EDC's Oceans of Data Institute (ODI) and IBM's Workshop on
BUILDING GLOBAL INTEREST IN DATA LITERACY: A DIALOGUE

Data Literacy Expert Panel: Biographies

Deborah Boisvert
Principal Investigator, BATEC
Deborah is the principal investigator for BATEC, an NSF-funded Advanced Technological Education National Center of Excellence aimed at creating a coordinated IT education system, spanning area secondary schools, community colleges, and four-year universities, and co-principal investigator for the Massachusetts Exploring Computer Science Partnership. Through these projects, Deborah has proven her extensive experience in developing and implementing educational programs for secondary school, community college, and university faculty while creating enduring and effective connections at the academic and administrative levels among the network of community colleges and secondary schools. Her partnerships with industry and community provide her with a broad-level perspective on regional planning for workforce training. Deborah serves in leadership positions on the Massachusetts Computing Attainment Network (MassCAN), the MA K–12 Computer Science and Digital Literacy Standards Team, the Board of Higher Education's Transfer Task Force, The National Advisory Board of IWITTS, and the ACM SIGITE Education Board.

Kirk Borne
Principal Data Scientist, Booz Allen Hamilton
Kirk is a transdisciplinary data scientist and an astrophysicist, with specific expertise in applications of data mining, machine learning, and advanced analytics within diverse domains, from marketing to education to scientific research. He is the principal data scientist in the NextGen Analytics and Data Science account within Booz Allen Hamilton's Strategic Innovation Group, where he provides advisory, consulting, mentoring, training, client solutions, and business development expertise in collaboration with the 1000+ data scientists within the organization across numerous industries. He has advised several federal agencies on data analytics and big data applications. He is a founding member of the American Astronomical Society's Astroinformatics and Astrostatistics Working Group and the International Astrostatistics and Astroinformatics professional society. Prior to moving to his current position in May 2015, Kirk was professor and data scientist at George Mason University for 12 years. Before 2003, he spent nearly two decades in positions supporting NASA projects, including NASA's Data Archive project scientist for the Hubble Space Telescope, and as contract project manager in NASA's Space Science Data Operations Office. He received his BS degree in Physics from LSU and his PhD in Astronomy from Caltech. He is frequently identified as the #1, #2, or #3 big data and data science influencer worldwide on Twitter. You can follow him there at @KirkDBorne.

Michael Bowen
Associate Professor, Science Education, Mount Saint Vincent University, Halifax, Nova Scotia, Canada
Mike has worked with developing and researching competency with data and graph literacy for over 20 years. His ethnographic PhD work examined the development of data literacy (i.e., analysis and representation of data) at various educational levels ranging from grade 6 to post-doctoral fellows and university professors to try to understand how these competencies develop. He has published numerous academic articles and chapters on these issues in education, sociology, and psychology journals. His recent focus has been on the development of these competencies in teachers, and his recent publications

include two books to help develop inquiry and data analysis competencies in middle and high school teachers and their students. Mike has presented workshops on these issues at teacher professional development conferences over the past 15 years and works actively with the National Science Teachers Association. He has bachelor's degrees in Biology, Education, and Journalism (HonBSc, BEd, BJ); master's degrees in Toxicology and Sociology (MSc, MA), and a PhD in Education. He currently teaches undergraduate and graduate courses in science, science education, curriculum studies, media literacy, and research methodology.

Ben Davison

Quantitative User Experience Researcher, Google Search

Ben is a data scientist in Google Search. His goal is to extract meaning from user activities in Google Search. The largest-*n* work involves A/B studies with billions of users on everything other than the main list of links or ads. This informs product teams and leadership on what users really want to see on the page. Ben started research with psychometric studies for accessibility in academia, where getting enough participants was a key problem. He has since discovered that big data has the reverse problem: spurious findings and results that are difficult to put into action. He found a distance in meaning not present in small-*n* studies. His current work in logs analysis, surveys, and user needs is triangulating on meaningful results and improving methods for product-driven research. Ben holds a PhD in Human-Centered Computing from Georgia Tech.

Rob Gould

Faculty, UCLA Department of Statistics

Rob has been responsible for developing and directing the UCLA Statistics undergraduate program since 1998 and his primary interests are in statistics education. Currently, he is principal investigator of the Mobilize Project, an NSF-funded program to develop data science curriculum materials in high school STEM courses centered on participatory sensing, a data-gathering paradigm. He is currently on the American Statistical Association's joint committee with the National Council of Teachers of Mathematics, and next year will chair the ASA's joint committee with the Association of Mathematicians at Two Year Colleges. He is founding editor of the e-journal *Technology Innovations in Statistics Education* and a co-author on the introductory statistics textbook *Exploring the World Through Data*. He was a collaborating author on the ASA's *Guidelines for Assessment and Instruction in Statistics Education* (GAISE) College Report, published in 2007. He has a PhD in Mathematics from University of California, San Diego, and a BS in Applied Mathematics from Harvey Mudd College.

Ryan Kapaun

Crime Analyst, Eden Prairie Police Department

Ryan is a crime analyst for the Eden Prairie Police Department (MN). He uses data to forecast crimes in and around Eden Prairie. After crimes occur, Ryan uses data to develop leads and locate suspects. He has 12 years of experience as an analyst, including five years as an intelligence analyst with the State of Minnesota, assigned to the Division of Homeland Security and Emergency Management, Bureau of Criminal Apprehension and the Minnesota Joint Analysis Center. He is a past president of the Minnesota Association of Criminal Intelligence Analysts and, in 2010, he was named the Minnesota Crime Analyst of the Year for his role in collecting and analyzing intelligence data for the Eden Prairie Police Department. Ryan has a BA in Communication from the University of Minnesota, Duluth.

Cliff Konold

Director, Scientific Reasoning Research Institute, University of Massachusetts, Amherst

Cliff is director of the Scientific Reasoning Research Institute at the University of Massachusetts, Amherst, and senior research scientist at PRISM. A psychologist by training, he studies how people reason and learn about chance and data, and applies this research to the design of educational materials and

software. He was the lead designer of TinkerPlots, the data visualization and modeling desktop application published by Learn Troop, and is currently part of the team developing the data analysis Web application, CODAP. As part of that project, he is continuing his research of students' understanding and use of data structures.

Juan Miguel Lavista Ferres

Principal Data Scientist at Bing/Microsoft

Juan Miguel Lavista Ferres is currently the principal data scientist for Microsoft Data Science team (DnA), where he works with a team of data scientists searching for insights in petabytes of data. Juan joined Microsoft in 2009 to work for the Microsoft Experimentation Platform (EXP), where he designed and ran randomized control experiments across different Microsoft properties. At Microsoft, Juan also worked as part of the Bing Data Mining team. Before joining Microsoft, Juan was the CTO and co-founder of alerts.com. Juan has two computer science degrees from the Catholic University in Uruguay, and a graduate degree in Data Mining from Johns Hopkins University.

Odette Merchant

Project Manager, Nova Scotia Community College (NSCC), Halifax, Nova Scotia, Canada

Odette is an experienced educator who has worked for more than 20 years in the adult education sector in both Canada and the United Kingdom. Odette has held various teaching and leadership roles within the field and is now project manager at NSCC supporting educational programs and partnerships with industry. Her work in post-secondary education has always focused on the development of pathways to learning, skills development, and applied learning. A true advocate of lifelong learning, Odette strives to support strategic collaboration efforts that bring together educational institutions and the community for the enhancement of both. Currently, Odette is working on a multi-institutional project in Nova Scotia that is bringing together high schools, community colleges, universities, government agencies, and industry partners in developing learning opportunities, pathways, curricula, and applied research around data and analytics. Odette holds a BA from Memorial University of Newfoundland, MBA from the University of Glamorgan (University of South Wales), Diploma in Community College Education from NSCC, and is currently studying for her MEd in Lifelong Learning at Mount Saint Vincent University.

Andrew Shaffner

Professor of Statistics, California Polytechnic State University, San Luis Obispo

Andrew is very interested in curriculum development as well as increasing statistical literacy and computing across the undergraduate curriculum. He introduced statistical computing using R to the Cal Poly BS Statistics program in 1997, which is now required in the curriculum. He also served as the university-wide curriculum chair from 2010–15. In this coming year, he will serve as the internal reviewer of Cal Poly's General Education program, where he plans to stress the importance of coursework to improve data literacy. He is co-PI and principal statistician for a number of NIH-funded clinical trials investigating obesity and pregnancy as well as consulting statistician for multiple environmental projects funded through the National Estuary Program in Morro Bay and Tenera Environmental. He holds a BS in Mathematics from Cal Poly and an MS and PhD in Statistics from the University of Washington.

Hunter Whitney

Consultant, Author, and Instructor; UX and Data Visualization

Hunter is a consultant, author, and instructor who brings a user experience (UX) design perspective to data visualization. He has advised corporations, start-ups, government agencies, and NGOs to achieve their goals through a strategic design approach to digital products and services. His experience includes leading the designs of data analysis interfaces for uses ranging from biomedical research to cybersecurity.

He has also consulted for the Monterey Bay Aquarium on various UX and visualization projects. Hunter is the author of *Data Insights: New Ways to Visualize and Make Sense of Data* and contributed a chapter to *Designing for Emerging Technologies: UX for Genomics, Robotics, and the Internet of Things.* He received dual bachelor's degrees in Biology (UCSC) and English Literature (UCLA)—and has completed post-graduate psychoneuroimmunology research at UCLA.

Michelle Williams

CEO, Williams Learning Solutions

Michelle is CEO of Williams Learning Solutions, a start-up company. Her focus is developing educational tools for elementary science. Michelle worked as an associate professor of science education at Michigan State University for almost 10 years. During that period she developed projects designed to determine effective approaches to successfully deliver science education to K–12 students. Her work combined topics in the biological sciences using a technology-enhanced learning environment to take advantage of research in the learning sciences that improves scientific literacy among precollege students. She received several million dollars in National Science Foundation funding to address the question, How can all students be assured the opportunity to learn significant STEM content? Through this initiative, Michelle investigated best practices in technology-supported instructional design and formative assessment that provide rich data on students' conceptual understanding of genetics. Her efforts resulted in engaging the attention of policy makers at both the federal and state levels. Earlier in her career, she worked in marketing and then later became an elementary school teacher. Michelle holds a BBA in Marketing from the University of Texas, Austin and a PhD in Education in Development in Mathematics and Science from UC Berkeley.