Analytics Summit 2015
Real-World Impact from Business Analytics

May 29, 2015

keynotes
John F. Elder | Stephen Few

four all-day tracks
Prescriptive Analytics | Predictive Analytics
Descriptive Analytics | Building Your Analytics Team

The University of Cincinnati Center for Business Analytics
business.uc.edu/analytics-center
About the Center

UC’s Center for Business Analytics in the Carl H. Lindner College of Business was established in 2012 as a corporate–academic partnership that brings together best-in-class stakeholders, and a world-class multidisciplinary group of MS Business Analytics and Information Systems faculty and students. The Center promotes the use of data-driven analytical methods that improve business, government, and organizational performance.

The Center hosts events that feature nationally known speakers and holds professional development analytics and data training classes. Analytical research and consulting services, as well as, onsite corporate analytics training, using actual company data, in any area of data analytics and data management are also offered.

Center Members

Thank you for your continued support!

Center Staff

Jeff Camm, Director | Larry Porter, Marketing and Communications | Geoff Smith, Executive in Residence | Tricia Burger, Administrative Assistant
8–9 am  Registration and Continental Breakfast

9:00–10:30 am  Welcome and Opening Remarks
Grand Ballroom
Michael Fry (Department Head, Operations, Business Analytics and Information Systems, Lindner College of Business)

Keynote Presentation 1
“The Peril of Vast Search (and How Target Shuffling Can Save Science)”
John F. Elder IV, PhD (Founder of Elder Research Inc., Co–author of Handbook of Statistical Analysis and Data Mining Applications, Ensemble Methods in Data Mining, and Practical Text Mining and Statistical Analysis for Non-structured Text Data Applications)

10:40–11:30 am  Breakout Session 1
Mt Lookout room  “Designing Dashboards to Delight” [Descriptive Analytics]
Kelly Martin (VizCandy, Founder)
Amphitheater 1  “Predictive Analytics: What are the Possibilities in Health Care?” [Predictive Analytics]
Denise White (Cincinnati Children’s Hospital Medical Center, Assistant Professor/Director of Quality & Transformation Analytics)
Amy Anneken (Cincinnati Children’s Hospital Medical Center, Lead Analyst of Quality & Transformation)
Mike Platt (Cincinnati Children’s Hospital Medical Center, Senior Analyst)
Amphitheater 2  “StratBAM; Geisinger Health System’s Strategic Bed Analysis Model” [Prescriptive Analytics]
Chris Stromblad (Geisinger Health System, Senior Operations Research Modeler)
Mt Storm room  “Evolutionary Analytics Enablement” [Building Your Analytics Team]
Laura Harris (American Modern Insurance Group Vice President of Business Intelligence & Analytics)

11:40 am–12:30 pm  Breakout Session 2
Mt Lookout room  “Last Call at the Bar [Chart]” [Descriptive Analytics]
Jeffrey Shaffer (Unifund, Vice President of Information Technology and Analytics)
Amphitheater 1  “Geisinger Health Systems Uses Predictive Modeling to Mitigate No-shows” [Predictive Analytics]
Ron Dravenstott (Geisinger Health System, Senior Modeler–Operations Research)
Amphitheater 2  “Real Time Dispatch Optimization” [Prescriptive Analytics]
Zahir Balaporia (Schneider, Director, Process and Technology)
Mt Storm room  “Growing an Analytics Team” [Building Your Analytics Team]
Doug Meiser (The Kroger Co., Operations Research Manager)

12:30–1:30 pm  Lunch
Grand Ballroom

1:40–2:30 pm  Breakout Session 3
Mt Lookout room  “Data-Driven Storytelling: Tips from a Tableau Iron Viz Champion” [Descriptive Analytics]
Ryan Sleeper (Evolytics Director of Data Visualization)
Amphitheater 1  “Tales from the Trenches of Predictive Maintenance” [Predictive Analytics]
Erick D. Wikum (Principal Scientist within the Tata Consultancy Services Innovation Lab)
Amphitheater 2  “Statistical and Optimization Techniques for Laundry Portfolio Optimization at P&G” [Prescriptive Analytics]
Kevin Norwood (P&G Senior Research Fellow)
Ivan Oliveira (SAS, Director Advanced Analytics and Optimization Services)
Mt Storm room  “Built to Last: What’s Your Analytics Strategy?” [Building Your Analytics Team]
Glen Wegryn (Manager/Principal at Analytics Impact LLC)

2:30–2:45 pm  Afternoon Refreshments
Grand Ballroom

2:45–4:15 pm  Keynote Presentation 2
Grand Ballroom  “Signals”
Stephen Few (Founder of Perceptual Edge, innovator, consultant, and educator in the fields of business intelligence and information design. Author of Show Me the Numbers, Information Dashboard Design, and Now You See It)

Closing Remarks
Jeff Camm (Director, Center for Business Analytics, Lindner College of Business)
“The Peril of Vast Search (and How Target Shuffling can Save Science)"

It’s always possible to get lucky (or unlucky). When you mine data and find something, is it real, or chance? The central question in statistics is “How likely could this result have occurred by chance?” Ancient geniuses devised formulas to answer this question for special-case scenarios. Yet, their calculus only applies to quaint, handmade analyses where a few hypotheses are considered. But modern, predictive analytic algorithms are hypothesis-generating machines, capable of testing millions of “ideas.” The best result stumbled upon in its vast search has a much greater chance of being spurious. Such overfit is particularly dangerous, as it leads one to rely on a model molded to the data noise as well as signal, which usually is worse on new data than no model at all. The good news is an antidote exists! John Elder will explain the simple breakthrough solution that’s rarely employed, but being rediscovered in leading fields. He will illustrate how to use the resampling method he calls “target shuffling” in multiple learning scenarios, showing how it calibrates results so they are reliable. Bottom line: Honest data science is needed to save experimental science!

“Signals”
Stephen Few  Founder of Perceptual Edge, innovator, consultant, and educator in the fields of business intelligence and information design. Author of Show Me the Numbers, Information Dashboard Design, and Now You See It.

Abstract: There is no shortcut to enlightenment. Better decisions can only come from better understanding. Information technology does not hold the key to better decisions, we do. Technologies can augment our thinking, but cannot replace it.

The computer has ushered in a new “data age.” The “information age” is yet to come. For this to happen, we must use better technologies more intelligently. Most data is noise. With more data comes more noise but not necessarily more signals. More important than gathering more data, we must learn to distinguish signals from noise. The longer we wait, the harder this will become. While there’s still a chance, we must turn up the signals and turn down the noise. In this presentation, Stephen Few will introduce what’s needed to do this.
DESCRIPTIVE ANALYTICS TRACK

“Designing Dashboards to Delight”  
Kelly Martin: Senior Data Analyst, author at VizCandy.ca and Tableau Zen Master  
For far too long, business dashboards seem to have been designed to purposely abuse and confuse their users. The recent explosion of ‘beautiful’ web data visualizations has the pendulum swinging widely in the other direction. . . . beautifully designed, but not necessarily informative or useful for business. Our job as dashboard builders is to create a cohesive and accurate information message that can stand alone in a room without us there to interpret. In this session we’ll explore how to apply meaningful design to dashboards in a way that effectively communicates the data, highlights the insights and also provides enough beauty to draw the user in.

“Last Call at the Bar [Chart]”  
Jeffrey A. Shaffer: Vice President of Information Technology and Analytics, Unifund  
What happens when a data visualization expert walks into a bar? We’ve heard many times that bar charts are great visualization tools, but this chart type has some limitations. This session will focus on variations of the bar chart and line chart and alternative chart types that can be used to visualize data, while still taking advantage of the strengths of the visual system. We will discuss the pros and cons of these various alternatives and show real-world examples from a number of data visualization designers.

“Data-Driven Storytelling: Tips from a Tableau Iron Viz Champion”  
Ryan Sleeper: Director of Data Visualization at Evolytics, Tableau Iron Viz Champion  
How do you get the most out of your descriptive dashboards when you’re not always there to actually describe the stories in your data to stakeholders? Former Tableau Iron Viz Champion, Ryan Sleeper, is here to share fifteen actionable tips on balancing design, data visualization best practices, and functional requirements to get the most out of your company’s descriptive analytics. Ryan believes that without some consideration to the intangible aspects of data visualization, your descriptive analytics practice is destined to fail. This session is for anyone who wants to improve their storytelling to maximize the effectiveness, adoption, and business impact of their dashboards.

BUILDING YOUR ANALYTICS TEAM TRACK

“Evolutionary Analytics Enablement”  
Laura Harris: CIC, Vice President of Business Intelligence & Analytics at American Modern Insurance Group  
Enabling a self-service model may be one of the most gratifying movements that a data executive can make. At American Modern Insurance Group, the demand for ad hoc reporting had well outpaced the team’s capacity, leaving true skill sets underutilized. With this realization, Laura Harris proposed and executed a strategic vision to limit her team’s reporting resources in the short term in order to enable the business long term. In this session, Harris uncovers the keys behind balancing immediate frustrations while staying the course and delivering on a greater promise — self-service in the hands of the business customer to enable insight driven operational and strategic decision making.

“Growing an Analytics Team”  
Doug Meiser: Founding member of the Operations Research Team at The Kroger Company  
Analytics talent is in short supply. Learn about the way that Kroger’s Operations Team successfully constructed a mathematically diverse team to create a sustainable competitive advantage.

“Built to Last: What’s Your Analytics Strategy?”  
Glen Wegryn: Manager/Principal at Analytics Impact LLC and President, Analytics Section at INFORMS  
So you’ve sold-in analytics to your organization, bought the software, attended the conferences, (think you) understand Big Data and have delivered a modest, but insightful analysis. Great start! Now get ready to roll up your sleeves to figure out what your Act II will be, and more importantly how to sustain the impact and ultimately gain the competitive advantage analytics offers. This session, led by a seasoned practitioner, will discuss three keys to achieving long term success in analytics: Strategy, People and Relevance.
PREDICTIVE ANALYTICS TRACK

“Predictive Analytics: What are the Possibilities in Health Care?”
Denise White: Assistant Professor/Director of Quality & Transformation Analytics in the James M. Anderson Center for Health Systems Excellence at Cincinnati Children’s Hospital Medical Center
Amy Anneken: Lead Analyst of Quality & Transformation, Cincinnati Children’s Hospital Medical Center
Mike Platt: Senior Analyst, Cincinnati Children’s Hospital Medical Center

Over the past decade, the influx of electronic medical records in health care has opened up new horizons for deployment of analytics in the healthcare industry, especially in the area of predictive analytics. Improved data access and technology allows predictive modeling to answer many questions and permits proactive response that was not previously possible. Utilizing predictive analytics in both a static and real-time environment, we can answer many questions. What is the probability that a patient will be readmitted? When might an employee experience an on-the-job injury? What number of specialized nurses will we need in 2 days? How many patients are expected to be admitted/discharged on a particular day? When will we need to build additional ICU capacity? We will discuss the current methods and tools that we are using at Cincinnati Children’s Hospital to integrate predictive modeling into daily activities and explore the future potential in the industry.

“Geisinger Health System uses Predictive Modeling to Mitigate No-shows”
Ronald Dravenstott: MS, Senior Modeler-Operations Research, Geisinger Health System

No-shows, patient appointments that are scheduled but not completed, cost Geisinger Health System (GHS) over $20M annually. GHS has created and implemented a No-Show Predictive Model (NPM), an Artificial Neural Network-based model that identifies patients likely to no-show and enables proactive targeted interventions. The NPM and targeted intervention have been integrated with the Electronic Health Record and tested through a randomized controlled trial which showed a 24.9% relative reduction in the no-show rate. Subsequent to the randomized controlled trial, GHS has expanded the NPM to 40+ clinics. The impacts of the NPM are: 1) former no-showing patients receive care, 2) patient access to care is improved, and 3) clinics operate more efficiently. The NPM targeted interventions are projected to prevent over 5,000 no-shows annually.

“Tales from the Trenches of Predictive Maintenance”
Erick D. Wikum: Principal Scientist within the Tata Consultancy Services Innovation Lab in Cincinnati, OH

The ultimate goal of predictive maintenance is to identify and address impending failures before they occur. Proliferation of low cost sensors producing reams of data provides the basis for significant progress towards that goal. And yet, significant challenges exist to harness sensor and other data to predict and diagnose failures. This presentation examines several such challenges related to interpreting data and moving from detection to action in the context of real world case studies.
“StratBAM: Geisinger Health System’s Strategic Bed Analysis Model”
Chris Stromblad: Senior Operations Research Modeler at Geisinger Health System’s Division of Clinical Innovation and a research associate at the Geisinger Center for Healthcare Systems Re-Engineering

How do executives best utilize their most expensive resources and deliver value in a highly variable environment? At Geisinger our high level decision makers are faced with this question when deciding how many beds are needed to ensure the right care at the right time for our patients. Studies have shown that elongated emergency room wait times until inpatient admission (>6 hours) are associated with an increased risk of mortality. In addition, the initial cost of an inpatient high acuity bed can be as high as $1 million, emphasizing the need for an analytic approach to support all bed capacity decisions. This presentation will detail how our team:

• Analyzed patient flow data (>70,000 inpatients) from our electronic health record
• Understood the detailed patient placement processes and the market forecast methods
• Developed, validated, and applied StratBAM
• Transformed a decision making process to be strategic, objective, data driven, and robust

“Real Time Dispatch Optimization”
Zahir Balaporia: Director, Process and Technology at Schneider

Optimization is at the core of Schneider Intermodal’s driver dispatch process. At peak volumes the optimization matches thousands of hours of capacity with thousands of shipments, creating a very large and complex optimization problem to solve in real time. The data changes continuously based on updates from drivers, updates from railroads, updates from container sensors, changes to freight availability, and plans that are running ahead or behind schedule. This talk will cover:

• An introduction to the technology framework, problem partitioning, and parallelization used to solve the optimization problem
• The change management program used for training frontline and upstream users
• The use of Hadoop to store optimization log files and the potential to use the data to feedback into the optimization process
• Successes and continuing challenges in deploying a semi-autonomous real time dispatch optimization system

“Statistical and Optimization Techniques for Laundry Portfolio Optimization at P&G”
Kevin Norwood: Research Fellow in R&D at Procter & Gamble. Ivan Oliveira: Director Advanced Analytics and Optimization Services at SAS

The Procter & Gamble (P&G) Fabric Care business oversees a broad portfolio of products, including household brands such as Tide, Dash, and Gain. We describe a novel analytical framework that uses visual statistical tools and advanced mathematical programming methods, helping P&G determine ingredient levels and product and process architecture to create some of the world’s best laundry products. This framework has provided targeted consumer benefits while enabling cost savings in the order of millions of dollars.
Amy Anneken
Cincinnati Children’s Hospital Medical Center, Lead Analyst of Quality & Transformation

Amy is a Lead Analyst of Quality & Transformation in the James M. Anderson Center for Health Systems Excellence at Cincinnati Children’s Hospital Medical Center (CCHMC). While at CCHMC, Amy has been instrumental in developing statistical process control (SPC) methods for use in a healthcare setting and supported the spread of quality improvement throughout the organization. Her analytic work has focused on productivity & flow initiatives throughout the hospital. Amy is a graduate from the University of Cincinnati’s College of Business where she received both her BBA and MS in Quantitative Analysis. Amy’s interests are in applied data analysis to help improvement teams change the outcome for children.

Zahir Balaporia
Schneider National, Director Engineering and Advanced Analytics

At Schneider, a premier provider of transportation, logistics and related services, Zahir is responsible for implementation of business optimization technologies and related processes within the company’s Intermodal division. Prior to moving into the Intermodal line of business, he led the corporate Decision Engineering Team, which specializes in the application of advanced analytics for operational, tactical and strategic decision support. A Certified Analytics Professional with more than 20 years of experience, he is acknowledged in the books Competing on Analytics by Davenport and Harris, and The New Know by Thornton May. Zahir has an MS in Industrial Engineering from Purdue University and a BS in Computer Engineering from Clarkson University. He is pursuing an MS in System Dynamics from Worcester Polytechnic Institute.

Ron Dravenstott, MS
Geisinger Health System, Senior Modeler—Operations Research

Ron has been an Operations Research Practitioner at Geisinger Health System (GHS) since 2011. He received his Master of Science (2012) and Bachelor of Science (2009) in Industrial and Systems Engineering from Ohio University. In addition to his work on no-shows to outpatient appointments, while at GHS Ron has improved predictions for surgical case durations, implemented a short-term inpatient bed demand forecasting tool, and developed an Emergency Department discrete-event simulation model. Prior to joining GHS, Ron was a research assistant at Ohio University developing manufacturing cost estimation software for General Electric Aircraft Engines, Electric Power & Water Systems.

John F. Elder IV, PhD
Elder Research Inc., Founder

20 years ago, John founded Elder Research, America’s largest and most experienced analytics consultancy. With offices in Charlottesville VA, Baltimore MD, and Washington DC, they’ve solved hundreds of challenges for commercial and government clients by extracting actionable knowledge from all types of data. Dr. Elder co-authored 3 books — on practical data mining, ensembles, and text mining — two of which won “book of the year” awards. John has created data mining tools, was a discoverer of ensemble methods, chairs international conferences, and is a popular workshop and keynote speaker. Dr. Elder earned Engineering degrees from Rice and UVA, where he’s an Adjunct Professor. He was named by President Bush to serve 5 years on a panel to guide technology for national security.
Stephen Few  
Perceptual Edge, Founder

Stephen founded Perceptual Edge in 2003. With 30 years of experience as an innovator, consultant, and educator in the fields of business intelligence and information design, Stephen is now a leading expert in data visualization for sensemaking and communication. Stephen writes the quarterly Visual Business Intelligence Newsletter, speaks and teaches internationally, and provides consulting services. In 2004, he wrote the first comprehensive and practical guide to business graphics entitled Show Me the Numbers, now in its second edition. In 2006, he wrote the first and only guide to the visual design of dashboards, entitled Information Dashboard Design, also now in its second edition. In 2009, he wrote the first introduction for non-statisticians to visual data analysis, entitled Now You See It.

Laura H. Harris  
American Modern Insurance Group, Vice President of Business Intelligence & Analytics

With American Modern Insurance Group for 21 years, Laura has held a variety of positions in Product Development, Underwriting, Operations and now Business Intelligence. Laura is a co-developer of the company’s five year Enterprise Data Warehouse and Business Intelligence Strategy and leads the team responsible for supporting 1300 internal analytics business users as well as 700+ external partner users. She is a graduate of the University of Cincinnati, holds the designation of Certified Insurance Counselor and is currently pursuing her designation as a Chartered Property and Casualty Underwriter. She is a resident of Ft. Thomas, Kentucky with her husband, and is the mother of a senior in High School and 1st Year Medical School Student.

Kelly Martin  
VizCandy, Founder

Kelly has been working as a senior data analyst since 2000 and has an education in demography; the study of population patterns and behavior. (MA 2001). She has worked in health care (public health, cardiology), child protection services, and telecommunications and is skilled in social research methods, statistics, SQL and Tableau. Kelly has been a Tableau Zen Master for two consecutive years, 2013 & 2014. Kelly’s visualization was featured in the Keynote at the last Tableau conference and was also mentioned in GeekWire. She authors VizCandy.ca, “at play in the world of data visualization”, focusing on designing Tableau dashboards.

Doug Meiser  
The Kroger Co., Operations Research Manager

Doug is proud to be the founding member of the Operations Research Team at The Kroger Company. The Operations Research team has delivered world-class solutions in innovation, queuing, inventory, facility layout, manufacturing analysis, and many other disruptive solutions. In 2013, Doug was honored as a Franz Edelman Laureate for the Operations Research Team’s work in inventory; the medal is given to men and women who distinguish themselves with their significant contribution to applied analytics. He was honored in 2014 for the company’s rank at the #3 spot in the Information Week Elite 100 for the Kroger QueVision system. Doug obtained his B.S. in Mathematics and Physics and his MBA from Northern Kentucky University. Doug enjoys coaching the micro-soccer team for his kids.
Kevin Norwood

Procter and Gamble, Senior Research Fellow

Kevin received his PhD in physical chemistry from Iowa State University in 1990 and is a Research Fellow in R&D at Procter & Gamble. He leads technical work to create and apply modeling approaches to formulate products within the Fabric and Home Care businesses. His current work is focused on integration of models across disciplines. He started with P&G in 1991 and has worked in Analytical Science, Technology, Formulation, and Modeling, where he has spent the majority of his career.

Ivan Oliveira

SAS, Director Advanced Analytics and Optimization Services

Ivan manages the Advanced Analytics and Optimization Services (AAOS) group at SAS, where he has directed projects in operations research (OR) and optimization applications in a variety of industries. AAOS delivers consulting expertise to SAS customers in the field of OR, Inventory Optimization (IO), Revenue Management and Price Optimization (RMPO), and related technologies. Prior to the creation of the AAOS, Ivan was a member of the R&D interface team where he supported OR Professional Services engagements, acted as liaison between the field and R&D, addressed technical support issues, and developed algorithms for the interior point solver. Prior to joining SAS, Ivan worked at Intel Corporation (Optimization and Statistical Analysis Division) where he managed projects and developed models and algorithms for semiconductor design, supported a general optimization framework for internal customers, and taught classes on optimization. Education: MIT (MS, PhD).

Mike Platt

Cincinnati Children's Hospital Medical Center, Senior Analyst

Mike is a Senior Analyst in the James M. Anderson Center for Health Systems Excellence at Cincinnati Children's Hospital Medical Center. Mike is a graduate of the University of Cincinnati's College of Business where he received his M.S. in Quantitative Analysis. He also holds a B.S. degree in Mathematics from the University of Cincinnati. Mike's work focuses in the areas of capacity management, hospital flow, and predictive analytics.

Jeffrey A Shaffer

Unifund, Vice President of Information Technology and Analytics

Jeff is Vice President of Information Technology and Analytics at Unifund and has been instrumental in the creation and development of the complex systems, analytics and business intelligence platform at the company. He holds a bachelor of music and a master of music degree from the University of Cincinnati and an MBA from Xavier University where he was the winner of the 2006 Graduate Student Scholarly Project in Research. Jeff is also Adjunct Assistant Professor at the University of Cincinnati in the Carl H. Lindner College of Business teaching a graduate-level course in Data Visualization. He is a regular speaker at conferences, symposiums, universities and corporate training programs on the topics of data visualization and data mining, and also teaches data visualization at the KPMG Advisory University.

Ryan Sleeper

Evolytics, Director of Data Visualization

Ryan is Director of Data Visualization at Evolytics, a full-service digital analytics consultancy out of Kansas City, where he has worked with data-driven brands including TurboTax, Mint, Roku, Sephora, Dr Pepper, and the Atlanta Hawks, among many others. Outside of his day job, Ryan enjoys creating unique sports data visualizations that have led to several notable Tableau recognitions including 2013 Elite 8 Champion, 2x 2013 Top 25 Tableau Public visualizations, 2014 Elite 8 Sports Viz Finalist, 2014 Top 5 Tableau Public visualization, and 2013 Tableau Iron Viz Champion. His work has garnered attention from popular websites including The Guardian, ESPN, and Grantland. He is a lifelong Kansas City Chiefs and Kansas City Royals fan.
Christopher Thomas Strömblad  
Geisinger Health System, Senior Operations Research Modeler

Chris is a Senior Operations Research Modeler at Geisinger Health System’s Division of Clinical Innovation and a research associate at the Geisinger Center for Healthcare Systems Re-Engineering. At Geisinger, Chris has optimized outpatient clinic and physician scheduling with the objective of improving access to care and seeing more patients using Mixed-Integer Programming. Chris has also provided strategic decision support to multi-million dollar inpatient bed capacity challenges at times of hospital expansion and renovation. Prior to Geisinger Chris worked at Accenture Copenhagen as part of a team of consultants and developed an IT-Vision for Save The Children Denmark. Chris serves as a Councilor for the INFORMS Health Applications Society (HAS) and as Chair for the INFORMS HAS Practitioner Engagement Committee. Chris has a Master of Science Dual Degree in Industrial Engineering and Operations Research from The Pennsylvania State University and a Bachelor of Science in Engineering Mathematics from The Technical University of Denmark.

Glenn Wegryn  
Analytics Impact LLC, Founder / Principal

A dynamic and engaging speaker, Glenn has been an evangelist for analytics for over 30 years. Notably, he re-built the Advanced Business Analytics practice at P&G into a world-class, award-winning organization. Now retired from P&G, he actively consults and coaches on analytics and supply chain strategy and design. Glenn is a regular invited speaker at major conferences. He holds a BS in Quantitative Analysis from Indiana University Kelley School of Business and is a Certified Analytic Professional by The Institute for Operations Research and Management Science (INFORMS) and currently serves as President of the Analytics Section of INFORMS.

Denise White  
Cincinnati Children’s Hospital Medical Center, Assistant Professor/Director of Quality & Transformation Analytics

Denise is Assistant Professor/Director of Quality & Transformation Analytics in the James M. Anderson Center for Health Systems Excellence at Cincinnati Children’s Hospital Medical Center. In her current position, she manages the analytic team supporting quality and transformation analytics across the hospital. The team provides expertise in statistical process control (SPC), performance measurement and reporting, and advanced analytics along with providing coaching and training in quality improvement analytics. Dr. White is a graduate from the University of Cincinnati’s College of Business where she received her PhD in Operations Management with a focus on Healthcare Operations. She holds a BS degree in Mathematics and Computer Science along with an MBA. Dr. White’s research interests lie in the area of capacity management, hospital flow, scheduling, and advanced analytics.

Erick D. Wikum  
Tata Consultancy Services, Principal Scientist

Erick is a Principal Scientist within the TCS Innovation Lab in Cincinnati, OH. He focuses on applied supply chain research, interacting with leading universities, other TCS labs and corporate partners. Dr. Wikum has over 20 years of experience in applying Operations Research and analytics techniques to help people and organizations make better, data-driven decisions. His primary application area has been freight transportation, with expertise in airlift, rail, truckload trucking, truck-rail inter-modal, third-party logistics, freight brokerage and pipeline transport.
The Operations, Business Analytics and Information Systems (OBAIS) Department in the UC Lindner College of Business offers several options to advance your career with specializations in analytics and or information systems. Both Masters of Science degrees and certificate options are offered. Flexible course options that accommodate part-time students, national recognition as a top data analytics program, an outstanding analytics and information systems faculty, internships, and 95-100% employment rates on graduation are strengths of these programs.

**Master of Science in Business Analytics** (Ed Winkofsky, Academic Director)  
- The Lindner MS program in Business Analytics seeks full-time and part-time students with quantitative and or technical backgrounds (mathematics, engineering, statistics, science, economics etc.) who are interested in pursuing careers in the fast growing fields of business analytics and data science.
- No work experience is needed to enter the program which can be completed in less than a year.
- Students learn data visualization, predictive modeling, data management, statistical analysis, data mining, optimization, simulation and many other skills.

**Master of Science in Information Systems** (Rob Rokey, Academic Director)  
- The Master of Science in Information Systems accepts students from any undergraduate major who want to gain a real-world business and technology foundation that includes IT management strategy and project management.
- Students will understand technology’s role in business and position themselves to stand out in the job marketplace.
- Flexible part-time options are available with evening and weekend classes.
- Most students also graduate with a Certificate in Data Analytics.
- 100% employment on graduation at companies such as Google, Microsoft, Accenture, Yahoo!, EY, Deloitte Consulting, Procter & Gamble, SAP, Unilever and many others.

**Data Analytics Certificate** (Ed Winkofsky, Academic Director)  
- The Data Analytics certificate (12 credit hours) prepares individuals to develop logical data models, construct data warehouses, build visually effective data displays and use sophisticated analytical techniques to glean valuable insights.
- The four core courses include Business Intelligence, Data Management, Statistical Computing and Data Analysis Methods.
- Students pick two electives from a wide selection that include Data Visualization, Data Base Design, Data Mining and others.

**Data Science Certificate** (Karen Davis, Academic Director)  
- The graduate certificate in Data Science (15 credit hours) is a collaborative program between computer science and business analytics.
- Students are prepared to apply analytic techniques and algorithms (including statistical and data mining approaches) to large data sets to extract meaningful insights and acquire hands-on experience with relevant software tools, languages, data models, and environments for data processing and visualization.
- Core courses include Data Warehousing and Mining, Intelligent Data Analysis, Cloud Computing, Data Visualization, Data Analysis Methods and Statistical Computing.