# Computer Graphics & Visual Computing (CGVC) 2017

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## Preface

Welcome to CGVC2017, the 2017 Computer Graphics and Visual Computing International Conference (CGVC), which will be held on 14th to 15th September 2017 in Manchester, United Kingdom.

The CGVC conference is a forum for researchers and practitioners to present their latest research results in computer graphics and visual computing, and share their experiences gained from this exciting area of research. The scope of the conference is not only limited to the field of computer graphics research, but also includes interdisciplinary subjects across virtual reality, augmented reality and digital games technologies. The conference also hosts the annual EUROGRAPHICS UK Chapter general meeting, and has been taken places in many major cities in the UK including London (2015), Bournemouth (2016), now the year of 2017 in Manchester organised by Manchester Metropolitan University, UK.

Included in this volume of conference proceedings, we have contributions from academia and industries, which aim to advance technologies and address challenging issues related to computer graphics and visual computing, ranging from Visualisation, Rendering, Simulation to Computer Graphics Applications. Each paper submission has been reviewed by three reviewers of our International Program Committee. Selected papers included in this proceedings are accepted for presentations at the conference.

We would like to thank all members of the International Program Committee for their devotion to the conference in the past years and their expert reviews to the papers, which have provided valuable feedbacks to authors. Many thanks also go to our keynote speakers, Professor Robert Laramee of the University of Swansea, and Dr Andrew Gibb, of the BBC. for their inspirational plenary talks to the conference delegates. Last but not least we would like to thank the Manchester Metropolitan University for hosting and organizing the conference.

Dr Tao Ruan Wan and Dr Franck Vidal

August 2017

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## Keynote

### The Age of Data Chaos

***Robert S. Laramee***

MSc., PhD, Associate Professor in Data Visualization

**Abstract**

Some people believe that we live in the Age of Information. I believe it's much more accurate to say we live in the Age of Data. Even more accurate is to say we live in the Age of Data Chaos. With the rapid advancement of big data storage technologies and the ever-decreasing costs of hardware, our ability to derive and store data is unprecedented. However, a large gap remains between our ability to generate and store large collections of complex, time-dependent data and our ability to derive useful information and knowledge from it. This is complicated further by the fact that our data collection is often unstructured and usually not very well planned-to the extent of creating a environment of data chaos.

Data visualization leverages our most powerful sense, vision, in order to derive knowledge and gain insight into large, multi-variate and sometimes chaotic data sets that describe complicated and often time-dependent behavior. This talk presents a selection of case studies that address the age of data chaos with very different taster applications. To add to the chaos, the audience will determine the Outcome of the talk.

**Biographical Sketch**

Robert S. Laramee received a bachelors degree in physics, cum laude, from the University of Massachusetts, Amherst (ZooMass). He received a masters degree in computer science from the University of New Hampshire, Durham. He was awarded a PhD from the Vienna University of Technology (Gruess Gott TUWien), Austria at the Institute of Computer Graphics and Algorithms in 2005. From 2001 to 2006 he was a researcher at the VRVis Research Center (www.vrvis.at) and a software engineer at AVL (www.avl.com) in the department of Advanced Simulation Technologies. Currently he is an Associate Professor at the Swansea University (Prifysgol Cymru Abertawe), Wales in the Department of Computer Science (Adran Gwyddor Cyfrifiadur). His research interests are in the areas of scientific visualization, information visualization, and visual analytics. He has published more than 130 peer-reviewed papers in scientific journals and conferences. He served as general Chair of the EuroVis 2014 conference in Swansea.