Workshop: *Information Design and Presentation Best Practices*

Prof James R Carey

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James R. Carey is Distinguished Professor of Entomology at the University of California, Davis, and Senior Scholar in the Center for the Economics and Demography of Aging at UC Berkeley. Carey has taught workshops on information design and presentation strategies in science throughout the world including the European Doctoral School of Demography and the Consortium for Advanced Research Training in Africa.

Workshop Outline
Carey's presentation will be divided into three parts:

(1) Information design—basics of typography, graphics, color and layout. Design in presentations is a requirement and not a cosmetic addition;
(2) Presentation strategies—PowerPoint capabilities are as underutilized as they are misused. Attendees will learn how to become sophisticated users of this presentation software, particularly with respect to the judicious use of animation, color palettes, content arrangement, and decluttering;
(3) Storytelling concepts—the use of storytelling concepts encourages presenters to consider the presentation as a whole with different acts, with a story arc, and sometimes with a touch of drama.

Half day Workshop: 30 September 2019
Partly hands-on: attendants will get material to upload on their laptops before the workshop.

Parts of the presentation will be based on a section on data visualization in the forthcoming book *Biodemography: An Introduction to Concepts and Methods* (J. R. Carey and D. W. Roach, 2020, Princeton University Press).

Workshop: *Introduction to Six Sigma*

Dr Karl van der Merwe

Senior Lecturer
Department of Industrial Engineering, Operations Management
and Quality
Nelson Mandela University
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Karl van der Merwe has been a practicing industrial engineer since 1989 who, after a fifteen-year stint in the automotive sector, moved to an academic environment to pursue a career in teaching, research and consulting. Karl holds a doctorate in operations management, which was granted by the NMMU, based on research completed in the field of Lean and Six Sigma operations. He is currently overseeing a number of continuous improvement research projects in collaboration with industry partners. Karl is also an enthusiastic (but not very talented) cyclist, currently residing in Port Elizabeth, South Africa.

Workshop Outline
This half-day workshop will introduce participants to the Six Sigma methodology, including its background and underlying logic. The majority of the time, however, will be allocated to a hands-on exercise that is used worldwide to teach the principles of Six Sigma. Participants will have the opportunity to define, measure, analyse, improve and control a process in small teams, using a purpose designed instrument.

Half day Workshop: 30 September 2019

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Workshop: *Software Robotics and Machine Learning*

Dr Joke Bührmann

Senior Lecturer
Senior Lecturer Industrial Engineering
University of the Witwatersrand
https://www.wits.ac.za/mecheng/streams/industrial-engineering/

Dr. Joke Bührmann is a senior lecturer in Industrial Engineering at the University of the Witwatersrand specialising in Operations Research and Machine Learning. She has industry experience in areas including business analytics, data and optimisation analysis, business intelligence and application development.

Jan-Rudolph Bührmann

Technical Lead: Automation
Diverse I.T. Connections
http://diverseitcon.com/

Mr. Jan-Rudolph Bührmann is technical lead in Intelligent Automation at Diverse I.T. Connections. He has vast experience in Java programming and application development at corporate industries including Standard Bank and Discovery.

Half day Workshop: 30 September 2019

Workshop Outline
The workshop will cover how and where machine learning fits into our current day-to-day working lives. We will give an overview and demonstrate how a person can use machine learning techniques in data analytics and forecasting. There will also be a demonstration on software robotics, where it fits in the machine learning landscape and how this can be used as part of process engineering to automate computer processes.

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