to meet in the Café. A host will be waiting to "take you to your table." This is the perfect place to "grab coffee" with a friend, "catch up over drinks" or simply grab a few moments to reconnect with those you desire to do so.

Break Arcade

Breaks are necessary and incorporated between every session. The Break Arcade will offer a variety of activities for attendees to peruse to take a mental and/or physical break. Options included in the Break Arcade are chair yoga videos, a variety of Top 10 music offerings, Bucket List Travel Destinations, and more. A fun way to disconnect for a short time before getting back into the conference sessions.

2020 DSI CONFERENCE REGISTRATION

Saturday, November 21 – Monday, November 23

Regular \$75 Emeritus \$75 Student \$75

2020 DSI DOCTORAL SYMPOSIUM

Friday, November 20

Regular, Emeritus, Student FREE

As a reminder, attendees of the DSI Annual Conference and the Doctoral Symposium are required to be Decision Sciences Institute members as of the date of the conference. To join DSI or renew your DSI membership, please go to www.decisionsciences.org. Members who need to renew will find their renewal invoice in their Accounts tab located in their Info Hub. DO NOT JOIN AGAIN IF YOU HAVE A CURRENT MEMBERSHIP. To renew, you must pay the invoice already in your account. If your account is more than two months past due, your membership has expired. To reactivate, then you must Join again and your old and new records will be merged. Please contact the Home Office with any questions.

DOCTORAL SYMPOSIUM

This year, the Doctoral Symposium will take place on Friday, November 20, as a standalone event from the Annual Conference. This Symposium is free to all attendees, however it is limited to DSI members. Registration is required to attend. Registration will be open up to the date of the Symposium. To register <u>click here</u>.

The Doctoral Symposium will consist of an Opening Panel, a Meet the Editors Interactive session, three professional development workshops focused on research running concurrently with three professional development workshops focused on teaching, and a final wrap-up session.

PROGRAM

Opening Panel – How to Navigate Your Academic Career

Facilitator: Wendy L. Tate, University of Tennessee

Panelists: Stephanie Eckerd, University of Tennessee Steven Carnovale, Rochester Institute of

Technology

Sining Song, University of Tennessee Stephan Wagner, Swiss Federal Institute

of Technology, Zurich

Morgan Swink, Texas Christian University
Peggy Daniels Lee, Indiana University

Research PDW 1 - The Review Process - How to Respond Effectively to Comments Received on Your Manuscript and How to Effectively Conduct a Peer Review

Presenter: Dr. John E. Bell, University of Tennessee

A key professional role that young academics should master is conducting a review of a manuscript for an academic journal. Similarly, as new researchers, you will be challenged to professionally respond to the comments you receive on your own manuscripts from a number of anonymous reviewers. This professional development workshop will focus on both of these topics. First, we will take a close look at what a

good review looks like, and we will discuss "what to do" and "what not do" as you create a professional review of an academic manuscript for a journal. This will include suggestions on format, how to help the authors develop their manuscripts, and how to send the right messages to the AE and Editor about the quality of the research paper. In the second section of the workshop, we will look at how to firmly and respectfully answer the critical comments you receive during the R&R process on your own manuscripts. We will look at Response formats, approaches to tackling tough reviewers, how to get clarity on vague review comments, and how not to make things worse for your paper. This workshop will not cover every approach to conducting reviews and responding to reviewers, but it is intended to share over twenty years of experience and the knowledge passed down from a number of other senior academics.

Teaching PDW 1 - Teaching in a Global Setting

Facilitator: Dr. Vijay R. Kannan, Utah State

University

Panelists: Rohit Verma, Vin University, Vietnam

Sabine Baumann, Jade University of

Applied Sciences, Germany

Vaidy Jayaraman, Great Lakes Institute

of Management, India

In this session, a panel of seasoned academics with extensive experience in teaching and academic program development across the globe will share insights on the realities of university teaching. They will offer perspectives on cultural norms in higher education around the world, what can be learned from differences in teaching and learning environments, and how these can be used to position for teaching success.

Meet the Editors Interactive Session

Facilitator: Wendy Tate, University of Tennessee

Panelists: TBA

Renowned journal editors will share valuable information and inside tips to assist in getting your work published.

Research PDW 2 - Writing a Compelling Introduction

Presenter: Dr. Sriram Narayanan, Michigan State University

A compelling introduction will hook your audience and make a case for why your research should be published and cited. This session will cover the basics of how to write an introduction for your paper and position the paper for a reader. It is most useful for doctoral students in advanced stages of their thesis writing.

Teaching PDW 2 - Generation Z

Presenters: Dr. Karen Eboch, Bowling Green State

University

Dr. Katharine Sobota, Bowling Green

State University

This workshop provides tips and tools for tackling the changing student population and teaching demands. Practical how-to advice will be shared, from setting expectations before class officially begins to engaging your learners to the end. Techniques tested across diverse classroom configurations will be shared along with ways administrators can support faculty innovation in course design. Join the discussion to share your classroom trouble spots needing solutions and your successes.

Research PDW 3 – Crafting a Manuscript that Makes a Theoretical and Practical Contribution

Presenter: Barbara Flynn, Indiana UniversityPanelists: Thomas Choi, Arizona State University

Lisa Ellram, Miami University

Stephan Wagner, Swiss Federal Institute

of Technology

Crafting a manuscript that makes a theoretical contribution is an important pre-requisite for publication in top journals that authors often put a great deal of thought into. However, making a practical contribution is also an important point that is sometimes only considered as an afterthought. This panel discussion will feature notable researchers, including associate editors and former editors of several prestigious journals,

who have themselves mastered the art of making both a theoretical and practical contribution as they craft a manuscript. The session will be highly interactive, so please come prepared with good questions for them to respond to.

Teaching PDW 3 - Online Teaching for Ph.D. Students, Tips and Tricks

Presenter: Dr. Mark Collins, University of Tennessee

Many, if not all courses were forced to move online in the past Spring semester. Some Ph.D. students may not experience it if that was not their semester to teach. Looking forward, it may be expected that online teaching may stay for a while and a fair amount of the courses will continuously be offered online even post the pandemic. In this session, tips and tricks are offered to those who just had and are seeking tips and tricks for the continuous improvement purpose, to those who are currently experiencing it, and to those who are expected to teach online in the near future.

Wrap Up Session

Facilitator: Wendy Tate, University of Tennessee

Bring any additional questions, comments, etc. to this session, as final remarks are shared.

DECISION SCIENCES INSTITUTE

INVITATION TO APPLY: EDITOR OF DECISION SCIENCES INSTITUTE PROFESSIONAL DEVELOPMENT PUBLICATION

The Decision Sciences Institute (DSI) is seeking qualified candidates for the position of Editor for its new professional development magazine. The Editor will serve a term of four years and may be reappointed for two additional years. The primary responsibility of the Editor is to publish four high quality issues of the magazine each year.

The magazine will offer articles having practical relevance to a variety of stakeholders including faculty members, doctoral students, practitioners, and administrators. The topics of interest for this magazine are varied including, for example, managerial/practitioner implications of academic research; decision sciences perspectives on contemporary managerial and policy issues; teaching cases and innovations; early stage research concepts and findings; primers/tutorials; professional development guidance for doctoral students, teaching faculty, scholars, and administrators; and book reviews. The articles published will be short (1,500 words or less) and crafted with readability in mind.

Each issue will contain 4-6 editorially reviewed articles that address a diversity of important topics. The editor has the discretion to seek external feedback from qualified individuals in deciding whether to accept or reject a submission. The magazine will be published in .pdf format and distributed electronically. Published articles may include links to multimedia or take the form of videos, webinars etc. with a brief text introduction. While the Editor has primary responsibility for sourcing relevant content, several existing channels may be leveraged including current Decision Line Feature Editors, DSI conference PDWs, partner organizations, and the editorial team.

DSI is inviting individuals who are thought leaders and

well regarded in their chosen discipline to apply for the Editor position. The position will require the candidate be a member of DSI. Candidates will have an appreciation for and relevant experience in research, pedagogy, academic administration, and managerial practice. Equally important, the Editor must be willing to set aside topical biases to provide a fair evaluation process for submissions to the magazine so that its articles meet the eclectic needs and interests of Decision Sciences Institute members.

Each candidate or nominee for the Editor position must provide the following information:

- Current curriculum vita that includes information about education, academic and industry positions, publications, honors and awards, professional affiliations and activities, and other relevant items.
- 2. Description of editorial experience with scholarly journals or other publications (e.g., editor, co-editor, associate editor, department editor, etc.)
- Statement of interest and availability to serve as
 Editor, including a description of anticipated academic and professional responsibilities for the next four years.
- 4. Statement of editorial philosophy for the Decision Sciences Insights magazine including views on editorial policy, directions the publication should take, and the process he/she envisions for garnering input from external sources for making publication decisions.
- 5. Brief description of administrative and/or managerial experience.

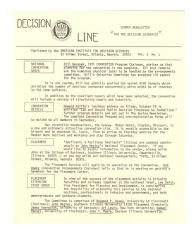
The due date for applications has been extended to January 31, 2021. The process may be kept open until the position is filled. All nominations and applications should be addressed to Dr. Shawnee K. Vickery, VP of Publications and Chair of the Search Committee (vickery@broad.msu.edu). The Publications Committee will provide its recommendations to the DSI Board by May 1, 2021. The anticipated start date for the new Editor will be upon Board approval.experience.

DECISION LINE: A LEGACY AND REBIRTH

By Vijay R. Kannan President, DSI

In 1969, soon after the American Institute for Decision Sciences was formed, Decision Line was born as a 'newsletter for the decision scientist'. Early issues, consisting of a mere handful of pages, informed members

about plans for the 'National Convention', placement opportunities, and regional news. Given the times, they also served as a medium for communication about and between members. Over the years, Decision Line has evolved and grown.



It now encompasses not only news and updates but articles of a professional development nature and annual conference reflections and highlights.

In recent years, the DSI website blog and regular email communications from the Home Office have become the primary means of sharing news, updates, and other similar items in real time. As such, this past spring the DSI board concluded that the time was right to re-envision what is now the 'scholarly magazine' of the Institute with a singular focus on professional development. 'Decision Line' will remain, as the header of the Blog section of our website that houses news and informational items. A new publication is however planned that will encompass articles similar to those currently in Decision Line's various 'Feature' columns. The changes will ensure that both Decision Line and the new publication retain a tighter focus and provide greater value to DSI members.

Decision Line has come a long way since the early

days, and successive editors have continued to innovate and move the publication in response to changing needs. While some feature columns have been mainstays, others have come and gone. For example, 'In the Classroom', 'Doctoral Student Affairs', 'Research Issues', 'Ecommerce', and 'From the Bookshelf' have made regular appearances. For a number of years 'The Deans' Perspective', and 'Production and Operations Management' were also regulars but then came off the table of contents. More recently, 'Analytics and Data Science' and 'Information Technology' have featured prominently. It is interesting to note how changes to the lineup of feature columns have reflected changes in the business environment. For example, the 'Analytics and Data Science' column appeared for the first time five years ago when 'big data' began to emerge as a regular part of the business vernacular.

Technology has played an important role in Decision Line's evolution. Between 1969 and 2008 it was a print only publication that was mailed out to all DSI members. In 2009, the Board experimented with distributing the publication in both digital and physical forms, and in 2010 Decision Line went digital only. Having served on the board at that time, I vividly recall the animated discussions about going digital. While some argued for the inevitability of doing so, 'traditionalists' suggested that members would not easily give up their hard copy. To them, receiving and picking up the physical document was what motivated readers. While even today there are those that cherish the feel of paper in their hands when they read, the question of digital versus physical publications in academia has long been moot and no longer even merits discussion. A mere ten years ago that was far from the case!

Over its history Decision Line has had fourteen editors. While early editors typically served for only a year or two, longer tenures have been the norm. Indeed, since 1982 there have been a mere seven editors. The 'record' for the longest tenure is held by none other than the current editor, Maling Ebrahimpour (2012-2020). It is perhaps fitting that his record

will live on in posterity. It is a measure of the publication's stature within the DSI community that nine editors went on to serve as DSI President (Ebrahimpour, Dhir, Leong, Flynn, Terry, Davis, Taylor, Darden, Collons). Serving as editor of a newsletter/magazine does not have the cachet of being a journal editor. However, these individuals, whose commitment to and extensive records of leadership within the Institute saw them elected President, also recognized the importance and value of Decision Line to the organization and its members. DSI owes a deep debt of gratitude to all fourteen Decision Line editors, the many feature editors, and countless others who have supported the publication over the years.

The 'look' of Decision Line has also changed over the years. Early on it changed with some regularity until in 1991 a style was adopted that endured with only minor change until the present style appeared in 2018.

As they say, words are important. So too are names and identity. Just as the American Institute for Decision Sciences will forever be part of our history, so too will Decision Line. While it may no longer be attached to a publication, it will live on as the name of the news section of the DSI website. Indeed, after fifty-one years, we are going full circle, returning Decision Line to its original identity as the bearer of institute news.

Vijay R. Kannan President, DSI

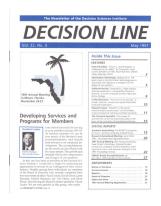
DECISION LINE EDITORS THROUGH THE YEARS

1970 – 72	Rodger Collons
1972 – 73	James Black and Rodger Collons
1974 – 75	William Cornette & Dale Flowers
1976	Thad B. Green
1977 – 78	William R. Darden
1979 – 81	V. Thomas Dock
1982 – 87	Bernard W. Taylor
1988 – 93	K. Roscoe Davis
1994 - 96	Terry Rakes
1997 – 2002	Barbara Flynn
2003 – 07	Keong Leong
2008 – 11	Krishna Dhir
2012 – 2020	Maling Ebrahimpour











A NEW PARADIGM OF ORGANIZATIONS IS HERE

A FOND ADIEU TO THE DECISION LINE

It has been a privilege to serve as the Feature Editor
- Information Technology for the Decision Line during
the past four years. I would like to thank DSI and Editor
Maling Ebrahimpour for the opportunity. I have thoroughly enjoyed my role to do some careful research on
the most current topics or issues dealing with IT and
its applications for value creation in organizations and
implications for individuals and society at large. We
have published six articles, including this final piece, in
this feature column of the Decision Line.

- 1. Trimi, S. (2017). Technology and future of jobs, 48(2), 17-19.
- 2. Asllani, A. (2017). The metamorphosis of management science, 48(3), 21-24.
- 3. Han, H., & Trimi, S. (2018). From e-commerce to social commerce: management of reverse logistics, 49(1), 17-20.
- 4. Faja, S., & Trimi, S. (2018). Big data and information privacy, 49(2), 9-16.
- 5. Trimi, S. (2020). Technology, innovation, and the COVID-19 pandemic, 49(2), 9-16.

I would like to thank my research collaborators who contributed new insights on advances in IT and their implications to organizations and well-being of people. The titles of the above articles reflect some of these major developments in IT and their impact on people and the way organizations innovate to create value and/or to meet the challenges of the digital age. We will greatly miss the Decision Line as it has been a wonderful platform for exchanging ideas and news among DSI Members. In my last article, I would like to present a short discussion about the new paradigm of organizations which is fast becoming a reality in this digital age.

Silvana Trimi is an Associate Professor in the Department of Supply Chain Management and Analytics at the University of Nebraska – Lincoln. Her research interests are on



Organizational and IT Innovation, Digital Transformation, Big Data, Artificial Intelligence and Machine Learning, Smart Operation, Green IT, E-commerce and Social Networking, and Knowledge Management. She has published more than 70 articles in such journals as Communications of the ACM, Information and Management, Communications of AIS, International Journal of Production Research, Journal of World

Business, Journal of Business Research, International Journal of Public Administration, Expert Systems with Applications, and others.

THE EMERGING NEW PARADIGM OF ORGANIZATIONS

It is a known fact that organizations exist to create value. The key questions about this statement however are "how" and "for whom"? To become effective producers of value, organizations need to balance two imperatives: stability and dynamism (Aghina et al., 2018). The old paradigm was to design organizations as tightly controlled bureaucracies and smooth-running machines. To maintain stability, a pyramid style hierarchical structure of responsibilities and functions was needed to be established. Thus, bureaucracy in varied forms has been the dominant structure of human organizations. For dynamism, in the old paradigm, many systematic approaches were applied to make organizations run like machines. Scientific Management of Frederick W. Taylor, project management systems, assembly line operations, quality control programs, operations research, systems engineering, and the like have been widely applied.

The general research findings show that the old paradigm emphasized the following for competitive advantage: ownership of critical resources, efficiency based

on the economies of scale and scope, vertical integration for value creation, innovation based on internal R&D competencies, stable organizational structure with clearly defined functions and responsibilities, and organizational dynamism based on systematic decision making rules. The primary purpose of organizations in this paradigm was the financial outcome for the major stakeholders. However, the old paradigm of organizations is not relevant in the digital age where the market environment changes with unprecedented velocity and scale (Hamel & Zanini, 2018).

The digital age is characterized by the application of exponential technologies of the 4th Industrial Revolution (4IR) and digital transformation (Deloitte, 2019; Siebel, 2019). In the turbulent digital age, organizational stability is sought by employing smart agility, flexibility, adaptability, and resilience (Lansiti & Lakhani, 2020), while dynamism to counter the environmental change rests on the autonomous systems enabled by advanced technologies, innovation approaches, and courageous leadership.

Digital transformation has evolved through two main phases. First, advances in technologies (e.g., cloud computing, mobile, big data, virtual/augmented reality, social networks, etc.) opened new opportunities for organizations to become smart entities. In the second wave, more advanced technologies (e.g., artificial intelligence, machine learning, blockchain, Internet of Things, etc.) help organizations enhance their innovation capabilities, transforming them as smart organizations that strive to create value not only for themselves but for the greater good (Bughin et al., 2019; Chui et al., 2018; Comcast Business, 2018; Trimi, 2020).

This new paradigm of organizations pursues competitive advantage by the means of: access (rather than ownership) to critical resources, sharing economy,

effectiveness based on the economies of networks, co-creation and collaborative innovation, emphasis on customer experience and shared goals for the greater good (Chui et al., 2018; Lee & Lim, 2018). In the new paradigm, organizations seek for stability through agility and dynamic capabilities, and dynamism through autonomous ecosystems enabled by advanced technologies. There already have been autonomous business ecosystems and a drive toward self-managing organization (Libert et al., 2019). The purpose of organizations in the new paradigm is aspirational and lofty: creating value for the greater good for society and humanity well beyond just for the immediate stakeholders.

The unprecedented current COVID-19 pandemic has shown how the new paradigm of organization is already here. We have observed how guickly organizations have responded to the disruptions brought by the pandemic. Some of the good examples include: the real-time environment scanning about the virus spread (Reuters, 2020), collaborative networks among public-private entities for the shared goal of mitigating the virus (Copeland, 2020; Desmond-Hellmann, 2020), agile innovations for repurposing the existing resources and facilities to manage the virus (Ip, 2020), application of advanced technologies for mobile testing and contact tracing (Lee & Trimi, 2020; Schmidt, 2020), seamless data analytics and information processing for decision making (Stoll, 2020), and global collaboration to combat the common enemy (Trimi, 2020). Innovation in the time of crisis reveals the real paradigm of organizations (Bello et al., 2020). We believe the new paradigm in the digital age is already here.

We wish everyone to stay healthy, safe, and happy. Adieu!!

MAKING AN IMPRESSION WITH YOUR RESEARCH PITCH

Varun Grover
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As doctoral students, you often hear about the importance of the 3 minute or less research pitch, also referred to as the "elevator pitch." The objective of these pitches is to navigate short opportunistic temporal spaces in conferences or other forums by communicating and impressing busy, often important people, on what you are doing...and consequently you. Or it could even be to open a dialog with strangers in the same field as part of exploring potential shared research interests. Regardless, the pitch is something that is touted as an important skill, but rarely is there any specific guidance on how to do it well. In this column, I will try to provide pointers on giving an impactful research pitch.

Most pitches focus on dissertations often in interview settings, usually in response to a generic question like "what are you working on?" However, there are some general guidelines that can make the pitch on any research more effective. Having been on the receiving side of the pitch in hundreds of instances, I have observed a wide variance in the extent to which the pitches resonated with me (regardless of my interest in the research topic). Such resonance comes in many combinations of the ability to communicate enthusiasm, impact, and knowledge. Some pitches might reflect outstanding research, but much of that is nullified by insipid presentation.

Pitches can be divided into three parts, the preamble (your motivation, research question), the hard work (your review, theory, data/method/analysis) and takeaways (what you have/can learn).

Below, I highlight some critical considerations for your

Varun Grover is the David D. Glass Endowed Chair and Distinguished Professor of IS at the Walton School of Business, University of Arkansas. Prior to this he was 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 400 publications, 250 of which are in major refereed journals. Over ten recent articles have ranked him among the top four researchers globally based on number of publications in the top IS journals, as well as citation impact. Dr. Grover has an h-index of 92 and around 40,000 citations in Google Scholar. Thompson Reuters recognized him as one of 100 Highly Cited



Scholars globally in all Business disciplines. He is Senior Editor for MISQ Executive, Editor of the Journal of the Association for Information Systems Section on Path Breaking Research, and has served as Senior Editor for MIS Quarterly (2 terms), the Journal of the AIS (2 terms) and Database. Dr. Grover's current work focuses on the impacts of digitalization on individuals and organizations. He is recipient of numerous awards from USC, Clemson, AIS, Academy of Management, DSI, the OR Society, Anbar, PriceWaterhouse, among others for his research and teaching, and is a Fellow of the Association for Information Systems. He has had the privilege of being extensively involved with PhD students, serving as an advisor to over 45 PhD students and as Co-Chair of numerous doctoral consortia at both the International Conference on Information Systems and Americas Conference on Information Systems. He has been invited to give numerous keynote addresses and talks at various institutions and forums around the world.

pitch. I will illustrate this by using an example of a (fictitious, but typical) research project abstracted below:

This study examines small e-retailers who participate in single or multi-platform strategies. The research examines which strategy is advantageous for the e-retailers and under which conditions. The research draws from theories of risk diversification, network externalities, and complementarities to construct a model which is subsequently tested using secondary data compiled from web harvesting and public data on 2000 e-retailers. The results indicate that when

the firm has pricing power on a platform and when the consumer base of platforms have different constituencies, then, multi-platforming is beneficial.

PREAMBLE

Critical Success Factor: To communicate that the topic is something to care about personally and/or societally.

To do this, it is important to convert the research question into a practical problem or a dilemma. A poor pitch would start like this "I am studying network externalities in multi-platforming due to different risk profiles of eretailers." The issue here is not that the pitch is incorrect, but it does not convey any reason for studying the topic or why you (or anyone else) should care about it.

A better pitch might go something like:

"If you were a small business trying to sell a product on the Internet, it would be a challenge. How would consumers find you? Well known businesses have brand equity that allow consumers to find them...but as a small business you need to rely on big platforms like Amazon to get your product sold. Doing this has risks since you are giving control of how your product is marketed to the platform owner, and you could be subject to competition on the platform itself. Perhaps you should go multiple platforms to diversify your risk and expand your potential market. Or you can go alone with an app to develop deeper relationship with customers...but it will be tough to establish a customer base. These are critical issues for e-retailers. We study these tradeoffs and try to help resolve this dilemma."

Too long...perhaps. But the point is to convey the problem by putting yourself (and the listener) in the shoes of the target subject of your research, in this case the small e-retailer. The pitch communicates the problem and why you want to study this. Communicating this with enthusiasm could convey that it is a real problem, you care about this, and others should too.

THE HARD WORK

Critical Success Factor: To communicate simply, communicating depth of your work without going into depth.

You have put in tremendous work in your literature review, theoretical development, data collection, and analysis, and it is natural for you to want to communicate all that you have done. However, you need to be cognizant of the simple fact that your investments might have correspondingly created a tremendous information asymmetry between you and the recipient. So, in describing you work, do not assume much knowledge. If you must communicate your theoretical or methodological contributions, spoon feed with contrasts that accentuate your contribution. For example, you might say that most prior studies used one dominant theoretical perspective X, it fails to consider -----. We integrate three perspectives to cover all facets of the phenomena. Similarly, highlight any key methodological innovations. Remember, your overall research model if complex does not need to be described in detail.... just a broad framing of the model and the DV. A short pitch does not permit depth... but should communicate that there is depth and due diligence behind your research

A pitch might go as follows – "I use theories risk diversification, network externalities and complementarities to study e-retailer multi-platform behavior. I scraped data on 2000 e-retailers and ran finite mixture model econometric models to study this." Such a pitch communicates a lot of terminology and the fact that you looked at many theories and used "sophisticated" analysis...but it is not effective at contextualizing the hard work.

Alternatively, if you say:

"Most studies on multi-platforming behavior examine it from a usage behavior perspective, while we take a more holistic approach in looking at risk and benefits, drawing of theories of risk, externalities and comple-

mentarities in economics. We integrated data on 2000 e-tailers from secondary sources and web-scraping analyzed to test our hypotheses."

In this case, the hard work on theory is positioned better (i.e., novel perspective) and the data collection communicates the effort (i.e., data integrated from different sources) without elaborating on the theory, method, or analysis in any great depth. Remember, this is a short pitch – so the essential value statements of your research are more important than the process details.

TAKEAWAYS

Critical Success Factor: To communicate your return on investment in the project by cherry picking the most interesting findings.

Like the preamble where you indicated that the topic is something to care about personally and/or societally, here you need to communicate what you learnt and how it is broadly useful. Here is where you have considerable discretion. You can cherry pick a key finding or learning experience from the project that is interesting, surprising, or exciting. By indicating that "one of the findings of my study was particularly interesting to me...." you can describe the finding and its implications. So, a poor way of doing this would be to sequentially go through each of your five (say) hypotheses and indicate if it was supported or not. A more effective way would be to highlight one or two that have strong implications for (in this case) the dilemma you raised and discuss how the findings help resolve it. So, an ineffective pitch might be: "My results indicate that externalities and risk diversification matter. Complementary market segments matter too. The dominance of the product mix in the general market offers some significant moderation effects in the relationships with multi-platform models."

More effectively, you could say:

"I found that e-tailers who need to decide on whether

to list their products on multiple platforms, should do so, particularly if their product is unique and each platform is accessing unique markets. If these conditions do not hold then a single platform would be better for them."

Clearly, the pitch "closes the loop" on the problem you studied.

CONTINGENCIES

There are some cases where adjustments will need to be made. For those doing multi-essay dissertations, if the three essays are interlinked as part of a broader program, then it is very possible to do the pitch at the level of the program....highlighting the broader preamble and then the sub-questions that constitute each of the essays. The critical success factors still apply to the hard work sections...except that you might need to just overview approaches followed in each essay. Sampling the takeaways from each essay or one or two broader takeaways could be effective too. However, if the three essays are quite distinct, it might be better to focus your pitch on one of the essays (either the most developed one, or the one that is the most consequential to you)....indicating early that your pitch is on one essay of the dissertation.

Also, depending on the degree of completion of the project, just the preamble (if you are starting out), the preamble and the hard work (if you are post proposal) and all three (if you are done) are relevant.

There could also be variations for different audiences. In an interview setting, you might want to tailor the pitch to what the interviewer is looking for. For instance, connecting your research to interests of the faculty in that institution could be a brief extension of your pitch. In some cases, a shorter version of the pitch for light conversation in an informal setting may be more appropriate, focusing more on the preamble and takeaway.

FINAL THOUGHT

Overall, it is important to link the three parts discussed above so they "tell a story" and do not appear disjointed. So, the hard work should be logically linked to the preamble, and the takeaway should be a derivative part of the preamble and emerge from the hard work. These connections might take a lot of practice... till you get the flow right. Style matters. While practic-

ing the pitch dozens of times is important, the live pitch should not come across as hurried or rehearsed; it should come across as natural.

Ultimately, I believe that any research project can be communicated in an interesting way, that can impress your listener regardless of their interest in the specific topic. Hopefully, these guidelines help.

NEW CHALLENGES, NEW RESEARCH PROBLEMS AND OPPORTUNITIES

Professor Danny Samson, University of Melbourne

INTRODUCTION: MASSIVE SHIFTS IN THE WORLD WE STUDY

While the problems brought by the Covid-19 pandemic are a source of real worries for operations/ supply chain managers, the changing conditions of our supply chains and markets does open up and require us to not just refresh and re-initialize our research, but should lead us to focus more than ever on addressing new professional practice challenges. In addition to use examining new problems, should we be developing new research approaches?

In many industries, this year has brought simultaneous and large shifts in both demand and supply, and further, great uncertainty going forward about these. Some markets, such as air travel, have essentially collapsed, impacting not just the air carriers, but a host of suppliers, from food services to fuel. The human impact has been huge. Large turnover drops in many manufacturing industries and instabilities that make it hard to forecast, plan, procure and schedule production, challenge the methods that we have developed and validated in recent decades.

Strategic and political changes such as trade wars, Brexit, and nationalism in general have led business owners and managers to consider reshoring or near-shoring, that require new models and studies, because these decisions have multiple dimensions of value to take into account, and much uncertainty in data, and new assumptions that we must make to populate such models and analyses.

Another current change has been the rise of our new wave of advanced technologies, often called Industry 4.0, mostly involving digitalization, and also physical

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production, eg 3D printing. Of these, artificial intelligence both promises and threatens to overturn a lot of how work is done, in everything from banking decision making through to mining operations, medical and biological sciences research and production, indeed almost everywhere. Efficiencies and effectiveness through blockchain, IoT, VR/ AR and many other new capabilities introduce opportunities, but also more volatility to what seems to be a fading memory of a relatively stable past.

In that past, we were able to design a supply chain, production system, products and services, and business models, with the expectation that at least for a few years, there would likely be a return on that investment. Those days are over for most operations and supply chain managers, who must now be able to pivot what their production systems do almost overnight. We previously used optimization approaches that often assumed a steady state of many parameters. We now live in a world where for a brief time, the spot price of oil went negative!

Environmental and climate change concerns are rising. Investors and fund managers in particular are being increasingly influenced by sustainability, CSR, and more recently the broader ESG measures of organisational processes and results, that will surely flow into the design and configuration decisions of op-

erations and supply chains. The ESG field is relatively immature, but accelerating in its interest and influence in the investments world, and will rapidly impact product and service designs, technology choices, and process design decisions. Consumers are seeking more information about the ESG performance of firms when they choose their products and services, and talented employees are increasingly doing similar in choosing an industry, profession and employer. Major companies are increasingly infusing ESG/ sustainability criteria into vendor selection decisions. While environment concerns have been in play for some decades, social contributions of organisations are being brought more into focus, adding more pressure, complexity and challenge to those who design and run operations functions.

All of the above factors, from geopolitical instability, Covid-19, ground-shifting technologies, environmental and social changes and expectations, and a host of other factors, require us as researchers and consultants to work with practitioners to build useful models and frameworks, build and test theory, and gather evidence that will provide insights and guidance that is of value. Complexity abounds, in many forms. Yet professionals, be they technical experts or business and political leaders, must make their strategic decisions ever faster, for example in dealing with pandemic induced issues, or else risk getting washed over by fast changing waves of disruption.

It is not just our fields of operations and supply chain that are being shaken up. Some similarly foundational changes are occurring in marketing, where young consumers want very different things from their parents, and social media are taking over from traditional channels of communication, advertising and distribution, and fake news has become a 'thing' in communications. In economics, new problems face central banks, governments and households that are in new territory of giant debt and record low interest rates, with labor markets in disarray. Where are our nations' GDP numbers headed? How will we fund our health system requirements? In finance, there seems to be a bigger

gap than ever between asset values such as equities and progress of the real economy.

ARE OUR CURRENT RESEARCH APPROACHES UP TO IT?

Most traditional approaches, such as static optimization models, are not able to deal with the problems we will face over the next decades. They are based on loads of assumptions that are no longer valid.

More recently, we have built some new research concepts and theories, such as ambidexterity (simultaneously operating explore and exploiting processes and fitting these together) and business/operations agility, although there is much more to be done before these fields of knowledge can be considered as mature.

As much as we see innovation cycles being sped up in looking for an effective Covid-19 vaccine, we need to speed up our research approaches and develop entirely new techniques. Data sciences and artificial intelligence look promising. Some new probabilistic methods are needed to cope with the uncertainties, that merge with data sciences and AI, perhaps producing a next generation of risk analysis models, but with powerful predictive analytic algorithms informing them.

Since supply chains are becoming ever more complex and concerns about environmental and social sustainability are reasonably coming to the fore, new approaches to multidimensional modelling are needed to combine those 'triple bottom line' outcomes, with inter-organisational dynamics and supply/ procurement contracting typologies, to guide supply chain designers and influencers. And this needs doing, and therefore studying and modelling, under uncertainty, and even in the light of 'unknown unknowns'!

Daunting as this may at first seem, there is excellent computing power available these days, and sensing and pattern recognition (AI) that can go with it. We'll need to increasingly figure out how to optimise us-

ing our carbon based human brains with those of AI, jointly. Our new generations of scholars/ researchers will hopefully see these challenges as career-generating challenges and opportunities. I think they will have to become broader in their orientation, reflecting the connectivity of the world that connects the problems that we must solve. For example it is great to see some leading journals focussing on inter-functional boundary issues. I have been interested for example in the problem of jointly optimising the strategic and marketing mix and the supply chain design for some time (Samson and Gloet, 2018).

LOOKING AND PROJECTING FORWARD

One thing is for sure: the next decade of research and problem solving in production and operations management will not be boring/ 'same old'. Right now, the practical problems are getting harder and more complex faster than our research is moving to solve them. Connectivity and integration of issues, coupled with the sheer 'unknowability' of the future requires new research approaches. Whereas our research is often focussed on getting journal articles published that are incrementally advancing of knowledge in operations/ supply chain, big and radical approaches are much needed. Are we as researchers working too much in existing paradigms, with existing theories, frameworks

and methods, when the world is actually changing so much and so fast that this isn't enough?

As global population moves towards eight billion people, the effective production and distribution of goods and services, critical to all of us consumers, implies that our field of knowledge, of operations/ supply chain management, has never been more important. The big challenges, of health care/ pandemic, climate change and environment/pollution, political risk and trade wars, and divisions between providers of capital and labor, wealthy and poor, can perhaps be at least partially addressed by new technologies and newly innovative business models, that requires closer integration between the disciplines of technology management, and that of supply chain. While many organisations are able to engage in their 'business as usual' processes quite effectively, most are not able to effectively innovate nearly as well, whereby concepts of organisational ambidexterity are in need of much further practical development and validation. Ultimately, we researchers should do more than modelling and empirical studies of observing 'what works', but also innovate new approaches that will work in radically new conditions.

Danny Samson & Marianne Gloet (2018) Integrating performance and risk aspects of supply chain design processes, Production Planning & Control, 29:15, 1238-1257, DOI: 10.1080/09537287.2018.1520314

TEMPURA MUTANTUR

Gyula Vastag

Times have changed; *Decision Line*, after half a century, is leaving our professional lives. For me, *Decision Line* was, chronologically after DSI Annual Meetings and before *Decision Sciences*, the link to my first and foremost professional home in the United States and, later through EDSI, in Europe. Back in the early 1990s, Shawnee Vickery asked me to contribute a piece (frankly, I am as proud of my *Empirio-Criticism* essay as many of my more "serious" papers) and, occasionally, I kept doing it since then.

Decision Line was a forum to read interesting, perhaps controversial but always insightful pieces about our profession, to get updates about colleagues, conferences, books and software packages. On my bookshelf, I have a collection of old issues that, somewhat nostalgically, sometimes I pick-up to re-live history and get myself lost in memories. In its capacity, Decision Line has served as an important element of the fabric that held our members together through shared experiences and communication.

However, we all know that *Tempura mutantur, nos* et mutamur in illis (Times are changed, we are also changed with them). Paradoxically, despite all the advancements in digitalization and online networks, we are living in, perhaps, the most fractured world of the last 50 years that is calling out for a community-building outlet that could do what *Decision Line* did so well for many-many years.

Rationally, we all know that progress cannot be achieved without changes but, emotionally, I am sad to see *Decision Line* leaving us; I feel many of my shared memories, professional history and connections are going with it.

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Gyula Vastag earned Ph.D., and Doctor of Sciences degrees from the predecessor of Corvinus University and from the Hungarian Academy of Sciences; finished habilitation at

Corvinus University. Prior to rejoining his alma mater in 2019, he directed Széchenyi István University's PhD Program. Between 1989 and 2006, he worked in the Kelley School of Business (Indiana University), The Eli Broad Graduate School of Management (Michigan State University), and The Kenan-Flagler Business School (University of North Carolina at Chapel Hill). He spent the 2000/2001 academic year in Stuttgart where he was



Professor and Dean of Supply Chain Management Programs and held a visiting professorship afterwards. Between 2005 and 2007, he was Visiting Professor (part-time) at the University of Groningen (The Netherlands).

Gyula, an award-winning instructor, was the recipient of several research awards: New Central Europe Distinguished Senior Researcher Scholarship (2014), Magyary Chair (National University of Public Service, 2014), Best Application Paper Award by Alpha Iota Delta – The International Honor Society in Decision Sciences and Information Systems (2012), and Award for Research Excellence from Corvinus University (2009). He was the Founding Editor of Pannon Management Review, is the Associate Editor of Decision Sciences, served as Editor of two Special Issues and he is on the editorial boards of several journals.

He served as external promotion reviewer for US and European universities and jury member for award committees; most recently, the European Public Sector Award – 2019. He served as Vice-President of the Decision Sciences Institute (DSI) and as President of the European Decision Sciences Institute. In 2019, he received DSI's highest level of award, the Dennis E. Grawoig Distinguished Service Award.

ECOMMERCE IS BECOMING MIDDLE AGED: A RETROSPECTIVE OF ECOMMERCE RESEARCH, OPINIONS, AND PRACTICE IN DECISION LINE

Kenneth E. Kendall, Rutgers University

Who so neglects learning in his youth loses the past and is dead to the future. — Euripides

This article marks the 20-year anniversary of my editorship of the Ecommerce column for Decision Line. We have had quite an amazing journey. So many wonderful people have contributed to this column with incredible enthusiasm. Some of the authors are dedicated Decision Science Institute members and some have been friends who wanted to share their insights or express their opinions to our community.

While paging through some of the old articles, I couldn't believe how passionate the authors were about their subjects. Some wanted to inform or teach readers about ecommerce services or apps. Others wanted to humanize their own scholarly research studies. Some wanted to reminisce, still others, wanted to predict the future. All of the articles are remarkably readable. I asked the authors to downplay the serious statistics and boring methodologies to concentrate on their contributions. I used many of the articles in my graduate and undergraduate classes. Students were inspired because the articles were conversational in nature, easy to read, and short. The best part for me was to see authors chain off of a previous Ecommerce column article.

I thank Decision Line Editors Barbara Flynn, Keong Leong, Krishna Dhir, Maling Ebrahimpour, as well as longtime managing editor Hal Jacobs for their magnificent support for, and dedication to, not only this column, but to the entire issue of every Decision Line published. I am also grateful to all of the contributors who made the effort to write articles that informed a

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and the Feature Editor of the Decision Line Ecommerce column for 20 years. Ken was awarded the 2014 Dennis E. Grawoig Distinguished Service Award from DSI. He was named Educator of the Year in IS for 2010 by the Association for Information Technology Professionals and was inducted into the PhD Project Hall of Fame in 2016. Ken is also one of the founders of the International Conference on Information Systems (ICIS).

wide Decision Sciences audience about the past, present, or future of Ecommerce.

Kenneth E. Kendall, Feature Editor

ECOMMERCE IS BECOMING MIDDLE AGED: A RETROSPECTIVE OF ECOMMERCE RESEARCH, OPINIONS, AND PRACTICE IN DECISION LINE

Kenneth E. Kendall, Rutgers University

The first challenge I had to face included what to call the column: e-commerce or e-business? I chose neither opting for ecommerce without a hyphen. I followed the pattern from IT where data-base eventually became database, e-mail became email, and Web site became website. Then I needed to figure out the boundaries to this new field of research.

In my first column, *Ecommerce: Thou Shall Not Steal*, I tried to define what ecommerce was. I felt strongly

that it was not just about business, so we shouldn't call it e-business. Although the first definition of commerce involved "the buying and selling," the second definition was "the intellectual exchange or social interaction." Back in 2000, I stressed the second definition having faith that I would eventually be correct, but not imagining the social interaction of Facebook, Twitter, Instagram, and TikTok.

You may be wondering what the "Do Not Steal" part was all about. At that time marketing departments were trying to harness the research and grab new courses based on ecommerce. Their approach was to pay attention to what I referred to as e-tailing. In the article, I commented "Ecommerce is not limited to the buying and selling of goods and services. Ecommerce also means informing people of service or product characteristics prior to the sale and supporting goods and services after the sale."

So, *Decision Line's* new Ecommerce column was destined to become a column devoted to ecommerce and everything that supported it. Below, I describe some of the themes and categories of the last 20 years.

The articles contributed to the Ecommerce column fell into the following categories:

- Philosophical Arguments, Opinions, and Predictions regarding Ecommerce
- Innovation that Supported Ecommerce
- · Surveys and Observations about Ecommerce
- Perspectives on Practice in Ecommerce
- Theories and Opinions Based on My Personal Experiences with Ecommerce

My retrospective will take you on a journey through these categories.

PHILOSOPHICAL ARGUMENTS, OPINIONS, AND PREDICTIONS REGARDING ECOMMERCE

In 2001, Fay Cobb Payton, in her *Decision Line* article called *Ecommerce: Technologies that Do Steal!* Fay

complemented my initial column of *Ecommerce: Thou Shalt Not Steal* as she discussed three technologies: personalization techniques, e-marketing technologies, and analytics that impact privacy in our world today. She reminded us that it is not only security, but the critical triad of privacy, security, and social participation that would provide major challenges to ecommerce.

In 2001 Peter Ping Li explored the eight paradoxes of electronic business, including the paradox of success-failure, the paradox of old-new, the paradox of small-big, and the paradox of competition-cooperation among others. He proposed and then explored in detail the idea that the "central theme shared by the above paradoxes is the network paradigm."

Chris Westland (2000) predicted the intensive use of ecommerce in the MIS profession to publish and profit from books, case studies, and other teaching materials in a specialized ecommerce exchange. Westland challenged the traditional business model of textbook publishing and re-imagined a marketplace for the exchange of intellectual property (teaching resources) and money that would be targeted toward professors who would want to read and write such material.

The discipline of risk assessment is vital to traditional business, and ebusiness was no exception. Viehland (2002) wrote about 'Risk E-Business' Assessing Risk in Electronic Commerce. He offered research-based methods and solutions for managing e-business risk including competitive risk, transition risk, and business partner risk.

In 2003, Julie Kendall pointed out the strategic importance of websites for nonprofit theatre organizations and introduced the concept of e-distance. Basing her concept on location theory, she presented a compelling argument that through their Web presence, they become collaborators rather than competitors.

A natural progression was provided in the article by Jack Becker (2003) that discussed how collabora-

tive tools were being developed and refined to support virtual teams, importantly posing the question of whether the "technology or the team is more important for problem solving?"

In Walled Garden or Virtual Prison (2011), I looked at ecommerce and Apple's new approach to selling software: The App Store. At that time, I was very positive about the Apple experience but questioned whether app developers would be forced to sell their software in the app store. Little did I know that nine years later Apple would be banning the game Fortnite over that very issue.

In 2013, I wrote about the sharing economy. Through ecommerce platforms we can now share everything we want with others and make money doing so. I talked about objects, services, and digital items that we may want to share with others. But I questioned whether this sharing will benefit us in the long run. Sharing text-books benefits students, because they become cheap commodities. Who, however, will write our textbooks when the monetary incentives disappear?

Have you ever wondered how an online item received a 5-star rating? Did you think it was a simple survey of users? In the 2013 article, *To Be(lieve) or Not to Be(lieve): Can We Trust Our Ecommerce Recommender Systems*? I explored four basic types of recommender systems and showed how none of them could be applied to every purchase. After reading the article, you might never have trusted recommendations again.

We can learn lessons about ecommerce from anywhere. In 2016, I wrote an article explaining what we can learn from computer games and their support groups, using examples from a popular support site, *TSTO Addicts*.

INNOVATION THAT SUPPORTED ECOMMERCE

Very early on, Eric Turner (2000) recognized the need for *trust* in digital exchanges like those necessary in ecommerce and discussed the importance of public

key infrastructure (PKI) for securing "data transmitted over public networks such as the Internet." The importance of trust in digital exchanges exploded into several different approaches.

By late 2001, even in the embryonic life of ecommerce, Merrill Warkentin was already writing about *The Next Big Thing in eCommerce* saying that amidst all the exciting developments there were four to focus on: B2B eServices, new etail brick-&-click strategies, voice portals, and A2B (administration to business) and D2D (device-to-device) systems.

In the same year, Diane Parente, et al. (2001) introduced B2B online reverse auctions. At the time I wrote, "New online auctions are broadening their appeal by including a larger pool of participants, expanding the range of products and services well beyond traditional commodities, and improving the availability of data about the auction process not only to participants but to academic researchers as well."

In a 2002 article, *B2C ecommerce: Observations* about a Technology in Its Early Stages, I explained the lessons I learned from early uneven experiences with ecommerce including a disappearing online gift certificate, an online gift order that had to be confirmed by phone, shopping online for a hotel room, and purchasing a prototype Simpsons game online with no English instructions, and then using an early Web-based translator to understand them.

Sameer Verma (2003) provided an eye-opening introduction to open source software in his prescient article *Open Source Software*—as *Good as it Gets*. About six years later, research into open source development and corporate engagement became a fruitful research area for me and many other scholars, which it continues to be. Open source is just getting bigger.

In 2003, a father-daughter writing team of JP Shim and Julie Shim brought us up to date on m-commerce (mobile commerce) around the world, noting that m-commerce was exploding on the scene, especially

in countries such as Korea, where user perceptions of mobile devices as ecommerce platforms were highly favorable.

In 2005, Julie Kendall pointed out that new mapping software using satellite technology was changing the way we view our surrounds and even changing how we find our way. She pointed out future uses as well as stating the utility of mapping software as it existed then. Later on, in the "mashup articles," we'll see how critical mapping software has become because it integrated apps with mapping technologies to fulfill user experiences.

Allen Schmidt, a long-time co-author of mine, was a delight to work with. We coauthored three articles for *Decision Line* over the years. In our first article (2006) we wrote about a Web programming technique called Ajax, which allowed a website to dynamically change without reloading the entire page.

In 2007, Allen and I introduced mashups and presented numerous examples of their use in ecommerce, all the while having fun citing silly, but illustrative, websites that created *Mad Libs*-type stories, or showed where you would surface if you dug a very, very deep hole in your backyard (or anywhere you chose). Spoiler alert: Earth is round.

In the second mashup article, also appearing in 2007, we showed how to create a mashup using Google Maps to show the location of the DSI 38th Annual Meeting in Phoenix, Arizona using simple XML code.

Also in 2007, I wrote an article suggesting that the Internet may have been able to save us from the high-definition wars between two standards: HD DVD and Blu-Ray. Both formats were new, but in the column I asked, "Why not skip the DVD player entirely?" and cited some pioneering streaming alternatives like Amazon Unbox, Netflix, and Vongo (which was classified as a virus because it was nearly impossible to uninstall). Still, I practiced what I preached, skipped the high def players and went straight to streaming.

Sameer Verma, in 2008, provided a provocative look at the importance of code, the world of software licensing, and the practical implications of moving toward adoption of free or open source software, especially for academics and authors who may be best served by using non-commercial, non-proprietary software.

In 2006 I suggested that RSS readers were making a comeback. They were around since 1999, but rarely used. I suggested a few alternatives and showed readers how to create their own feeds. After the iPad, Flipboard was introduced and more recently, Apple News, both of which made it much easier to receive the news and feature readers want.

Ten years ago, in 2010, I wrote an article about the first Apple iPad, predicting it to be a game-changer, citing a number of ecommerce applications and apps that I would depend on. At that time, I couldn't predict that I would love the Apple Pencil as much as I do.

In 2D or Not 2D: That Is the Barcode Question, Julie Kendall (2011) described four of the many 2D codes that were beginning to appear in many places. She explored some of the imaginative uses for these codes but warned that we had seen unsuccessful attempts to use barcodes in ads before. She advised our readers not to bet on any of them, and she was correct.

SURVEYS AND OBSERVATIONS ABOUT ECOMMERCE IN BUSINESSES AND UNIVERSITIES

Chong Kwan Han wrote in 2000 that it was critically important to establish a research center at Universiti of Putra Malaysia that would do research on ebusiness or ecommerce and also focus research on what the digital economy could mean for strategic positioning of Malaysia.

Ernie Jordan (2001) asked *Are Corporate Board Members Ready for e-Commerce?* and he was unsure that they were. Board directors traditionally take on the perspective of risk management or risk governance. Based on observations and extensive inter-

views, he concluded that board members did not feel it was their responsibility to offer an ecommerce strategic plan. Rather, they expected management to set the agenda on ecommerce strategies for the organization.

In that same time period Cindy Riemenschneider and Vicki McKinney (2002) surveyed and interviewed small business executives to discover their attitudes toward ecommerce "Surprisingly, some of the 27 executives indicated there was nothing for their company to gain from utilizing Web-based ecommerce. One executive said, "That's something we'll never do." However, executives who saw opportunities available from a Web presence cited numerous advantages including distribution of information and improving information accessibility.

In 2004 JP Shim and Mark Simpkin surveyed the ecommerce educational landscape and found that while a number of universities were featuring ecommerce, they believed they could do more by further supporting their programs in ecommerce, partnering with businesses and by conducting ecommerce research.

Once again returning to the theme of why users adopt new mobile technologies, JP Shim, Julie Shim, and Kyungmo Ahn (2006) reported a large cross-cultural research study that derived critical success factors necessary for the adoption of mobile multimedia services known as "TV-on-the Go," digital multimedia broadcast (DMB), or cellevision. Those factors were device price, quality programming content, performance/reliability, and usage/connection time.

Clyde Holsapple and H. Jin (2007) performed a valuable service in their article on collaborative decision making (CDM), developing a convincing case that CDM research should be linked with both ecommerce research and supply chain research. This was a trail-blazing look at how our fields in the decision sciences are interrelated and interdependent.

Social networking and ecommerce were considered

together by JP Shim in 2008. Comparing the U.S. and Korea, he noted that there were several cultural, social, governmental, infrastructure, and even geographical features that nurtured or inhibited the adoption of social networking sites. The timing was apropos, since in early 2007, Facebook was already showing ads to users it had targeted as potential customers.

Looking broadly at the knowledge sharing made possible via digital networks, JP Shim and Yang (2009) ask *Why is Wikipedia not more widely accepted in Korea and China?* Their findings pointed to the importance of "understanding cultural differences, differences in user's behavior, and user's behavioral patterns, and overcoming the first mover's advantage in knowledge-sharing service," as "key factors affecting on adoption of Wikipedia in other countries."

In a 2014 article, Born Free: How the Origins and Advancement of Open Source Software through Sharing will Uphold the Values of Free Software, I teamed up with Matt Germonprez, Julie Kendall, and Brett Young to inform our readers that "open source software development has changed dramatically with the increasing involvement of for-profit corporations in open source communities" by reexamining the concept of free software and showing that many for-profit corporations also embraced the notion of "free."

In examining IT project performance, Marc Schniederjans, Vicky Ching Gu, and Ray Qing Cao (2017) found that although many strides had been made in professionalizing IT projects, the context of IT project performance and the organizational culture in which the project unfolds must be observed.

In 2017, Dara Schniederjans and Douglas Hales wrote about *Supply Chain Economic and Environmental Balance: It's all in the cloud ...Or is it?* Five years after this column published our first article about the adoption of software as a service (SaaS), this research article examined some of the advantages of cloud computing but went on to caution supply chain professionals about the increased cost and energy

from cloud computing use that could potentially negatively affect the sought after economic advantages and lessened environmental impacts they initially imagined.

PERSPECTIVES ON PRACTICE IN ECOMMERCE

Greg Sherbon examined document management and discussed the advantages and disadvantages of a paperless society from a practitioner's point of view in 2004. While he endorsed a paperless office, he found investment in new ecommerce technology coupled with ingrained managerial habits tied to paper usage to be substantial barriers to adoption.

In a 2008 detailed article about security, Tim DiVito, an IT practitioner, explored an all-too familiar problem of the growing proliferation of passwords needed to conduct secure ecommerce transactions on websites. He examined the then-current solutions for authorization and authentication, and then investigated a new technology called OpenID.

In examining social computing and its impact on business decision making, Tony Clement in 2009 examined numerous aspects of generations of computers, multiple Web design patterns, the wisdom of crowd decisions facilitated by new technologies and found, quite optimistically, that Web 2.0 had made it possible for the entire world to reap the benefits of group decision making.

Michael Mahfood, who started his own website design firm, offered us a personal journey down the information highway in 2010. He admitted to us that "In the early days of the Internet, some of us really didn't know whether the word or term was supposed to be website or websight."

In 2012, John Anderson, a practitioner from New Jersey, introduced the DSI community to SaaS, software as a service. He revealed a lot of potential. SaaS is basically cloud based software.

Ramesh Sharda and David Biros (2013) in Taking Re-

search to Practice in Technology: Development of an Ammunition Multimedia Encyclopedia discussed the entire development process beginning with problem identification to final development of an app. This unique article demonstrated what can be accomplished within a business school as part of a sponsored research program.

William Condren based his 2015 article on his own experiences as a volunteer firefighter and his interest in emerging information technologies. He informed us of the advantages of using the smartphone application called Active911, using mapping technologies and communication software, but admitted it's only a supplement to more widespread technologies.

THEORIES AND OPINIONS BASED ON MY PERSONAL EXPERIENCES WITH ECOMMERCE

Some articles spoke directly to the Decision Sciences Institute. I used my experience with conference scheduling when I was Program Chair for the 35th Annual meeting to write a 2004 philosophical piece about the wackiness of AI and personalized services running wild with conference scheduling.

In 2004, I wrote an article explaining what extreme programming (XP) was and how the principles and values of XP were represented in the conference management systems designed and developed by Scott Sampson.

I created the Decision Sciences Institute Wikipedia page, so in a 2008 *Decision Line* article, I described the process and explained how to author your own Wikipedia page. Since technology plays a key role in ecommerce, I started writing about the Apple ecosystem in a 2009 article, where I described iMacs, productivity apps, and running Windows on a Mac using virtualization software.

While working on a scholarly article on disaster planning in 2009, I found time to write a piece suggesting that Major League Baseball's success (and failure) of

a critical rain delay in the 2008 baseball World Series served as a lesson to organizations that must prepare for power outages, power surges, computer viruses, and other Black Swan events.

In Recommendations for Surviving Shifting ISPs:

Be the Master of Your Domain, published in 2002, I
described an unfortunate incident where an Internet
provider assigned me someone else's domain when
converting accounts from one service, @home, to
another, Comcast. The email broadcasts intended for
someone in Alabama named Martha stopped only after
I abandoned Comcast. My message to our readers
was to secure their own domain for life, rather than
depending on free services or institutional email. In my
case, I chose thekendalls.org.

The cloud's usefulness was discussed in a 2010 article I wrote about the frustrations I had trying to get back home to New Jersey from a trip to London when flights were canceled because of a volcano ash cloud. Even though I had the best technology available at that time, I had to resort to phone calls and face-to-face communication to find a way home. I didn't know it then, but I was destined to be in disaster planning mode again a few years later in 2012, this time using face-to-face communication to find a way home from Mexico City after a long-delayed return trip caused when Hurricane Sandy passed directly over my house.

I also had the opportunity to write about collaboration. I've published with four dozen coauthors, but my favorite coauthor is my wife, Julie. Soon after Julie earned her doctorate we started writing together. In the 2019 article *Game Theory Revisited: Searching for Answers about Collaboration on Software Development Projects*, Julie and I wrote about our collaboration from two distinct sides. My story was about concentrating on the rationality of game theory. Julie's story was about the emotional side.

In 2020, for my last ecommerce column article, I teamed up with Julie Kendall once more to participate in a debate about the future of ecommerce as it will develop after the COVID-19 pandemic. We flipped a Bit-

coin and Julie chose to talk about positive prospects, while I was left talking about the negative outlook. The article suggested that it is difficult to predict what will happen in the future.

THE MIDDLE AGES

Since submitting my most recent article, my 22nd contribution to this column, I began to realize that ecommerce has reached middle age.

Am I referring to the European Middle Ages, specifically the 14th century in which a series of disasters including the Great Famine and the Black Death, numerous revolts, and the breakup of the dominant religion caused havoc? Or am I talking about the period of our lives which we refer to as middle age when mortality and cognitive losses begin to increase, career satisfaction and the meaning of life are questioned, and a person begins to realize their accomplishments or lack thereof? Take your pick. Either way, we're in for some big changes. Authors writing ecommerce columns in the future, in some other venue, will most assuredly help usher us through the next age of ecommerce.

This will be the final article of this series. For those of you who are wondering, this is article number 1101100 (in binary).

Thanks for listening to us and learning in ecommerce's youthful, first 20 years!

Book Review for

"THE HUMACHINE: HUMANKIND, MACHINES, AND THE FUTURE OF ENTERPRISE"

Authored by Nada R. Sanders, PhD from Northeastern University and John D. Wood, Esq., Routledge (Taylor & Francis Group), Hardcover, ISBN: 978-1138571358, 298 pages, 2019

Keywords: Artificial intelligence, enterprise, innovation

"Reading should awaken the mind, not replace it." (Yilmaz 2002, p.123, translated)

It has been a privilege to serve as one of the feature editors for our Decision Line! First, I would like to thank Dean Maling Ebrahimpour, Ph.D. for extending the opportunity to contribute to our Decision Line as the Bookshelf Editor. The value of opportunities created for the junior aspiring scholars by the established esteemed ones are instrumental in ensuring sustainability of our DSI through further integration of the community as well as instilling much needed agility in the ways we feel, think and act amid rapid change. That said, my primary reason for embracing this responsibility was to employ it as an excuse for catching up on reading books. Based on my numerous conversations with colleagues in and outside our decision sciences disciplines as well as practitioners, people suggest that they do not read as much as they would like to!

Whether we "see ourselves as intellectuals, scholars, and/or researchers" (Pettigrew 2005, p.973), the value of reading is strongly emphasized by many including religious texts (Abdullah et al. 2019). That is perhaps best explained by one of the famous Turkish poets, Yunus Emre, with the following verses:



Dr. Mehmet G. Yalcin is an Assistant Professor of Operations and Supply Chain Management at the University of Rhode Island, College of Business. Mehmet held various engineering and managerial positions prior to joining academia where he has been recognized with research and teaching awards. He is

a certified Black Belt in Lean/Six Sigma (LSS), and Logistics, Transportation, and Distribution (CLTD) and teaches Operations and Supply Chain Management courses to students and practitioners. Dr. Yalcin's research focus is the interface of sustainability and innovation with the focal point on Supply Chain Ambidexterity (SCX).

Knowledge should mean a full grasp of knowledge:
Knowledge means to know yourself, heart and soul.
If you have failed to understand yourself,
Then all of your reading has missed its call.
(Timurtaş 1980, p.51, translation by anonymous)

Accordingly, we are not necessarily in the business of just reading and perhaps, reading has deeper meanings. "Two people who debate the written are just like companions in search for true path. Indeed, their mutual goal is not to deceive one another. Thoughtful discourse is the only race where the loser is deemed a victor. To concede, or in other words to get richer through conquering the truth, is --from a part toward whole-- to transition from darkness toward enlightenment" (Meriç 1985, p.281). I hope there were at least a few losers, hence winners, who emerged with the help of our humble contributions From the Bookshelf.

In bidding farewell to our readers and without further ado, I am hereby introducing –again- Muhammad Hasan Ashraf, a doctoral student of supply chain management in College of Business at The University of Rhode Island, for his latest book review of The Humachine: Humankind, Machines, and the Future of Enterprise that is authored by Dr. Nada R. Sanders and John D. Wood, Esq. Thank you for your hard work and contribution Mr. Ashraf!

The Humachine is an exceptional work by Sanders and Wood. The book explores the combination of human and machine features with the aim to harness the power of machines to strengthen human capabilities to create a benevolent superintelligence at an enterprise level also known as Humachine. Further, the authors discuss in detail the organizational governance, operations, strategy, and technological breakthroughs and limitations to achieve this roadmap. The title of the book characterizes the desired superintelligence. The book describes Humachine as the blend of better qualities of humankind such as creativity, intuition, compassion with the mechanical efficiency of a machine such as economies of scale, big data processing, in such a way as to avoid the respective limitations and shortcomings of both humans and machines while maintaining the qualities of both. The authors of this book put together philosophical, psychological, and legal insights to identify where humans and machines can best complement one another to create a better enterprise.

Author Nada R. Sanders, PhD is a distinguished professor of supply chain management at D'Amore Mc-Kim School of Business at Northeastern University in Boston. Her expertise includes forecasting, analytics. global supply chain intelligence, and sustainability. She is the 2019 president of the Production and Operations Management Society and fellow of the Decision Sciences Institute. The co-author John D. Wood, Esq., is a member of the New York and Texas Bar Associations and a graduate of NYU School of Law. He is the founder of a law firm and provides strategic counsel to property owners. His expertise includes risk management, legal compliance, and sustainable business strategy. Combining the business and legal perspectives, the authors merge their strengths in business strategy, forecasting, law, and sustainable business to explore the world of AI and the future of human enterprise. The book has 9 chapters and each chapter contributes to laying out a distinct path for companies to integrate human resources with technology to leverage the strengths of both, for an optimal combination, creating a super intelligent enterprise. The authors

review technology, philosophy, psychology, economics, and other disciplines to help explain the complex topic of Humachine.

The initial chapter sets the basis of the book where the authors introduce Garry Kasparov, the greatest chess player in the world during the 80's and the 90's. Kasparov was unbeatable up until IBM's supercomputer, Deep Blue, defeated him for the first time in his career. Devastated by the loss, he was determined to analyze the potential interactions, and collaborations, of human and machine thinking. His findings provide the major theme for the book and is known as Kasparov's law. The law states that, "A clever process can beat superior knowledge and superior technology" (p.4) which can be formulated as "weak human + machine + better process" (p.4) is superior to a strong computer alone and also, superior to a "strong human + machine + inferior process" (p.4). But the question arises, would the machines be able to replace humans? According to the authors, AI has arrived in various forms such as smartphones, voice recognition, digital assistants, self-steering vacuum cleaners etc. and studies have predicted that AI and automation will wipe out half of today's workforce by 2055. However, Moravec's Paradox states that "where machines have strengths, humans have weaknesses, and vice versa" (p.9). Machines are stronger, better, faster, more precise. Humans are intuitive, creative, and understand the context. Therefore, the gist of this topic is to utilize the strengths of both and find the right way to do it. After all the idea of Humachine is that an enterprise can achieve collective superintelligence because of synergies between humans and machines.

After setting the foundation for the book, the authors provide the pathway to Superintelligence. Various well-defined pathways to attaining the superintelligence are laid out for the readers, for instance, biological cognitive enhancement, neural lace whole brain emulation, and collective superintelligence. The authors argue that it is the collective superintelligence that is the most promising way to move forward; but what is superintelligence? Authors, quote Bostrom, a

Professor at University of Oxford, and define superintelligence as "any intellect that greatly exceeds the cognitive performance of humans in virtually all domains of interest" (p.24). This book aims to convince the readers and the people who matter, that combining the virtues of humanity with the virtues of machinery is the way forward to develop an enterprise that possess superintelligence. The reason for this is the argument, presented in the book, from a segment of population that believe in "Species Chauvinism" (p.40), which is a derogatory portrayal of the view that only humans can be sensible. Authors refute this bias by introducing the notion of "collective intentionality" (p.43) where they claim that an intelligent enterprise - Humachine - could possibly have a mind of its own. They further explain that just like a person, an enterprise can be smart or dumb; it can be ethical or characterized by moral wickedness. An enterprise that has a mind of its own can just be as helpful as it could be destructive. However, with highly efficient processes in place, a superintelligent enterprise will have a competitive advantage over ordinary enterprises. This is possible to achieve specifically due to the four main breakthroughs in the technology stated in chapter 3: the growth of big data, the strengthening of algorithms, the augmentation of cloud computing and the ability to process dark data. There are four popular computational learning methods that are; (i) artificial intelligence (AI) which allows machines to perform tasks that make them seem intelligent, (ii) Machine Learning, where machines learn from data without being programmed, (iii) Neural net, where machines can determine where they are right or not, and (iv) Deep learning, algorithms that mimic human reasoning processes. Authors indicate that all these technologies promise to transform work processes, which, at least AI, is already doing so.

Nevertheless, the authors raise a question at this juncture. Is there anything machines cannot do? Apparently, according to research by Bloomberg, as discussed in chapter 3, companies are too reluctant to discuss the limitations of AI. However, one needs to realize that these machines cannot do everything, especially the tasks that a human can do. For instance, these ma-

chines lack common sense. An example in the book explains this shortcoming; AI may recognize a person on the horse, but will not be able to tell that the figures are actually a bronze sculpture of a man on a horse, not an actual man on an actual horse. Similarly, these machines lack the understanding of context. They live on the algorithms that look for patterns in the data and have no opinion of their own. Moreover, authors caution that these are data hungry machines, and require millions of data items to train themselves. Whereas, a human intellect is far more capable at acquiring new knowledge. If the data fed into a machine is corrupted or inaccurate, then so too will the machine output be corrupted or inaccurate. Meanwhile, humans are not all Mighty either and they too have their limitations. Chapter 4 discuss the Human Capabilities limitations. Humans are emotional species, who can get carried away with anger, love, disappointment, embarrassment etc. Human decision making gets affected with such contextual factors. More importantly, Homo sapiens are not prone to biasness. Biasness, as indicated in this chapter, such as anchoring effect, bandwagon effect, attribution bias, confirmation bias and framing bias all impact human thinking and actions. Humans are social animals whose desperateness and insatiable desire for wealth can lead to unethical practices in the enterprise. On the contrary, authors maintain that a machine can overcome all such emotions and desires, and rather would decide or recommend solutions based on merit and data. But does this mean that humans would be replaced by the Machines? Ali Baba's founder Jack Ma has claimed that in 30 years, Time Magazine cover for the best CEO of the year will highly likely be a robot. However, the authors disagree with this statement and re-emphasize the main theme of the book, i.e. collective intelligence. Humans bring so much to the table in the development of these machines. The intuition, general intelligence, aesthetic taste, emotional intelligence, and care are the attributes only possessed by humans. Originality, creativity, innovation, conscientiousness, and caring can never be programmed. Hence, the authors throughout the book remind the readers that instead of accepting innovation as human vs. machine, rather consider both as collaborators to the formula

of success. The Humachine will harness the unique features of human resources and offset their biases with decision support. Authors reinstate the fact that If we can successfully manage the human interface, human learning and performance will be significantly amplified.

Irrespective that the authors are making a constant effort throughout the book to highlight the collective aspect of human and machine intelligence, in the middle chapters of the book, they do discuss some of the risks of AI impacting humans at work, with the goal of understanding how unique skills of people and technology can be combined for extraordinary results. The biggest worry among the humans is that their jobs will go away just as the way horses were displaced by stream engines and telecopters were displaced with drones. This displacement of conventional means by the technology is called "botsourcing" (p.15) which is the robotic version of outsourcing. However, the authors while referring to medical advancements, assert that the jobs are going to evolve rather disappear. For instance, the technological advancements in medical field has left many radiologists fearing for their jobs. Nevertheless, with the automation of machines, many new jobs emerged that are needed to maintain the latest technologies. New job titles such as Data Detectives, Al- Assisted Healthcare technicians, Chief Trust Officer etc. would emerge to balance out the jobs that were lost due to the displacement. In fact, there is a large stream of research that have shown that AI induction could actually lead to more jobs. For instance, an example in the book talks about Amazon, which has invested in automation of its facilities, leading to more humans being employed due to more efficient and capable processing of orders. "The robots might not take our jobs – they could very well make our jobs" (p.128). It is all about how well the humans collaborate with the machines and how much they trust them. We already have become comfortable with the machines, for instance authors provide a very real life example where we sit in the car, take out our phone, insert the destination in Google Maps and then trust the algorithm to guide us to our destination. The more the human capabilities are integrated with the machine capabilities, the better the results. This integration can be done

through augmentation where "machines learn from human input and humans, in turn, are provided with information by the machine to make decisions," (p.134) such as Google Maps. It could also be achieved through "Co-bots" (p.135) (collaborative robots) where robots physically interact with humans in a shared workspace. Example given in chapter 5 is of auto industry where wearable robotic devices are enabling industrial workers to perform their jobs with superhuman endurance and strength. The integration could also be achieved in the domains where machines help humans to enhance their creativity, such as computer-aided design (CAD). Software provide the humans with data visualization capability to interpret large data values and make correct decisions. The authors have done a great job in establishing their point that machines are not the enemies but rather complement human capabilities. "Humans will not be put to pasture anytime soon" (p.146). Machines will displace the worst possible jobs, such as physically hazardous or mentally grueling ones, and make our lives easier. Major sections of the global economy, transportation, and healthcare especially, are to be revamped on urgent basis.

In addition to the job displacement, there is a control problem posed by AI and authors in chapter 6, urge the readers to take it seriously. Authors give an example of technologies such as Generative Adversarial Networks (GAN) that can create fake images that look so real that they may be impossible to differentiate from reality. People are vulnerable to identity theft. Insensitive gathering of civilian data undermines privacy and creates security risks from data breach. Al might be fed data that contains historical influences, resulting in bias in, bias out. Releasing AI applications in public gathering without oversight would negatively impact the public through social media or cyber-attacks. Authors discuss the precautionary principle as a method of risk management in the context of AI control problem. The risk of Stock Market crash and other cost-benefit related issues make the authors skeptical about the governments to devise policy instruments to manage the risks posed by the AI. Rather they suggest that the business leaders should take this up as corporate social

responsibility and consider themselves accountable for the power they are creating and oversee public goods even when they are not forced to do so by the law. The developers and owners of AI systems must proactively deal with control problem, algorithm bias, and the weaponization of AI.

Towards the end of the book, in the last couple of chapters, the authors offer a way forward for the readers on how to break away from conventional "plug-and-play model" (p.192) of technology adoption. They recommend in chapter 7 that the technology adopters must shift away from sole focus on financial performance and shareholder value to focus on intentionality and objective. Second, they should shift away from predetermined relationships to more meaningful ones. Third, they must shift away from requiring a physical presence in an office environment to flexibility that includes both virtual and physical presence. Last is to shift away from conventional throughput measures and rather adopt aspiring metrics. To manage these maneuvers, the authors propose the "Four I" model: (i) intentionality, (ii) integration, (iii) implementation and, (iv) indication, and call it "a road map for mutating into the humachine" (p.196)

In chapter 8, authors describe Humachine as a process that is evolving and there is no near end to it. Machines have advanced beyond our expectations. For instance, authors talk about when refrigerators and washing machines first came out, not many people had thought there is room for innovation in these products. Yet today, Haier is leading the way in home appliance innovation. Refrigerators can talk to human, warn when milk is running low or when vegetables are turning bad. They can also self-order grocery when its running low. Sky is the limit and machines would keep on mutating. But, the authors stress again that the process of transformation is highly dependent on the leadership, who should encourage a culture of entrepreneurship and innovation, reforming an enterprise and making it capable of continuous adaptation to environmental pressures with acceptability for open innovation and co-creation.

This book is undoubtedly one of the most interesting

ones I have come across lately. Authors have laid the foundation for the Humachine – the organization of the future and, as they have suggested, the roar of Silicon Valley can be heard through this book. It is time the leaders and innovators start investing in these machines. Authors warn the enterprises that they should not become Blockbuster that lost innovative edge to Netflix. Rather they must act as the leader implementing an organizational management framework that resolves Moravec's Paradox by applying Kasparov's Law in a way that satisfies the conditions of superintelligence. But most importantly, they need to Trust the Machines!

The authors end the book on an optimistic note by providing the findings of a survey conducted by MIT Sloan Management Review and The Boston Consulting Group. The results show that 66% of the firms were actively engaged in some form of AI research and implementation, meaning, in the words of the authors, that the breakthroughs will come "fast and furious" (p.258) and very soon. "Just as the printing press led to the global distribution of knowledge, AI will lead to the global distribution of automated rational thought." (p.258)

Overall, I would highly recommend this fabulous work to students, instructors, researchers, and industry practitioners, especially in management and engineering fields. With several options to draw from, the readers will find rich examples of similar Humachine processes within their own industries and areas of research interests. Thanks to Nada R. Sanders, PhD and John D. Wood, Esq.

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REFLECTION AND FAREWELL FROM "IN THE CLASSROOM" FEATURE EDITOR

Kathryn Zuckweiler

As I prepared to write my final piece for Decision Line, I realized I've been fortunate to serve as feature editor for "In the Classroom" for the past eight years. I thought about my own teaching journey over that same time frame and how the more things change, the more they stay the same. Setting aside the whole pandemic thing, a lot has changed in the fields of decision sciences over the past decade. While many of the core operations management topics endure, there are many new facets of old topics and some outright new concepts and models we teach our students to help them successfully advance their careers and the organizations that employ them. We also have new tools to facilitate teaching and learning, and especially recently, a much wider range of delivery modes to enable faculty and students to meaningfully interact across time and distance.

With all the natural growth that accompanies prog-

Kathryn M. Zuckweiler is Dean of the Dr. Billie Doris McAda Graduate School at Midwestern State University. Her research focuses on health care administration, quality, project management, and online education. She has published in such journals as International Journal of Production Research, Academy of Health Care Management Journal, International Journal of Distance Education Technologies, International Journal of Human Computer Interaction, International Journal of Information and Operations Man-



agement Education, and Decision
Sciences Journal
of Innovative
Education. She is
a member of the
Decision Sciences
Institute and
Institute of Supply
Management.

ress, some aspects of being in the classroom (however that is defined) remain the same. Many students (especially undergraduates) new to the decision sciences fields still aren't sure why they have to take this course or what it's about. Many students are still intimidated by the math and the modeling. Many students don't fully appreciate the global career opportunities available in decision sciences. Counterbalancing the newbies are the students who have taken decision sciences courses in the past, know what they're getting into, and keep coming back for more. These students have passion for what they can learn in our courses and a pretty clear idea of how they

might leverage that knowledge to benefit themselves and their companies.

Both groups of students present opportunities for decision sciences faculty. For the newbies, we can share our passion, help them overcome their concerns about self-efficacy, and light a flame that illuminates a path they likely didn't know existed. [Side note – I still remember the professor who did this for me when I was floundering and trying to find a major that fit. Dr. Everette Gardner at the University of Houston set me on the operations management path with his deep knowledge, dry sense of humor, and ability to explain the practicality and applicability of the topics he taught. I learned so much from him – about operations management and teaching and connecting with students - that I use in my classroom today.] For the students who already believe in the value of the decision sciences, we can extend the classroom to engage them in our research and catapult them into careers in industry and academia. It's not so much lighting a flame for these students as it is fueling it.

While teaching is one of three areas of faculty responsibility, it is arguably the one with the most potential impact and reach. If you're reading this column, you already know that. Although *Decision Line* and its "In the Classroom" feature are ending, I encourage you to fuel your own fire for teaching through *Decision Sciences Journal of Innovative Education* and the multitude of blogs, websites, journals, and events that foster and sustain excellent teaching.

I'm grateful to the Decision Sciences Institute and Dr. Maling Ebrahimpour for allowing me to be part of *Decision Line* for so many years. I'm also grateful to all of you who read the articles in this feature and shared your thoughts and feedback. It's gratifying and humbling that a community of distinguished scholars would devote time to reading articles on teaching and engaging in a broader dialog about effective teaching and learning, all for the benefit of students who are the lifeblood of higher education and our future.

So, until we meet again, keep the candle burning.



MEETING ANNOUNCEMENT

As a result of the ongoing COVID-19 pandemic, the 2021 Northeast Decision Sciences Institute Annual Conference will be held virtually March 26-27. The two-day conference will start on Friday and continue through Saturday afternoon. More information about the virtual platform to be used for the conference will be forthcoming.

CALL FOR PAPERS

Full papers, abstracts, and workshops are invited for, but not limited to, the topic areas listed. Undergraduate students may submit proposals for poster sessions. Sessions involving practitioners will be given consideration. Submissions will be blind refereed and accepted papers will be published in the online Conference Proceedings. By submitting a manuscript, the author certifies that it is not copyrighted or previously published, has not been presented or accepted for presentation at another professional meeting, and is not currently under review for presentation at another professional meeting. At least one of the authors certifies that he/she intends to register for and attend the conference to present the paper if it is accepted.

All papers, abstracts, and undergraduate posters must be submitted electronically on or before January 16, 2021 via the conference website: nedsi2021.exordo.com. If you have proposals for workshops or roundtable discussions, please email the program chair.

OUTSTANDING PAPER AWARDS

Outstanding papers are eligible for awards:

- David M. Levine Best Paper Award in Innovative Teaching
- Richard Briotta Best Paper Award in Knowledge Management/Strategy
- Bryant University Best Paper Award in Supply Chain Management and Logistics
- Best Ph.D. Student Paper Award
- Best Contribution to Theory Award
- Best Application of Theory Award
- Best Overall Conference Paper Award

PROGRAM TRACKS

- Accounting, Finance, Economics
- Big Data, Analytics, and Knowledge Management
- Cyber Security, IT, and Emerging Technologies
- Decision Making: Public Administration and Policy
- DSS, Machine Learning, and Artificial Intelligence
- Education, Curriculum, and Cases
- Healthcare Analytics and Services Management
- Human-Technology Interface
- Innovation and Creativity
- Legal, Ethical, and Social Issues
- Operations Management/Operations Research
- Marketing and Consumer Behavior
- Strategy and Organizational Behavior
- Supply Chain Management and Logistics
- Sustainability Management
- Undergraduate Student Poster Competition

OFFICER NOMINATIONS

The NEDSI Nominations Committee welcomes nominations for board members and officers. Contact Eric Stein, Penn State Great Valley, at ews3@psu.edu.

NEDSI is the Northeast Regional Subdivision of the Decision Sciences Institute.

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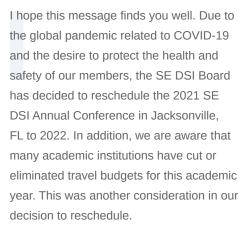
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MESSAGE FROM SEDSI PRESIDENT

Dear Colleagues -



We apologize for any inconvenience this may cause. Please remember to cancel your hotel reservation if you made one.

We invite you to participate in our rescheduled meeting which will be in Jacksonville, FL February 16-18, 2022. Look for announcements in the coming year.

If you have any questions or concerns, please do not hesitate to contact me or Binshan Lin, Program Chair for the 2022 conference. Thank you for your past and continued support of SE DSI.

Thank you and I wish you a safe and productive year.

Sincerely,

Cheryl Aasheim Georgia Southern University SEDSI President





SOUTHWEST DSI HOSTS HIGHLY SUCCESSFUL WEBINAR PROGRAM

Southwest Decision Sciences Institute hosted three webinars recently for interested individuals. Attendance exceeded expectations with over 70 participants. Recordings of the sessions are now available online and can be found on the SWDSI web page under Resources.

Dr. Victor Prybutok, the Regents Professor of Decision Sciences in the G. Brint Ryan College of Business, Vice Provost for Graduate Education and Dean of the Toulouse Graduate School at the University of North Texas, presented "Survey Development for Research and Customer Feedback" for the first session in the series for "Methods Monday." Dr. Prybutok is also the VP of Conferences for DSI.

The second session in the webinar series, was "Teaching Tuesday" and was presented by Dr. Gina Harden. She is an Associate Professor of Management at Stephen F. Austin State University and a Board Member for SWDSI. She presented "How to teach Dashboard building for mobile platforms".

"Wild Card Wednesday" concluded the webinar series. Dr. Gayle Prybutok, Assistant Professor of Health Services Administration at the University of North Texas, presented "Creating a Teaching Portfolio". She is the SWDSI Vice President – Student Liaison.

More webinars are being planned for early 2021, so stay on the lookout for future dates and topics. A special thanks to Dr. Victor Prybutok, Dr. Gina Harden and Dr. Gayle Prybutok for presenting this interesting information.

METHODS MONDAY

Victor Prybutok, Regents Professor of
Decision Sciences in the G. Brint Ryan
College of Business, Vice Provost
for Graduate Education and Dean of
the Toulouse Graduate School at the
University of North Texas, presented
"Survey Development for Research and Customer
Feedback".

Click here for the recording of the session

TEACHING TUESDAY

Gina Harden, Associate Professor of Management at Stephen F. Austin State University, presented "How to teach Dashboard building for mobile platforms".



Click here for the recording of the session

WILD CARD WEDNESDAY

Gayle Prybutok, Assistant Professor of Health Services Administration at the University of North Texas, presented "Creating a Teaching Portfolio".



Click her for the recording of the session

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OPEN POSITIONS AT HIGHER EDUCATION INSTITUTIONS

The Decision Sciences Institute website provides a listing of open academic positions. Below you will find Placement Listings for April 30 – July 20, 2020. For more details on these and other position listings, as well as applicant listings, visit the DSI website – <u>decisionsciences.org</u> Ready to post a position? Guidelines on how to list your position can be found there as well.

POSTING DATE	INSTITUTION	LOCATION	JOB TITLE	JOB TYPE	AREA OF INTEREST	
10/23/2020	California State University	Bakersfield, CA USA	Assistant Professor	Full-Time, Tenure Track	Operations/Supply Chain Management, Logistics	
10/22/2020	University of Colorado	Colorado Springs, CO USA	Assistant/Associate/Professor	Full-Time, Tenure Track	Operations Management, Quantitative Methods, Business Analytics	
10/21/2020	University of Mani- toba	Stevens Point, WI USA	Assistant/Associate/Professor	Full-Time, Tenure Track	Supply Chain Management, Lean/Project Management, Logistics	
10/21/2020	Massachusetts Insti- tute of Technology (MIT)	Cambridge, MA USA	Faculty Position	Full-Time, Tenure Track	Civil/Environmental Engineering	
10/20/2020	Loyola Marymount University	Los Angeles, CA USA	Assistant/Associate Professor	Full-Time, Tenure Track	Operations, Supply Chain Analytics	
10/20/2020	University of Ne- braska - Omaha	Omaha, NE USA	Instructor	Full-Time, Tenure Track	Supply Chain Management & Analytics, Logistics, Industrial Purchasing	
10/16/2020	Southern Illinois University - Edwardsville	Edwardsville, IL USA	Assistant Professor	Full-Time, Tenure Track	Supply Chain Management, Logistics	
10/13/2020	East Tennessee State University	Johnson City, TN USA	Assistant Professor of Supply Chain Management	Full-Time, Tenure Track	Supply Chain Management, Logistics	
10/12/2020	University of Cali- fornia	Los Angeles, CA USA	Assistant Professor	Full-Time, Tenure Track	Information Systems/ Operations/Technology Management	
10/9/2020	Wichita State University	Wichita, KS USA	Vissiting Assistant Professor	Full-Time	Management Information Systems, Business Analytics	
10/7/2020	Valparaiso University	Valparaiso, IN USA	Assistant Professor/Lecturer in Information and Decision Sciences	Full-Time, Tenure Track	Supply Chain Management, Business Analytics	
10/5/2020	York University	Toronto, ON Canada	Assistant Professor in Supply Chain Analytics	Full-Time, Tenure Track	Management Science/ Operations, Supply Chain Management	
10/5/2020	Dongbei University - ISCA	Dalian China	Assistant/Associate/Professor	Full-Time, Tenure Track	Business/Data Analytics, Information Systems, Supply Chain Management	
10/2/2020	North Dakota State University	Fargo, ND USA	Assistant/Associate Professor	Full-Time, Tenure Track	Supply Chain Management	
9/30/2020	University of Ala- bama - Birmingham	Birmingham, AL USA	Department Chair	Full-Time	Management, Information Systems, Quantitative Methods	
9/29/2020	HEC Montreal	Montreal, QC Canada	Open Rank	Full-Time, Tenure Track	Sustainable Operations, Logistics	
9/25/2020	Providence College	Providence, RI USA	Assistant Professor in Finance	Full-Time, Tenure Track	Operations Management, Business, Data Analytics, Statistics	
9/22/2020	University of Wisconsin - Eau Claire	Eau Claire, WI USA	Assistant Professor	Full-Time, Tenure Track	Supply Chain Management, Logistics, Operations	
9/15/2020	Wilfrid Laurier University	Waterloo, ON Canada	Assistant Professor	Full-Time, Tenure Track	Management Science, Operations & Supply Chain Management	
9/8/2020	Singapore Manage- ment University	Singapore	Assistant/Associate/Full Professor	Full-Time, Tenure Track	Sustainable Operations, Data Analytics, Digital Transformation	
8/31/2020	Sogang University	Seoul, South Korea	Assistant Professor	Full-Time, Tenure Track	Service Management	

POSTING DATE	INSTITUTION	LOCATION	JOB TITLE	JOB TYPE	AREA OF INTEREST	
8/31/2020	Samford University	Birmingham, AL USA	Assistant/Associate Professor in Data Analytics	Full-Time (9 month), Tenure Track	Statistics, Data Science/Analytics, Information Science	
8/13/2020	Rochester Institute of Technology	Rochester, NY USA	Assistant/Associate Faculty	Full-Time, Tenure Track	Management Information Systems, Business Analytics	
8/11/2020	Oregon State University	Corvallis, OR USA	Assistant Professor of Operations Management	Full-Time, Tenure Track	Operations/Supply Chain Management	
8/11/2020	University of Notre Dame	Notre Dame, IN USA	Open Rank Operations Management Faculty	Full-Time, Tenure Track	Operations Management	
8/7/2020	Rochester Institute of Technology	Rochester, NY USA	Assistant Professor	Full-Time, Tenure Track	Supply Chain Management and Logistics	
7/29/2020	Michigan State University	East Lansing, MI USA	Assistant Professor	Full-Time, Tenure Track	Supply Chain Management (Logistics/ Transportation, Operations, Sourcing)	
7/24/2020	Georgetown University	Washington, DC USA	Assistant Teaching Professor in Business Analytics	Full-Time, Non Tenure	Programming, Data Engineering, Policy, Business, Management	
7/24/2020	Georgetown University	Washington, DC USA	Assistant Teaching Professor in Business Analytics	Full-Time, Non Tenure	Programming, Data Engineering, Policy, Business, Management	

2010 - CURRI	ENT	1995–1996	John C. Anderson, University of Minnesota–Twin Cities
2019–2020	Janet Hartley, Bowling Green State University	1994–1995	K. Roscoe Davis, University of Georgia
2018–2019	M. Johnny Rungtusanatham, The Ohio	1993–1994	Larry P. Ritzman, Ohio State University
	State University	1992–1993	William C. Perkins, Indiana University-
2017–2018	Jatinder (Jeet) Gupta, University of Alabama – Huntsville	1001 1002	Bloomington Report F. Markland University of
2016–2017	Funda Sahin, University of Houston	1991–1992	Robert E. Markland, University of South Carolina
2015–2016	Morgan Swink, Texas Christian University	1990–1991	Ronald J. Ebert, University of Missouri–Columbia
2014–2015	Marc Schniederjans, Deceased	1989–1990	Bernard W. Taylor, III, Virginia Tech
2013–2014	Maling Ebrahimpour, University of South Florida, St. Petersburg	1981 – 1989	
2012–2013	E. Powell Robinson, Jr., University of	1989–1990	Bernard W. Taylor, III, Virginia Tech
2011 2012	Houston	1988–1989	William L. Berry, Ohio State University
2011–2012	Krishna S. Dhir, Berry College	1987–1988	James M. Clapper, Aladdin TempRite
2010–2011	G. Keong Leong, University of Nevada, Las Vegas	1986–1987	William R. Darden, Deceased
2009–2010	Ram Narasimhan, Michigan State University	1985–1986	Harvey J. Brightman, Georgia State University
2000 – 2009		1984–1985	Sang M. Lee, University of Nebraska– Lincoln
2008–2009	Norma J. Harrison, Macquarie Graduate School of Management	1983–1984	Laurence J. Moore, Virginia Tech, Deceased
2007–2008	Kenneth E. Kendall, Rutgers University	1982–1983	Linda G. Sprague, Deceased
2006–2007	Mark M. Davis, Bentley University	1981–1982	Norman L. Chervany, University of
2005–2006	Thomas E. Callarman, China Europe International Business School	1979–1981	Minnesota—Twin Cities D. Clay Whybark, University of North Carelina, Changl Hill
2004–2005	Gary L. Ragatz, Michigan State University		Carolina-Chapel Hill
2003–2004	Barbara B. Flynn, Indiana University	DSI FOUNDE	
2002–2003	Thomas W. Jones, University of	1978–1979	John Neter, University of Georgia
	Arkansas–Fayetteville	1977–1978	Charles P. Bonini, Stanford University
2001–2002	F. Robert Jacobs, Indiana University– Bloomington	1976–1977	Lawrence L. Schkade, University of Texas–Arlington
2000–2001	Michael J. Showalter, Florida State	1975–1976	Kenneth P. Uhl, Deceased
1999–2000	University Lee J. Krajewski, University of Notre	1974–1975	Albert J. Simone, Rochester Institute of Technology
	Dame	1973–1974	Gene K. Groff, Georgia State University
1990-1999		1972–1973	Rodger D. Collons, Drexel University
1998–1999	Terry R. Rakes, Virginia Tech	1971-1972	George W. Summers, Deceased
1997–1998	James R. Evans, University of Cincinnati	1969-1971	Dennis E. Grawoig, Deceased
	Ciricinnati		

Adam, Everett E., Jr. Anderson, John C. Benson, P. George Beranek, William Berry, William L. Bonini, Charles P. Brightman, Harvey J. Buffa, Elwood S.* Cangelosi, Vincent* Carter, Phillip L. Chase, Richard B. Chervany, Norman L. Clapper, James M. Collons, Rodger D. Couger, J. Daniel* Cummings, Larry L.* Darden, William R.* Davis, K. Roscoe Davis, Mark M. Day, Ralph L.* Digman, Lester A. Dock, V. Thomas Ebert, Ronald J. Ebrahimpour, Maling Edwards, Ward Evans, James R. Fetter, Robert B. Flores, Benito E. * Flynn, Barbara B. Franz, Lori S. Ghosh, Soumen Glover, Fred W. Gonzalez, Richard F. * Grawoig, Dennis E.* Green, Paul E. Groff, Gene K. Gupta, Jatinder N.D. Hahn, Chan K. Hamner, W. Clay Hayya, Jack C. Heineke, Janelle Hershauer, James C.

Holsapple, Clyde Horowitz, Ira Houck, Ernest C.* Huber, George P. Jacobs, F. Robert Jones, Thomas W. Kendall, Julie E. Kendall, Kenneth E. Keown, Arthur J. Khumawala, Basheer M. Kim, Kee Young King, William R. Klein, Gary Koehler, Anne B. Krajewski, Lee J. LaForge, Lawrence Latta, Carol J.* Lee, Sang M. Luthans, Fred Mabert, Vincent A. Malhotra, Manoj K. Malhotra, Naresh K. Markland, Robert E. McMillan, Claude * Miller, Jeffrey G. Monroe, Kent B. Moore, Laurence J. Moskowitz, Herbert Narasimhan, Ram Neter, John Nutt, Paul C. Olson, David L. Perkins, William C. Peters, William S. Philippatos, George C. Ragsdale, Cliff T. Raiffa, Howard * Rakes, Terry R. Reinmuth, James R. Ritzman, Larry P. Roth, Aleda V. Sanders, Nada

Schkade, Lawrence L. Schniederjans, Marc J. * Schriber, Thomas J. Schroeder, Roger G. Simone, Albert J. Slocum, John W., Jr. Smunt, Timothy Sobol, Marion G. Sorensen, James E. Sprague, Linda G.* Stecke, Kathryn E. Steinberg, Earle Summers, George W.* Swink, Morgan L. Talluri, Srinivas Tang, Kwei Taylor, Bernard W., III

Troutt, Marvin D. * Uhl, Kenneth P.* Vakharia, Asoo J. Vazsonyi, Andrew* Voss, Christopher A. Ward, Peter T. Wasserman, William * Wemmerlov, Urban Wheelwright, Steven C. Whitten, Betty J. * Whybark, D. Clay Wicklund, Gary A. Winkler, Robert L. Woolsey, Robert E. D. * Wortman, Max S., Jr.* Zmud, Robert W.

*Deceased

In order for the nominee to be considered, the nominator must submit in electronic form a full vita of the nominee along with a letter of nomination which highlights the contributions made by the nominee in research, teaching and/or administration and service to the Institute. Nominations must highlight the nominee's contributions and provide appropriate supporting information which may not be contained in the vita. A candidate cannot be considered for two consecutive years.

Send nominations to:

Chair of the Fellows Committee Decision Sciences Institute

C.T. Bauer College of Business 334 Melcher Hall, Suite 325

Houston, TX 77204-6021 info@decisionsciences.org

INSTITUTE CALENDAR

2020	
November 21-23	DSI Annual Conference
	Online
2021	
February 17 - 19	SEDSI Annual Conference
	Postponed to 2022

Visit the <u>DSI website</u> for details on these upcoming events.

2021			
March 17 - 20	SWDSI Annual Conference		
	Location TBD		
March 25 - 27	NEDSI Annual Conference		
	Online		
March 30 - April 2	WDSI Annual Conference		
	Postponed to 2022		
May 30 - June 2	EDSI Annual Conference		
	Lund, Sweden		

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DSI Membership Rates									
Based on the GDP per Capita (PPP)									
	All dues amounts are in United States dollars (\$)								
	MEMBER	MEMBER	MEMBER						
	CATEGORY A	CATEGORY B		CATEGORY C					
	Greater than 75th								
MEMBER TYPE	Percentile	50th -75th Percentile		Less	than 50th Percentile				
Regular	\$175	\$90			\$45				
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	Australia	Andorra	Afghanistan	Congo, Republic of the	Iraq	Nepal	Somalia		
	Austria	Bahamas, The	Albania	Cook Islands	Jamaica	Nicaragua	South Africa		
	Belgium	Bahrain	Algeria	Costa Rica	Jordan	Niger	South Sudan		
	Bermuda	Cyprus	Angeria American Samoa	Costa Rica Cote d'Ivoire	Kazakhstan	Nigeria	Sri Lanka		
	British Virgin Islands	Estonia	Angola	Croatia	Kenya	Niue	Sudan		
	Brunei	European Union	Anguilla	Cuba	Kiribati	N. Mariana Islands	Suriname		
	Canada	Faroe Islands	Antiguilla Antigua and Barbuda	Curacao	Korea. North	Pakistan	Swaziland		
	Cayman Islands	Finland	Arrigua and Barbuda Argentina	Czech Republic	Kosovo	Palau			
	Denmark	France	Argentina Armenia	· ·		Panama	Syria Tajikistan		
				Djibouti	Kyrgyzstan				
	Falkland Islands	Greenland	Aruba	Dominica	Laos	Papua New Guinea	Tanzania		
	(Islas Malvinas)	Guam	Azerbaijan	Dominican Republic	Latvia	Paraguay	Thailand		
	Germany	Israel	Bangladesh	Ecuador	Lebanon	Peru	Timor-Leste		
	Gibraltar	Italy	Barbados	Egypt	Lesotho	Phillippines	Togo		
	Guernsey	Japan	Belarus	El Salvador	Liberia	Poland	Tokelau _		
	Hong Kong	Korea, South	Belize	Equatorial Guinea	Libya	Puerto Rico	Tonga		
	Iceland	Lithuania	Benin	Eritrea	Macedonia	Romania	Tunisia 		
	Ireland	Malta	Bhutan	Ethopia	Madagascar	Russia	Turkey		
	Isle of Man	New Caledonia	Bolivia	Fiji	Malawi	Rwanda	Turkmenistan		
	Jersey	New Zealand	Bosnia and Herzegovina	French Polynesia	Malaysia	Saint Helena, Ascension,	Tuvalu		
	Kuwait	Oman	Botswana	Gabon	Maldives	and Tristan da Cunha	Uganda		
	Liechtenstein	Portugal	Brazil	Gambia, The	Mali	Saint Kitts and Nevis	Ukraine		
	Luxembourg	Saint Pierre and Miquelon	Bulgaria	Georgia	Marshall Islands	Saint Lucia	Uruguay		
	Macau SAR China	Slovakia	Burkina Faso	Ghana	Mauritania	Saint Vincent and	Uzbekistan		
	Monaco	Slovenia	Burma	Greece	Mauritius	the Grenadines	Vanuatu		
	Netherlands	Spain	Burundi	Granada	Mexico	Samoa	Venezuela		
	Norway	Taiwan	Cabo Verde	Guatemala	Micronesia	San Marino	Vietnam		
	Qatar	Trinidad and Tobago	Cambodia	Guinea	Moldova	Sao Tome and	Virgin Islands		
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	Switzerland		Chile	Honduras	Morocco	Seychelles	Yemen		
	United Arab Emirates		China	Hungary	Mozambique	Sierra Leone	Zambia		
	United States		Colombia	India	Namibia	Saint Maarten	Zimbabwe		
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