Empowering Your Organization

3rd Annual Symposium

March 23-24, 2016
Wayne State University
Student Center Building
5221 Gullen Mall, Detroit, MI 48202

Big Data is not just about more data; it is about using data to fundamentally rethink all facets of your business for efficiency and growth. Extracting value from Big Data requires a multitude of advanced technology and business skills. Join us as we hear from leading industry experts in manufacturing, supply chain, banking, health care and other sectors who have put analytics into action.
The Big Data phenomenon has now entered the next phase, where the question is no longer about whether or not we do Big Data. Emerging questions are all about Big Value and the empowerment of organizations through contextual intelligence. There are enough proof points now to substantiate tangible benefits of Big Data from almost every sector. Improving productivity and efficiency of existing operational processes through real-time intelligence, monetizing information as an asset, and a deeper and richer understanding of customers and overall business environments are just a few examples where unquestionable benefits have been realized.

The Big Data & Business Analytics Group at Wayne State University has been at the forefront of this evolution and is fast becoming the Midwest’s premier center of innovation. Our group is unique in its strong focus on leveraging the team’s core strengths and research expertise to solve real-life business problems in close collaboration with our region’s industry partners. Our annual symposium has become a must-attend event for the regional industry to get exposure to the latest developments and best practices in the applications of Big Data.

This third annual symposium brings together a stellar lineup of expert speakers from all over the industry to share and discuss their experiences in empowering their organizations through the smart use of Big Data. Support has increased substantially from leading vendors, who will showcase their latest and greatest offerings throughout the event. In response to popular request, we have reorganized the program to allow for increased networking time.

We thank the keynote and symposium speakers for volunteering their time to participate in the program. We thank the vendors for their sponsorship. In addition, a program like this is not possible without the help of a strong planning and support team. We deeply appreciate all of your help.

We hope you enjoy the symposium, and we look forward to working with all of you in the coming years.

Ratna Babu Chinnam
Co-director, Big Data & Business Analytics Group
Professor, Department of Industrial and Systems Engineering

Satyendra Rana
Co-director, Big Data & Business Analytics Group
CTO, Loven Systems

Leslie Monplaisir
Chair, Department of Industrial and Systems Engineering

Dennis Atkinson
Director of Corporate Engagement, The Front Door Program, Office of Economic Development

Robert Reynolds
Professor, Department of Computer Science

Patrick Gossman
Deputy CIO for Research, Computing and Information Technology

Toni Somers
Associate Dean and Professor, Department of Management and Information Systems

Shiyong Lu
Associate Professor, Department of Computer Science

WELCOME
KEYNOTE SPEAKERS

Paul Ballew, Global Chief Data and Analytics Officer, Ford Motor Company

Paul Ballew is the global chief data and analytics officer at the Ford Motor Company. Appointed in December 2014, Ballew leads Ford’s global data and analytics teams, including development of new capabilities supporting connectivity and smart mobility. Prior to joining Ford, he was chief data, insight and analytics officer at Dun & Bradstreet. In this capacity, he was responsible for the company’s global data and analytic activities, along with the company’s strategic consulting practice. Previously, Ballew served as Nationwide’s senior vice president for customer insight and analytics, General Motors Corporation’s executive director for global market and industry analysis, a partner for J.D. Power and Associates, and a research officer and senior economist with the Federal Reserve. He has a bachelor’s and master’s in economics from the University of Detroit and nearly 30 years of industry experience.

Lawrence Weber, Director, Analytics Platform Services, IBM

Having spent over 20 years in technology, building new business and bringing products to market, Weber understands the benefit of business analytics and tapping into new data sources for competitive advantage. On his current mission, he is getting back to his roots, getting hands-on and redefining the way that developers interact with enterprise software and engage with IBM on the digital front.

Prior to this role, Weber ran product marketing and strategy for IBM’s Big Data portfolio, including Hadoop and Streaming technologies, and spent considerable time with IBM’s data warehousing business launching IBM’s first family of data warehouse appliances.

Weber holds an M.B.A. with concentrations in product management and entrepreneurship from Kenan-Flagler Business School at the University of North Carolina and a master of computer science from North Carolina State University.

MAP

Student Center Building
Second floor
### PROGRAM AGENDA

#### DAY 1: TUTORIALS (MARCH 23) — STUDENT CENTER BUILDING

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>1-6:30 P.M.</td>
<td>Tutorial Registration</td>
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<tr>
<td>2:30-5 P.M.</td>
<td>Tutorial 1: Platforms and Algorithms for Big Data Analytics</td>
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<tr>
<td></td>
<td>Dr. Chandan Reddy, Associate Professor, Computer Science, Wayne State University</td>
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<td></td>
<td>This is an era of Big Data. The total digital data in this world is expected to double every two years. Big Data is driving radical changes in traditional data analysis platforms and algorithms. This tutorial consists of two parts: (1) understand Big Data platforms and their characteristics; (2) understand large-scale data mining (classification and clustering).</td>
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<tr>
<td>5-5:30 P.M.</td>
<td>Break / Refreshments / Light Dinner</td>
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<tr>
<td>5:30-8 P.M.</td>
<td>Tutorial 2: IBM Watson Analytics Hands-on Workshop</td>
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<td>Bernard Long, Worldwide Watson Analytics Academic Specialist, IBM</td>
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<td>The Watson Analytics Hands-on Workshop is an event designed to introduce you to the revolutionary approach to analytics that is smart data discovery. Industry is demanding it, and here is an opportunity to learn from Watson Analytics experts how you and your colleagues can benefit from learning about guided exploration, automated predictive analysis and effortless dashboard creation. You will work hands-on with the software and discover the power of collaborative analysis.</td>
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#### DAY 2: MAIN PROGRAM (MARCH 24) — STUDENT CENTER BUILDING

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>8-9 A.M.</td>
<td>Registration and Continental Breakfast</td>
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<td>Sponsored By: HPCC Systems</td>
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<td>Welcome – Opening Remarks and Welcome Address</td>
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<td></td>
<td>■ Ratna Babu Chinnam, Professor and Co-director, Big Data &amp; Business Analytics Group, Wayne State University</td>
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<td>■ Satyendra Rana, CTO, Loven Systems</td>
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<td>■ Farshad Fotouhi, Dean, College of Engineering, Wayne State University</td>
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<td>Master of Ceremonies – Patrick Gossman, Deputy CIO, Wayne State University</td>
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<tr>
<td>9:30-10:30 A.M.</td>
<td>Technical Keynote: Competing on Analytics — Technology Perspective</td>
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<td>Lawrence Weber, Director, Analytics Platform Services, IBM</td>
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<td>As the program director of portfolio marketing in IBM’s newly developed cloud data services division, Weber is redefining the way that users interact with enterprise software. With a focus on data warehousing and analytics business, he is building out their dashDB cloud services, infusing the speed of in-memory columnar data stores in their BLU technology with the imbedded analytics of Netezza analytics all on the cloud as a service.</td>
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<td>10:30-11 A.M.</td>
<td>Break / Vendor Showcases / Networking</td>
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<td>Sponsored By: Cloudera</td>
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<td>11 A.M.-NOON</td>
<td>Industry Keynote: Leveraging Insight and Analytics at Ford</td>
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<td>Paul Ballew, Global Chief Data &amp; Analytics Officer, Ford Motor Company</td>
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<td>Paul Ballew is the global chief data and analytics officer at the Ford Motor Company. Appointed in December 2014, Ballew leads Ford’s global data and analytics teams, including development of new capabilities supporting connectivity and smart mobility.</td>
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<tr>
<td>NOON-1 P.M.</td>
<td>Lunch / Vendor Short Presentations / Networking</td>
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<td>Sponsored By: IBM</td>
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## PROGRAM AGENDA

### 1:30-2:30 P.M.

**Panel Discussion: Empowering Your Organization Through Big Data & Business Analytics**
Moderator: Ratna Babu Chinnam, Professor and Co-Director, Big Data & Business Analytics Group, Wayne State University
Panel members:
- Jim Peregord, Vice President of Analytics, Element Financial Fleet Management
- Mahesh Rajasekharan, CEO, Cleo
- Daniel Reaume, Director, Advanced Analytics, Dow Corning
- Julia Swanson, VP of Performance Analytics & Improvement, Henry Ford Health System
- Flavio Villanustre, VP of Information Systems, LexisNexis
- Daniel D. Vivian, Executive Director of Global Product Development Business Imperatives, General Motors

### 2:30-3:15 P.M.

**Break / Vendor Displays / Networking / Poster Session**
Sponsored By: CLEO

### 3:15-4 P.M.

**Technology Case Study Track Hilberry C**
Coordinators: R. Reynolds (Computer Science, Wayne State University) and S. Lu (Computer Science, Wayne State University)
- "Big Data Applications with Cassandra & Spark" Artem Chebotko, Solutions Architect, DataStax
- "At Scale Micro Batch Serverless Data Processing Architectures using AWS" Fletcher Liverance, Senior Software Engineer, Amazon
- "Big Data Technologies to Speed Up Data-to-Insight Cycle" Shriram Chandra, Big Data Warehouse Engineer, Quicken Loans

**Analytics Case Study Track Hilberry A**
Coordinators: L. Monplaisir (Industrial Engineering, Wayne State University) and P. Gossman (Deputy CIO, Wayne State University)
- "Harnessing Big Data through Cancer LinQ to Deliver High-Quality Care" John Choate, Senior AE of Personalized Medicine, SAP America
- "Big Data in Manufacturing: Long-Term Opportunities and Short-Term Challenges" Bala Deshpande, Principal and Founder, SimaFoRe
- "Big Data and the B2B Enterprise" Michele Buckingham, Global Strategic Intelligence Manager, Dow Corning Corporation

**Business Case Study Track Hilberry B**
Coordinators: T. Somers (Mike Ilitch School of Business, Wayne State University) and D. Atkinson (Front Door, Wayne State University)
- "Building a Single, Unified Platform for Both Advanced Analytics and Traditional Business Intelligence" Jim Peregord, Element Financial Fleet Management
- "De-Mystifying Analytics" Daniel Vivian, Executive Director GPDBI, General Motors
- "Predict the Unpredictable — Power of Big Data" Vijitha Chekuri, Senior Director, and Mohan Jayaraman, Senior Principal Consultant, LochBridge

### 4-4:15 P.M.

**Break / Vendor Showcases / Networking**
Sponsored By: MapR

### 4:15-5 P.M.

**Technology Case Study Track Hilberry C**
- "Powering Machine Learning Applications at LinkedIn with Big Data" Shafkat Amin, Senior Software Engineer, LinkedIn
- "Using Streaming Technology to Enable Real-time Applications" Marc Fabbo, Sr. Systems Engineer, MapR

**Analytics Case Study Track Hilberry A**
- "Becoming Data-Driven: Advanced Analytics at Steelcase" Timothy Merkle, Supervisor, Advanced Analytics, Steelcase
- "Leveraging Sophisticated Algorithms and IoT to Optimize Stroke Rehabilitation" Jarred Hudson, Data Scientist, and Chris Dole, VP of Soothsayer Analytics
- "Operationalizing Big Data: From Project to Production" Mahesh Rajasekharan, CEO, and John Thielen, VP, Cleo

**Business Case Study Track Hilberry B**
- "We Create Chemistry: Through Leading Big Data Analytics and Operational Excellence" Sven Serneels, Manager, and Faisal Khalaf, Manager, BASF Corporation
- "Transforming to a Quantified Enterprise: Why and How?" Satyendra Rana, CTO, Loven Systems
- "Operational Deployment of Predictive Analytics — Faster Insights Through Open Standards" Michael Zeller, Ph.D.; CEO, Zementis

### 5-6:30 P.M.

**Reception / Networking**
Sponsored By: DataFactZ and DataStax
POSTER SESSIONS

Poster sessions will take place from 10:30-11 a.m., 2:30-3:15 p.m. and 4-4:15 p.m. in the Hillberry hallway.

Reduction of Big Data by Combination of Factor Analysis and Clustering for Business Applications
Amjad Faisal Almatrood, Aby K. George, Rula Twal, Otman Ali, Harpreet Singh, Wayne State University

Automotive Dealership Management: Deriving Tailored Recommendations Using Big Data
Haidar Almohri, Ratna Babu Chinnam, Wayne State University; Mark Colosimo, Daniel Mathias, Urban Science

A Heuristic Algorithm for Minimizing the Sum of Weighted Completion Times of Coflows in Data Centers
Tayebeh Bahreini, Daniel Grosu, Wayne State University

Learning Multi-channel Deep Feature Representations for Face Recognition
Xue-wen Chen, Melih S. Aslan, Kunlei Zhang, Thomas S. Huang, Wayne State University

Text Analysis with Deep Neural Networks: From Big Data to Big Impact
Ming Dong, Haotian Xu, Wayne State University

An Efficient Task and Data Placement Strategy for Running Cloud-Based Big Data Workflows
Mahdi Ebrahimi, Aravind Mohan, Shiyong Lu, Robert Reynolds, Wayne State University

Improving Access to Primary Care Using Big Data while Maintaining Utilization
Sina Faridimehr, Ratna Babu Chinnam, Alper Murat, Evrim Dalkiran, Saravanan Venkatachalam, Wayne State University; Hakimuddin Neemuchwala, Michael Lederle, Veterans Administration

Terminal Vulnerability of Internet of Things for Big Data Applications in Defense
Aby K. George, Amjad Faisal Almatrood, Rula Twal, Otman Ali, Harpreet Singh, Wayne State University

Feedback or Research: Separating Pre-Purchase from Post-Purchase Consumer Reviews
Mehedi Hasan, Alexander Kotov, Aravind Mohan, Shiyong Lu, Wayne State University; Paul M. Stieg, Ford Motor Company

KDM: An Automated Big Data Modeling Tool for Apache Cassandra
Andrey Kashlev, Shiyong Lu, Wayne State University; Artem Chebotko, DataStax, Inc.

Proactive Coordination between Emergency Department and Inpatient Units to Streamline Patient Flow with Near Real-Time Analytics
Seung Yup Lee, Ratna Babu Chinnam, Evrim Dalkiran, Wayne State University

A Big Data Enhanced Energy Emission Information System for Environmentally Guided Energy Consumption
Carol J. Miller, Caisheng Wang, Guoyao Xu, Mohsen Sadatiyan Abkenar, Chang Fu, Shawn McElmurry, Audrey Rose Zarb, Wayne State University

A Big Data Platform for Running Workflows in the Cloud
Aravind Mohan, Mahdi Ebrahimi, Shiyong Lu, Wayne State University

Estimation of Equity Risk Premium Using Preprocessed Correlation Based Dimension Reduction
Deok Hee Nam, Wilberforce University; Harpreet Singh, Wayne State University

Market Basket Analysis Using Large-Scale Graph-Based Community Detection Methods
Elham Nosrat, Ratna Babu Chinnam, Wayne State University; Satyendra Rana, Loven Systems

Healthy Urban Waters Safeguards, Discovery, and Research through Big Data Enabled Systems
James Olson, Carol J. Miller, Shawn McElmurry, Shahrzad Amoozegar, Audrey Zarb, Wayne State University

Distributed Group Recommendation Model for Crowdfunding Domains
Vineeth Rakesh, Chandan K. Reddy, Wayne State University

Sharing-Aware Online Algorithms for Virtual Machine Packing in Data Centers
Safran Rampersaud, Daniel Grosu, Wayne State University

Adaptive Block and Batch Sizing for Batched Stream Processing System
Quan Zhang, Weisong Shi, Wayne State University; Yang Song, Ramani R. Routray, IBM Research

A Weather Condition Incorporated Data-Driven Maintenance Scheme for Utility Poles
Jun Zhong, Caisheng Wang, Wenyuan Li, Feng Lin, Wayne State University
Shafkat Amin, Ph.D.; Senior Engineer, Data Engineering, LinkedIn
Shafkat Amin is a senior engineer in the data engineering team at LinkedIn. He is responsible for designing and deploying scalable machine-learning models including large-scale recommendation and content classification systems. He is currently working on building natural language processing models and infrastructure. His interest revolves around gleaning insights from Internet-scale data.

Michele Buckingham, Global Strategic Intelligence Manager, Dow Corning Corporation
Michele Buckingham is the global strategic intelligence manager for the Dow Corning Corporation. In this role, she ensures Dow Corning’s understanding of the industry’s economic and technological structure and its markets to provide insight, analysis and counsel to drive Dow Corning’s strategy. Current focus is on Big Data and partnership with advanced analytics for data-driven decision-making across the enterprise. Prior to joining Dow Corning, Buckingham spent 20 years at The Dow Chemical Company, where she held a variety of positions ranging from global director of hazard communication to information management expertise center leader. Her roles and experiences have leveraged vast amounts of data for both strategy development and execution.

Shriram Chandra, Big Data Warehouse Engineer, Quicken Loans
Shriram Chandra focuses on the design and development of the Big Data platform. Chandra has contributed to many data-driven solutions that address critical business challenges, and is passionate about building innovative solutions that drive impactful business decisions. Chandra has a master’s from the University of Arizona, where he performed Big Data research on social network analysis and cyber security.

Artem Chebotko, Ph.D.; Solutions Architect, DataStax
Artem Chebotko is a solutions architect at DataStax. His core expertise is in data modeling, data management, data mining and data analytics. For more than 10 years, he has led and participated in research and development projects on NoSQL, Graph, XML, Relational and Provenance databases. His current focus is on Big Data technologies, including Apache Cassandra, Apache Spark, Apache TinkerPop and a number of other technologies integrated in DataStax Enterprise. He is the primary investigator and author of the Big Data modeling methodology for Apache Cassandra and the inventor of Chebotko Diagrams used for visual representation of Cassandra logical and physical data models. He has authored more than 50 research and technical papers and is an educator with extensive experience in both industry and academic training. He received his Ph.D. in computer science from Wayne State University in 2008 and his M.S. in management information systems from Ukraine State Maritime Technical University in 2003.

Vijitha Chekuri, Senior Director, IoT Solutions, Lochbridge
Vijitha Chekuri is responsible for solutions, delivery and operations of accounts focused on telematics, infotainment, Internet of Things (IOT) and more. Prior to joining Lochbridge/Compuware in 2008, she served as the engineering program manager for GE Transportation and was the electrical program management team leader for Ford Motor Company. While at Ford, Chekuri was responsible for managing the development, delivery and operations of electrical/electronic systems for various new model and current model vehicles. She is a graduate of the two-year Ford College Graduate Program, which provided a holistic study of the automotive OEM business. She holds a master’s in computer engineering and a bachelor’s in electronic and communications engineering.

John Choate, Senior AE, Personalized Medicine, SAP America
John Choate is chair of program management and maintenance strategies SIG in SAP America’s Americas’ SAP Users Group (ASUG). He is dedicated to training users to navigate the vast SAP ecosystem to better utilize the system to enable business and increase team productivity. He has developed and presented at national webinars with subject matter experts on leadership, order-to-cash, PM, Agile PM, Scrum, Big Data, HANA, In Memory (HANA-S4HANA), business value and analytics.

Bala Deshpande, Principal and Founder, SimaFore
Bala Deshpande has extensive experience ranging from startups to Fortune 5 international firms, where he has demonstrated strong leadership and initiative in solving complex business problems. He has more than 20 years of consulting experience in fields ranging from automotive, aerospace, retail, food and manufacturing verticals delivering business analysis; designing and developing custom data products for implementing business intelligence; data mining; and predictive analytics solutions. He is the co-chair of the annual Predictive Analytics World Manufacturing Conference, held every June in Chicago. He co-authored the book Predictive Analytics and Data Mining – Concepts and Practice using RapidMiner, and is the founder and principal data scientist at SimaFore.

Christopher Dole, Vice President, Partner, Soothsayer Analytics
Christopher Dole is a co-founder of Soothsayer Analytics. His career has been spent working with companies to identify problems and develop novel approaches to solve them. This includes forming an understanding of their challenges, identifying the relevant data they possess, and articulating cogent solutions that can be grasped by people with varying levels of technological savvy. Dole studied political science at The Ohio State University and is involved in marketing, partnerships, sales and strategy at Soothsayer.

Marc Fabbo, Senior Systems Engineer, MapR
Fabbo is currently a senior systems engineer with MapR, where he helps customers learn about Big Data and how they can harness the power of it for their businesses. He
Fletcher Liverance, Senior Software Engineer, Amazon

Fletcher is a senior engineer at Amazon who is responsible for real-time seller-facing analytics and reports. He is an accomplished large-scale software system, virtualization, network and embedded system engineer. He is interested in the production and deployment of unique and instrumental software systems to broad audiences, with wide technological and societal impact.

Jarred Hudson, Data Scientist, Soothsayer Analytics

Hudson holds a bachelor’s in applied mathematics and physics from the University of Arizona, as well as a master’s in physics from The Ohio State University. Prior to joining Soothsayer, he worked in multiple fields ranging from condensed matter physics to quantitative psychology in physics education. This included developing models for electronic transport across molecular junctions and assessing the conceptual knowledge state of students in various levels of physics. Hudson has a strong background in analytical thinking and coding, as well as the ability to apply these techniques across a wide spectrum of problems.

Mohan Jayaraman, Senior Principal Consultant, Lochbridge

Mohan Jayaraman has a strong architecture and delivery record in the space of connected car. He leads Lochbridge’s solution offerings in the space of Big Data analytics. In his role, Jayaraman drives the strategy and implementation of Lochbridge’s offering — data analytics as a service. Mohan has more than 16 years of experience defining IT strategy and delivering solutions, with more than a decade of experience architecting enterprise solutions. His recent accomplishments include launching 4G LTE and predictive, analytics-based vehicle maintenance alerts for a major OEM.

Faisal Khalaf, Manager, Center of Excellence — North American Operational Excellence Group, BASF Corporation

Faisal Khalaf is center of excellence manager in the North American Operational Excellence group at BASF Corporation. He brings more than 16 years of experience in driving operational excellence in the automotive industry in both regional and global teams to achieve improvements in product and business processes. Khalaf earned a Ph.D. in industrial engineering and an M.S. in manufacturing engineering from Wayne State University, and a B.S. in mechanical engineering from Wright State University. Khalaf presently teaches quality management and quality engineering courses at both Wayne State University and University of Michigan-Dearborn. He has expertise and Master Black Belt certification in the fields of lean, six sigma and design for Six Sigma (DFSS).

Timothy Merkle, Supervisor, Advanced Analytics, Steelcase

Tim Merkle leads the Global Advanced Analytics Team at Steelcase Inc. He is responsible for managing the Advanced Analytics Program, personnel, technology, and driving successful predictive and prescriptive analytics projects to deliver value through data-driven insights. Prior to joining Steelcase, he served as a captain in the U.S. Marine Corps. During his nine years of active service, Merkle held positions as a logistics operations officer and operations research analyst. He graduated with honors from the Naval Postgraduate School in Monterey, California, with a master of science in operations research and also holds a bachelor of science in business from Miami University in Oxford, Ohio. Merkle serves as a Steelcase representative to the International Institute for Analytics and the Institute for Operations Research and the Management Sciences Roundtable, where he also serves as treasurer on the board of directors.

Jim Peregror, Vice President of Analytics, Element Financial Fleet Management

Jim Peregror is the vice president of analytics for Element Financial Fleet Management. Appointed in September 2015, Peregror leads Element Fleet’s analytics, business intelligence, and data management teams, including development of new predictive analytics and reporting capabilities. His team is currently building a cutting-edge, unified platform to support both advanced analytics and traditional business intelligence and reporting needs. Prior to this role, Peregror was instrumental in establishing a BI/Big Data Innovation COE at GE Capital that won multiple industry awards, and he also led the implementation of multiple strategic BI initiatives for GE Capital customers. Prior to joining GE in 2009, he led the business intelligence practice at a boutique BI consulting firm and has also worked at PriceWaterhouseCoopers, Ford Motor Company and Delphi Automotive. He holds a B.A. in management information systems from the University of Michigan-Dearborn and an M.B.A. from Wayne State University.

Mahesh Rajasekharan, Ph.D.; CEO, Cleo

Mahesh Rajasekharan has more than 18 years of experience as a senior software executive in sales and marketing, operations, business strategy, supply chain management, SaaS, enterprise software, consulting services, private equity, acquisition integration, and P&L. He currently serves as the CEO of Cleo, where he has led tremendous expansion, thought leadership and customer service excellence. He is considered an industry expert in global supply chain management. Rajasekharan has authored several industry and academic publications in the areas of supply chain and operations management, and has spoken at numerous industry conferences. He earned a Ph.D. in industrial engineering from Texas A&M University and has an M.S. in industrial engineering from Texas Tech University and a B.E. in mechanical engineering from Anna University, India. Rajasekharan also earned an M.B.A. in finance, strategy, and marketing from the Haas School of Business at University of California — Berkeley, where he graduated first in his class.
Satyendra Rana, Ph.D.; Chief Technology Officer, Loven Systems

Satyendra Rana is responsible for the design and development of the DIWO-A Cognitive Analytics Solution Platform at Loven Systems, an Analytics 3.0 company focused on research and product development in the Big Data analytics space. He is a highly accomplished and award-winning IT executive and corporate officer with an extensive record of success in product management, professional services, global program management and startup operations. He has special expertise in Big Data solutions, high-performance computing, strategic planning, business-IT alignment, business transformation, change management, service-oriented architecture and process innovation. He has a proven ability to deliver major revenue growth by managing IT to create business value.

Daniel Reaume, Ph.D.; Director, Advanced Analytics, Dow Corning

Reaume is the director of advanced analytics for the Dow Corning Corporation. In this role, he drives the corporation’s advanced analytics strategy and the implementation of advanced analytics initiatives. Current efforts include projects in the sales, marketing, risk management, compliance and supply chain areas, with a focus on Big Data. Prior to joining Dow Corning, Reaume spent 18 years with General Motors, where he was honored three times with GM’s highest award for technical accomplishment for his work improving profits by several billion dollars. Most recently, he led GM’s Senior Leadership Technical Council, charged with driving innovation in the corporation. Reaume earned his Ph.D. from the University of Michigan’s Department of Industrial and Operations Engineering, where he was a Rackham fellow and an NSERC 1967 fellow. He also holds graduate degrees in law and management, and is a licensed professional engineer and attorney.

Sven Serneels, Modeling Research Manager, BASF Corporation

Sven Serneels is presently the leading modeling expert at BASF Corporation. He holds a Ph.D. in science from the University of Antwerp, where he graduated in the ChemometriX group, a research group led by professor Piet Van Espen that focused on high-dimensional data analysis applied to X-ray spectroscopy. Serneels has since aggregated 10 years of corporate experience. He has previously worked as a research chemometrician at Shell Global Solutions and joined BASF in 2008. At BASF, Serneels accomplished assignments in manufacturing (superabsorbent polymer production plant management) and global technology (intermediates) before assuming his present role in the global business analytics group. Serneels has also continued cutting-edge research, as reflected by his 16 peer-reviewed publications, all of which focus on methods particularly useful for automated analysis of high-dimensional data.

Julia Swanson, Vice President of Performance Analytics and Improvement, Henry Ford Health System

Julia Swanson is responsible for implementing an analytics strategy to provide information and analysis to support clinical, business, and other strategic and operational priorities, as well as organizing support for systemwide operational performance improvement approaches and projects. She provides cross-functional leadership expertise in strategic planning, analytics and continual improvement, including excellent collaboration, organizational and analytic skills. Swanson delivers innovative solutions in response to customer and business requirements with leadership success.

John Thielen, Ph.D.; Chief Technology Officer, Cleo

John Thielen is responsible for crafting technology strategy, innovation and architecting enterprise integration solutions to solve complex requirements in multi-enterprise, cloud, collaboration, mobile and other integration challenges. He has more than 30 years of experience in the software industry. Most recently, he held the position of chief architect, product suite, and CSO with Axway. In prior roles, he served as a senior technology leader at GXS, Inovis, Tumbleweed and other software technology companies. John holds a mathematics degree from Harvard University.

Flavio Villanustre, Vice President, Information Systems, LexisNexis

Flavio Villanustre leads HPCC Systems at LexisNexis. In this position, Villanustre is responsible for information and physical security, overall infrastructure strategy, and new product development. Prior to 2001, Villanustre served at different companies in a variety of roles in infrastructure, information security and information technology. In addition, Villanustre has been involved with the open-source community for more than 15 years through multiple initiatives. Some of these include founding the first Linux User Group in Buenos Aires (BALLUG) in 1994, releasing several pieces of software under different open-source licenses, and evangelizing open source to different audiences through conferences, training and education. Prior to his technology career, Villanustre was a neurosurgeon.

Daniel D. Vivian, Executive Director of Global Product Development Business Imperatives, General Motors

Daniel Vivian joined General Motors in June 2011 as executive director of global HVAC, thermal and powertrain cooling engineering, and TREC. In January 2012, his responsibilities expanded to include BOM optimization and excellence. In October 2012, he became executive director of CO2 global strategy and BOM optimization and excellence. In April 2013, his responsibilities expanded to include vehicle innovation, integration and urban mobility. In November 2013, Vivian became executive director GPDBI, responsible for analytics implementation, cost engineering, vendor tooling engineering, BOM optimization and excellence, and material cost optimization. Vivian has a BSCE from Lawrence Technological University and a master’s in business management from Central Michigan University.

John Thielens, Ph.D.; Chief Technology Officer, Cleo

John Thielen is responsible for crafting technology strategy, innovation and architecting enterprise integration solutions to solve complex requirements in multi-enterprise, cloud, collaboration, mobile and other integration challenges. He has more than 30 years of experience in the software industry. Most recently, he held the position of chief architect, product suite, and CSO with Axway. In prior roles, he served as a senior technology leader at GXS, Inovis, Tumbleweed and other software technology companies. John holds a mathematics degree from Harvard University.

Michael Zeller, Ph.D.; Chief Executive Officer, Zementis

Michael Zeller is the CEO of Zementis, a software company focused on the operational deployment of predictive analytics. Zementis was recognized by CIO Review as one of the “Top 20 most promising Big Data companies in 2013” and named “Cool Vendor in Data Science” by Gartner in 2014. Zeller currently serves on the board of directors of Tech San Diego and on the executive committee of ACM SIGKDD, the premier international organization for data mining researchers and practitioners from academia, industry and government. He received a Ph.D. in physics from the University of Frankfurt (Germany) with emphasis in the development of neural networks, robotics and human-computer intelligent interaction.
We thank the following sponsors — leading vendors in the space of Big Data and business analytics — for their financial support and for exhibiting their products and offerings at the symposium.
The Big Data & Business Analytics Group at Wayne State University has a charter to assist enterprises in their Big Data adoption and Big Data value extraction challenges. The vision of the group is to be a premier center of innovation in Big Data science and business analytics, with a strong focus on solving real-life business problems in active collaboration with regional industry, while leveraging the core strengths and research interests of our team.

Big Data management and Big Data analytics require a host of advanced concepts, tools and technologies, and close collaboration among an interdisciplinary team of subject matter experts. Our group has assembled a cross-departmental team of experts who have extensive experience in successfully delivering and leading a variety of Big Data and business analytics projects and initiatives across industries such as health care, manufacturing and automotive, retail, and government.

Big Data is the bridge to the next wave of innovation and growth. By combining data from multiple channels and sources and discovering patterns of interest, businesses can improve operational efficiency and discover new ways of growing their portfolio. Additionally, Big Data has transformative potential, as has been shown by many leading adopters. However, extracting value from Big Data is no ordinary task. Required skills are hard to come by, and companies have to overcome entrenched cultural barriers to facilitate collaboration among silos.

In addition to undertaking projects, Wayne State University is also planning a variety of customized training programs, certificate programs and a fully online graduate degree in data science and business analytics. Please contact us for more information.

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