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Visualization and Data Analysis 2018

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Visualization and Data Analysis 2018

Wednesday January 31, 2018

Keynote: Purpose-designed Visualization

8:50 – 9:40 AM

Sandpebble A

VDA-294

Audience-targeted exploratory and explanatory visualization designs, Kwan-Liu Ma, University of California, Davis (United States)

Prof. Kwan-Liu Ma is a professor of computer science and the chair of the Graduate Group in Computer Science (GGCS) at the University of California-Davis, where he directs VIDI Labs and UC Davis Center of Excellence for Visualization. His research spans the fields of visualization, computer graphics, high-performance computing, and user interface design. Prof. Ma received his PhD in computer science from the University of Utah (1993). During 1993-1999, he was with ICASE/NASA Langley Research Center as a research scientist. He joined UC Davis in 1999. Prof. Ma is presently leading a team of over 25 researchers pursuing research in scientific visualization, information visualization, visual analytics, visualization for storytelling, visualization interface design, and immersive visualization. For his significant research accomplishments, Prof. Ma received the NSF Presidential Early-Career Research Award (PECASE) in 2000, was elected an IEEE Fellow in 2012, and received the 2013 IEEE VGTC Visualization Technical Achievement Award. Professor Ma actively serves the research community by playing leading roles in several professional activities including VizSec, Ultravis, EGPGV, IEEE VIS, IEEE PacificVis, and IEEE Lдав. He has served as a papers co-chair for SciVis, InfoVis, EuroVis, PacificVis, and Graph Drawing. [no paper]

Complex Visualization

9:40 – 10:20 am

Sandpebble A

9:40 VDA-314

Visualization of complex familial and social structures, John Holt, Worthy Martin, and Kathleen Flake, University of Virginia (United States)

10:00 VDA-315

Display infrastructure for virtual environments (DIVE) (JIST-first), Thomas Wischgoll, Madison Glines, Tyler Whitlock, Bradley Guthrie, Corinne Mowrey, Pratik Parikh, and John Flach, Wright State University (United States)

10:00 am – 4:00 pm Industry Exhibition

10:20 – 10:50 am Coffee Break

Medical Visualization

10:50 am – 12:10 pm

Sandpebble A

10:50 VDA-332

FitViz-Ad: A non-intrusive reminder to encourage non-sedentary behaviour, Tim Bodyka Heng, Ankit Gupta, and Christopher Shaw, Simon Fraser University (Canada)

11:10 VDA-333

High quality volume rendering of dark matter simulations, Ralf Kaehler, SLAC and KIPAC (United States)

11:30 VDA-334

A semi-automated method for measuring Fels indicators for skeletal maturity assessment in children, Sara Gharabaghi and Thomas Wischgoll, Wright State University (United States)

11:50 VDA-335

RemBrain: Exploring dynamic biospatial networks with mosaic-matrices and mirror glyphs (JIST-first), Chihua Ma¹, Filippo Pellolio², Daniel Llano³, Kevin Ambrose Stebbings³, Robert Kenyon¹, and G. Elisabeta Marai¹; ¹University of Illinois at Chicago, ²HERE Technologies, and ³University of Illinois at Urbana-Champaign (United States)

Visualization and Data Analysis 2018 Interactive (Poster) Papers Oral Previews

12:10 – 12:40 pm

Sandpebble A

In this session interactive poster authors will each provide a brief oral preview of their poster presentation, which will be presented fully in the Visualization and Data Analysis 2018 Interactive Papers Session at 5:30 pm on Wednesday.

12:10 VDA-355

Contrast enhancement effect on high dynamic range image registration using mutual information, Ibrahim Atli^{1,2}, Ahmet Saraçoğlu², and Osman Serdar Gedik^{1,2}; ¹Yildirim Beyazıt University and ²Kuartis Technology and Consulting (Turkey)

12:20 VDA-356 [no paper]

Deep variational auto-encoders for unsupervised glomerular classification, Brendon Lutnick¹, Rabi Yacoub¹, Kuang-Yu Jen², John Tomaszewski¹, Sanjay Jain³, and Pinaki Sarder¹; ¹University of Buffalo, ²University of California, Davis, and ³Washington University in St. Louis (United States)

12:30 VDA-357 [no paper]

ViDy, ViGly: Visualization of dynamical flexibility of virtual N-Glycans on proteins, Camille Besançon, Alexandre Guillot, Sébastien Blaise, Manuel Dauchez, Nicolas Belloy, Jessica Jonque+Prevoteau, and Stéphanie Baud, University of Reims (France)

12:40 – 2:00 pm Lunch

Plenary Session

2:00 – 3:00 pm

Grand Peninsula Ballroom D

Ubiquitous, Consumer AR Systems to Supplant Smartphones, Ronald T. Azuma, Intel, Corp. (United States)

Dr. Ronald T. Azuma, researcher and augmented reality pioneer, shares his vision for achieving ubiquitous, consumer AR systems. Recent large investments in augmented reality reflect the commercial interest in its inherent potential to replace current smartphone technology, but much remains to be done. In his talk, Dr. Azuma gives a vision for achieving this goal, which requires not just solving numerous technical challenges but also determining new, compelling AR experiences that will establish AR as a new platform and novel form of media.

Dr. Azuma leads a team in Intel Labs that designs and prototypes novel experiences and key enabling technologies to enable new forms of media. These technology areas include computational imaging and photography, computational displays, and head-worn displays. Dr. Azuma is recognized as a pioneer and innovator in augmented reality, and has held prominent leadership roles in that research area, including leading and implementing research projects and demonstrations in areas such as AR, visualization, and mobile applications. Dr. Azuma received his BSc (1988) in electrical engineering from University of California, Berkeley, and MS (1990) and PhD (1995) in computer science from University of North Carolina, Chapel Hill. Prior to joining Intel, he was a research leader at Nokia Research Center Hollywood, and a senior researcher at Hughes Research Laboratories.

3:00 – 3:30 pm Coffee Break

Visual Analytics

3:30 – 5:10 pm

Sandpebble A

3:30 VDA-376

CNVis: A web-based visual analytics tool for exploring conference navigator data, Samuel Bailey¹, Justin Wei², Chaoli Wang¹, Denis Parra³, and Peter Brusilovsky⁴; ¹University of Notre Dame (United States), ²University of North Texas (United States), ³Pontificia Universidad Católica de Chile (Chile), and ⁴University of Pittsburgh (United States)

3:50 VDA-377

A step towards automatic visual analytics pipeline generation, Benjamin Kärer, Inga Scheler, and Hans Hagen, University of Kaiserslautern (Germany)

4:10 VDA-378

BGS: A large-scale graph visualization tool, Fangyan Zhang¹, Song Zhang¹, Christopher Lightsey¹, Sarah Harun¹, and Pak Wong²; ¹Mississippi State University and ²ACT (United States)

4:30 VDA-379

Implementation and evaluation of distributed graph sampling methods with Spark, Fangyan Zhang, Song Zhang, and Christopher Lightsey, Mississippi State University (United States)

4:50 VDA-380

A visual technique to analyze flow of information in a machine learning system, Abon Chaudhuri, Walmart Labs (United States)

Symposium Interactive Papers (Poster) Session

5:30 – 7:30 pm

The Grove

Meet the Future: A Showcase of Student and Young Professionals Research

5:30 – 7:30 pm

The Grove