CGI2018

PROGRAM TIMETABLE

Monday 11 June 2018	Seminar Room 1	Seminar Room 2
8.00am - 5.00pm	Registration	
	VISUAL COMPUTER WORKSHOP	**ENGAGE I**
9.00am - 9.10am	Speaker 1 - Cai Yiyu	Welcome
9.10am - 9.20am		Speaker 1 - Zhaoyuan Yu
9.20am - 9.30am	Speaker 2 - Marina L. Gavrilova	
9.30am - 9.40am		
9.40am - 9.50am	Speaker 3 - Jinman Kim	
9.50am - 10.00am		Speaker 2 - Werner Benger
10.00am - 10.10am	Speaker 4 - Xiaoyang Mao	
10.10am - 10.20am		
10.20am - 10.30am		
10.30am - 10.50am	AM Coffee Break	
	VISUAL COMPUTER WORKSHOP	**ENGAGE II**
10.50am - 11.00am	Speaker 5 - Nadia Magnenat Thalmann	Speaker 1 - Feng Zhang
11.00am - 11.10am		
11.10am - 11.20am	Speaker 6 - Alexei Sourin	
11.20am - 11.30am		Speaker 2 - Werner Benger
11.30am - 11.40am	Speaker 7 - Daniel Thalmann	
11.40am - 11.50am		
11.50am - 12.00pm	Speaker 8 - Franz-Erich Wolter	Speaker 3 - Liangchen Zhou
12.00pm - 12.10pm		
12.10pm - 12.20pm	Speaker 9 - Junfeng Yao	
		ENGAGE III
12.20pm - 12.30pm		Speaker 1 - Adam Leon Kleppe
12.30pm - 12.40pm	Speaker 10 - Parris Egbert	
12.40pm - 12.50pm		
12.50pm - 2.00pm	Lunch	
	VISUAL COMPUTER WORKSHOP	**ENGAGE III**
2.00pm - 2.10pm	Speaker 11 - Zhigeng Pan	Speaker 2 - Zhaoyuan Yu
2.10pm - 2.20pm		
2.20pm - 2.30pm		
	BIOMEDICAL IMAGE PROCESSING FOR VOLUME RENDERING VISUALIZATION	
2.20pm - 2.30pm	Speaker 1 - Nadia Magnenat Thalmann	Speaker 3 - Stephane Breuils
2.30pm - 2.40pm		
2.40pm - 2.50pm		
		ENGAGE IV
2.50pm - 3.00pm		Speaker 1 - Lars Tingelstad

3.00pm - 3.10pm 3.10pm - 3.20pm	Speaker 2 - Jinman Kim	
3.20pm - 3.30pm 3.30pm - 3.40pm		
3.40pm - 4.00pm	PM Coffee Break	
	BIOMEDICAL IMAGE PROCESSING FOR VOLUME RENDERING VISUALIZATION	**ENGAGE IV**
4.00pm - 4.10pm 4.10pm - 4.20pm 4.20pm - 4.30pm	Speaker 3 - Bin Sheng	Speaker 2 - Di Hu
4.30pm - 4.40pm		Podium Discussion
	NOTRE **Session Chair:** Evangelia Baka, University of Geneva, Switzerland & Maria Christofi, Cyprus University of Technology, Cyprus	
4.40pm - 4.50pm 4.50pm - 5.00pm	Speaker 1 - Nadia Magnenat Thalmann	
5.00pm - 5.10pm 5.10pm - 5.20pm	Speaker 2 - Maria Christofi	
5.20pm - 5.30pm 5.30pm - 5.40pm	Speaker 3 - Evangelia Baka	

Tuesday 12 June 2018	**Seminar Room 1**	**Seminar Room 2**
8.00am - 5.00pm	Registration	
9.00am - 9.15am	Welcome Address by Nadia Magnenat Thalmann, Nanyang Technological University, Singapore & Program Introduction by Daniel Thalmann, EPFL, Switzerland	
9.15am - 10.00am	**Plenary Speaker #1 (Professor Richard Zhang)** **Session Chair:** Nadia Magnenat Thalmann, Nanyang Technological University, Singapore	
10.00am - 10.30am	AM Coffee Break	
	Session 1 – 3D Reconstruction **Session Chair:** Jinman Kim, University of Sydney, Australia	**Session 2B – Rendering Techniques I** **Session Chair:** Xiaoyang Mao, Yamanashi University, Japan
10.30am - 10.50am	Paper T1	Paper T5
10.50am - 11.10am	Paper T2	Paper T6
11.10am - 11.30am	Paper T3	Paper T7
11.30am - 11.50am	Paper A1	Paper A3
11.50am - 12.10pm	Paper A2	Paper A4
	Session 2A - Rendering Techniques 0 **Session Chair:** Xiaoyang Mao, Yamanashi University, Japan	
12.10pm - 12.30pm	Paper T4	Paper A5
12.30pm - 1.30pm	Lunch	

	Session 3 – Geometric Modelling I **Session Chair:** Richard Zhang, Simon Fraser University, Canada	**Session 4 - Visual Analytics & Pattern Recognition I** **Session Chair:** Marina Gavrilova, University of Calgary, Canada
1.30pm - 1.50pm	Paper T8	Paper T10
1.50pm - 2.10pm	Paper T9	Paper T11
2.10pm - 2.30pm	Paper A6	Paper T12
2.30pm - 2.50pm	Paper A7	Paper A10
2.50pm - 3.10pm	Paper A8	Paper A11
3.10pm - 3.30pm	Paper A9	Paper A12
3.30pm - 4.00pm	PM Coffee Break	
	Session 5 – Imaging And Painting **Session Chair:** Parris Egbert, Brigham Young University, USA	**Session 6 – Virtual & Augmented Reality I** **Session Chair:** Cai Yiyu, Nanyang Technological University, Singapore
4.00pm - 4.20pm	Paper T13	Paper T15
4.20pm - 4.40pm	Paper T14	Paper T16
4.40pm - 5.00pm	Paper A13	Paper A14
5.00pm - 7.00pm	Free & Easy	
7.00pm - 7.15pm	Coach pickup - from hotel to restaurant	
7.15pm - 9.30pm	Conference Dinner	
9.30pm	Coach pickup - from restaurant to hotel	

Wednesday 13 June 2018	**Seminar Room 1**	**Seminar Room 2**
9.00am - 9.15am	Welcome and Information	
9.15am - 10.00am	**Plenary Speaker #2 (Dr. Bruno Levy)** **Session Chair:** Daniel Thalmann, EPFL, Switzerland	
10.00am - 10.30am	AM Coffee Break	
	Session 7 - Visual Analytics and Pattern Recognition I Session Chair: Oliver Staadt, University of Rostock, Germany	**Session 8 – Geometric Modelling II Session Chair:** Franz-Erich Wolter, Leibniz University of Hannover, Germany
10.30am - 10.50am	Paper T17	Paper T22
10.50am - 11.10am	Paper T18	Paper T23
11.10am - 11.30am	Paper T19	Paper T24
11.30am - 11.50am	Paper T20	Paper T25
11.50am - 12.10pm	Paper T21	Paper T26
12.10pm - 12.30pm	Paper A30	Paper A16
12.30pm - 1.30pm	Lunch	
	Session 9 – Computer Animation **Session Chair:** Junfeng Yao, Xiamen University, China	**Session 10 – Rendering II** **Session Chair:** Bruno Levy, INRIA, France

1.30pm - 1.50pm	Paper T27	Paper T29
1.50pm - 2.10pm	Paper T28	Paper T30
2.10pm - 2.30pm	Paper A17	Paper T31
2.30pm - 2.50pm	Paper A18	Paper A19
	Session 11 - Social Robots **Session Chair:** Nadia Magnenat Thalmann, Nanyang Technological University, Singapore	**Session 12 – Display methods** **Session Chair:** Daniel Thalmann, EPFL, Switzerland
2.50pm-3.10pm	Paper A20	Paper A22
3.10pm - 3.30pm	Paper A21	Paper A23
3.30pm - 4.00pm	PM Coffee Break	
	Session 13 – Human Computer Interaction **Session Chair:** Daniel Thalmann, EPFL, Switzerland	**Session 14 - Geometric Modelling III** **Session Chair:** Zhiwen Fang, Nanyang Technological University, Singapore
4.00pm - 4.20pm	Paper T32	Paper T33
4.20pm - 4.40pm	Paper A24	Paper A25

Thursday 14 June 2018	**Seminar Room 1**	**Seminar Room 2**
9.00am - 9.10am	Welcome and Information	
	Session 15 – Virtual & Augmented Reality II **Session Chair:** Nisha Jain, Nanyang Technological University, Singapore	**Session 16 - Simulation** **Session Chair:** Nadia Magnenat Thalmann, Nanyang Technological University, Singapore
9.10am - 9.30am	Paper T34	Paper T36
9.30am - 9.50am	Paper T35	Paper A27
9.50am - 10.10am	Paper A26	Paper A28
10.10am - 10.40am	AM Coffee Break	
	Session 17 – Video **Session Chair:** Nisha Jain, Nanyang Technological University, Singapore	**Session 18 – Neural Networks** **Session Chair:** Bin Sheng, Shanghai Jiao Tong University, China
10.40am - 11.00am	Paper A29	Paper T37
11.00am - 11.20am		Paper A31
11.20am - 12.00am	**Panel Discussion** **Panel:** What are the breaking research topics in Computer Graphics in the years to come? **Chair: Nadia Magnenat Thalmann**, Nanyang Technological University, Singapore **Panelists: Franz-Erich Wolter**, Leibniz University of Hannover, Germany, **Marina Gavrilova**, University of Calgary, Canada, **Parris Egbert**, Brigham Young University, USA, **Daniel Thalmann**, EPFL, Switzerland and **Jinman Kim**, The University of Sydney, Australia	
12.00pm - 1.00pm	CGI 2018 Best Paper Award Ceremony	

KEYNOTE SPEAKERS

“Can Machines Learn to Generate 3D Shapes?”

by Professor Richard Zhang

SIMON FRASER UNIVERSITY
DIRECTOR OF GRAPHICS (GRUVI) LAB

Day 2, 12 June — 9:15~10:00

BIOGRAPHY:

Hao (Richard) Zhang is a professor at Simon Fraser University (SFU), Canada, where he directs the graphics lab. He has also been a visiting professor at Stanford, Shandong University, and Shenzhen University. Richard obtained his Ph.D. from the University of Toronto, and MMath and BMath degrees from Waterloo. He works in computer graphics with special interests in geometry modeling, shape analysis, machine learning, and computational design and fabrication, and has published more than 100 papers on these topics. Richard is an editor-in-chief of Computer Graphics Forum and has been a program chair for SGP’13, SIGGRAPH Asia Course’14, GI’15, and will be conference chair for Geometry Summit’19. He is an IEEE Senior Member and his awards include an NSERC DAS Award (2014), best paper awards from SGP 2008 and CAD/Graphics 2017, an SFU Research Excellence Award (2014), and a National Science Foundation of China Overseas Outstanding Young Researcher Award (2015).

ABSTRACT:

At heart, computer graphics is about synthesis and creation by computing machinery. Early success has been obtained on training deep neural networks for speech and image syntheses, while similar attempts on learning generative models for 3D shapes are met with difficult challenges. In this talk, I will first go over how the sub-field of 3D shape modeling and synthesis in computer graphics has evolved, from early model-driven approaches to recent data-driven paradigms, and highlight the challenges we must tackle. I would argue that the ultimate goal of 3D shape generation is not for the shapes to look right; they need to serve their intended (e.g., functional) purpose with the right part connection, arrangements, and geometry. Hence, I advocate the use of structural representations of 3D shapes and show our latest work on training machines to learn one such representation and an ensuing generative model. Finally, I would like to venture into creative modeling, perhaps a new territory in machine intelligence: can machines learn to generate 3D shapes creatively?

“Simulating fluids with the “path bundle” method.”

by Dr. Bruno Levy

INRIA RESEARCH DIRECTOR

Day 3, 13 June — 9:15~10:00

BIOGRAPHY:

Bruno Levy is a senior researcher with Inria, and the head of the ALICE group (geometry processing and computer fabrication) that he created in 2004 (now eight faculties). He received the Inria/French Academy of Sciences young researcher award in 2011. He is associate editor for The Visual Computer, ACM TOG and Graphical Models, and he is a member of the steering committee of SMA/SPM. He was paper co-chair of Eurographics 2014, Pacific Graphic 2013, SGP 2010, SPM 2008 and 2007. From 1998 to 2006, he focused on mesh parameterization, texture mapping and conversion between representations (e.g. mesh to Splines). From 2007 to 2014, in the frame of his ERC projects GOODSHAPE and VORPALINE, he worked on sampling (vector quantization) and meshing (isotropic, anisotropic, hex-dominant mesh generation). His latest research concerns computational physics, more specifically numerical algorithms for solving some partial differential equations and practical geometric algorithms for generating structured and unstructured meshes. All of his research results are available as open-source software (Graphite/Geogram) or proprietary software (Vorpaline).

ABSTRACT:

In this presentation, I’ll introduce the “path bundle” method, a method for simulating fluid dynamics. Recent advances in computational mathematics (Gallouet-Merigot scheme, Brenier projection) had spectacular applications in computer graphics (DeGoes et.al, power particles). The “path bundle” method elaborates on these approaches, and aims at simulating fluid behaviors such as turbulence in incompressible fluids based on very simple considerations (Newton laws for a single Lagrangian particle). I consider a continuum of particles with their trajectories parameterized by time (characteristics). The “path bundle” method considers groups of characteristics, described by a small number of parameters (e.g. center of mass, momentum, angular momentum). The PDE that governs the time evolution of these parameters is deduced from a principle of least action under the constraint that each characteristic remains in the same group. The numerical problem is solved by specific algorithms that take into account the geometric nature of the equation. The benefits of the method is that interface tracking (including free surface) becomes very easy. More importantly, since the method is purely Lagrangian, another benefit is the absence of field interpolation that introduce dispersion/damping when fields are transfered between Lagrangian particles and the Eulerian grid (here there is no Euler grid), thus fine scale motion of the fluid is accurately represented. Finally, the formulation makes it easier to enforce conservation laws (mass, linear and angular momentum, energy).

VISUAL COMPUTER WORKSHOP

Program for Visual Computer Workshop (9 sessions, 20 mins per session)

Speaker	**Title**
1. Yiyu Cai	New Developments in Path Planning
2. Marina L. Gavrilov	Machine Learning for Social Behaviour Understanding
3. Jinman Kim	Saliency-driven Medical Image Visualization
4. Xiaoyang Mao	AR Daltonization for Supporting People with Color Vision Deficiency
5. Nadia Magnenat Thalmann	Social Intelligent interactive robots: Our research on NTU Social robot Nadine
6. Alexei Sourin	Tangible Video Communication over the Internet
7. Daniel Thalmann	A Comparison of Actions in VR, Virtual Humans, and Robotics
8. Franz-Erich Wolter	Foundations for a Differential Geometric Analysis of Power flow computing
9. Junfeng Yao	Digital Interactive Performance of Quanzhou Marionette Puppet
10. Parris Egbert	Liquid and Particulate Fluid Simulation
11. Zhigeng Pan	Scanning 3D Human Body and E-fitting of Clothes

ENGAGE

Program for ENGAGE 2018 Workshop (4 sessions)

ENGAGE I (90 mins)

Welcoming (Yu Zhaoyuan, George Papagiannakis)

Invited Speaker	**Title**
1. Yu Zhaoyuan	Geometric Algegra in Modern Geographic Information Systems (tentative title)
2. Werner Benger	Visualization of Gometric Algebra of five-dimensional vector space (tentative title)

ENGAGE II (90 mins, each talk 25 mins + 5 mins Q&A)

Speaker	**Title**
1. Feng Zhang	The Formal Expression of Spatio-Temporal Topological Relations for Computation and Analysis
2. Werner Benger	Optimizing Refined Geometric Primitive's Leaflet Visibility for Interactive 3D Visualization via Geometric Algebra
3. Liangchen Zhou	An interactive indoor 3D reconstruction method based on conformal geometry algebra (*)

ENGAGE III (90 mins)

Speaker	**Title**
1. Adam Leon Kleppe	A Curvature-Based Descriptor for Point Cloud Alignment using Conformal Geometric Algebra
2. Zhaoyuan Yu	MVTree for Hierarchical Network Representation based on Geometric Algebra Subspace
3. Stephane Breuils	Quadric Conformal Geometric Algebra of $\mathbb{R}^{9,6}$

ENGAGE IV (90 mins)

Speaker	**Title**
1. Lars Tingelstad	Motor Parameterization
2. Di Hu	Geometric algebra- based spatial data description Language
3. Podium Discussion	Future of Geometric Algebra (all organizing committee members present at ENGAGE 2018+Vincent Nozick)

NOTRE SPECIAL SESSION

Program for NOTRE Special Session (3 papers, 20 mins per paper)
Chaired by: Evangelia Baka, University of Geneva, Switzerland & Maria Christofi, Cyprus University of Technology, Cyprus

Speaker	**Title**
1. Nadia Magnenat Thalmann	Social Computing for robots
2. Maria Christofi	Virtual reality and Empathy
3. Evangelia Baka	Designing a Virtual Environment for teacher training: Enhancing presence and empathy

BIOMEDICAL IMAGE PROCESSING FOR VOLUME RENDERING

VISUALIZATION

Program for Biomedical Image Processing for Volume Rendering Visualization Tutorial (3 papers, 40 mins per paper)
Chaired by: Jinman Kim, The University of Sydney, Australia

Speaker	**Title**
1. Nadia Magnenat Thalmann	Seeing Through Anatomical Virtual Humans
2. Bin Sheng	Deep Learning for 3D reconstruction
3. Jinman Kim	Medical image semantics and volume rendering

SESSIONS OF TECHNICAL PAPERS

Papers Tx can be found in the Special Issue of The Visual Computer
Papers Ax can be found in the ACM Digital Library (Proceedings CGI 2018)

Session 1 - 3D Reconstruction
Session Chair: Jinman Kim, University of Sydney, Australia

T1 “Real-time 3D scene reconstruction with dynamically moving object using a single depth camera” by Feixiang Lu, Bin Zhou, Yu Zhang and Qinping Zhao from Beihang University, Beijing, China

T2 “Implicit Surfaces from Polygon Soup with Compactly Supported Radial Basis Functions” by Shengjun Liu, Jintao Xiao, Ling Hu and Xinru Liu from Central South University, Changsha, University

T3 “3D Braid Guide Hair Reconstruction using Electroluminsescent Wires” by Hendrik Hachmann, Maren Awiszus and Bodo Rosenhahn from Institut fur Informationsverarbeitung, Leibniz Universitat Hannover, Germany

A1 “Voxelized Facial Reconstruction Using Deep Neural Network” by Xiaoshuang Li and Bin Sheng from Shanghai Jiao Tong University, Ping Li from Macau University of Science and Technology, Jinman Kim and David Dagan Feng from The University of Sydney

A2 “3D Reconstruction of Incomplete Archaeological Objects Using a Generative Adversarial Network” by Renato Hermoza Aragonés and Ivan Anselmo Sipiran Mendoza from Pontificia Universidad Catolica del Peru

Session 2A - Rendering Techniques 0
Session Chair: Xiaoyang Mao, Yamanashi University, Japan

T4 “A Framework for Developing and Benchmarking Sampling and Denoising Algorithms for Monte Carlo Renderer” by Jonas Deyson B. Santos, Manuel M. Oliveira from Instituto de Informatica, UFRGS, Porto Alegre, RS, Brazil and Pradeep Sen from University of California, Santa Barbara

Session 2B - Rendering Techniques I
Session Chair: Xiaoyang Mao, Yamanashi University, Japan

T5 “Evaluating Physical and Rendered Material Appearance” by Jiri Filip, Martina Kolafova, Michal Havlicek, Radomir Vavra, Michal Haindl from The Czech Academy of Sciences, Institute of Information Theory and Automation, The Czech Republic and Holly Rushmeier from Yale University, USA

T6 “An Image Based Method for Animated Stroke Rendering” by Tamas Umenhoffer, Laszlo Szirmay-Kalos, Laszlo Szecsi, Zoltan Lengyel from Budapest University of Technology and Economics, Hungary and Gabor Marinov from Limes Superior Ltd., Budapest, Hungary

T7 “Point Based Rendering Enhancement via Deep Learning” by Giang Bui, Truc Le, Ye Duan from University of Missouri, Columbia, USA and Brittany Morago from University of North Carolina Wilminsgton, USA

A3 “Automatic Identification of Performance Bottleneck for A Complex Rendering System through Big Data” by Yanci Zhang, Zi Liang, Xiaoyao, Li, Wenjie Ren and Yanli Liu from Sichuan University

A4 “Real-time Sketch-Based Terrain Generation” by Farès Belhadj and François Xavier Talgorn from LIASD - Université Paris 8

A5 “Constrained Texture Mapping via Approximate Voronoi Base Domain” by Peng Cheng from A*STAR, Singapore, Jiaye Wang from Shandong University, Chunyan Miao from Nanyang Technological University, and Changhe Tu from Shandong University

Session 3 - Geometric Modelling I
Session Chair: Richard Zhang, Simon Fraser University, Canada

T8 “Locally Refinable Gradient Meshes Supporting Branching and Sharp Colour Transitions” by Pieter J. Barendrecht, Martijn Luinstra, Jonathan Hogervorst and Jiri Kosinka from University of Groningen, The Netherlands

T9 “Robust Normal Estimation in Unstructured 3D Point Clouds by Selective Normal Space Exploration” by Claudio Mura, Gregory Wyss and Renato Pajarola from University of Zurich, Switzerland

A6 “High-fidelity Compression of Dynamic Meshes with Fine Details using Piece-wise Manifold Harmonic Bases” by Chengju Chen, Qing Xia and Shuai Li from Beihang University, Hong Qin from Stony Brook University, and Aimins Hao from Beihang University

A7 “The number of regular control curves of NURBS curve” by Han Wang and Chun-Gang Zhu from Dalian University of Technology

A8 “A unified approach to blending of constant and varying parametric surfaces with curvature continuity” by Xiangyu You, Feng Tian, and Wen Tang from Bournemouth University

A9 “Fast Computation of Tunnels in Corneal Collagen Structure” by Jia Chen, M. Gopi, and James Jester from University of California, Irvine

Session 4 - Visual Analytics and Pattern Recognition I
Session Chair: Marina Gavrilova, University of Calgary, Canada

T10 “Visual Attention Prediction For Images With Leading Line Structure” using Issei Mochizuki, Masahiro Toyoura and Xiaoyang Mao from University of Yamanashi, Yamanashi, Japan

T11 “Dual-path Adversarial Learning for Fully Convolutional Networks (FCN) based Medical Image Segmentation” by Lei Bi, Dagan Feng and Jinman Kim from School of Information Technologies, The University of Sydney, Australia

T12 “Hand Joints Based Gesture Recognition For Noisy Dataset Using Nested Interval Unscented Kalman Filter with LSTM Network” by Chunyong Ma, Anni Wang, Ge Chen from Ocean University of China, China and Chi Xu from School of Automation, China University of Geosciences, China and Hubei Key Laboratory of Advanced Control and Intelligent Automation for Complex Systems, China

A10 “Fast photographic style transfer based on convolutional neural networks” by Xiaosong Yang, Li Wang, Nan Xiang: and Jianjun Zhang from Bournemouth University

A11 “Interactive Mixed Brushing: Integrated Text and Visual Based Data Exploration” by Michael Beham from VRVis Research Center, Denis Gracanin from Virginia Tech, Silvana Podaras, Rainer Splechtna, Katja Bühler from VRVis Research Center, Igor S. Pandzic from University of Zagreb, and Kresimir Matkovic from VRVis Research Center

A12 “Evaluation of Star Coordinate Boundaries” by Yan Chao Wang, Feng Lin, and Hock Soon Seah from Nanyang Technological University

Session 5 - Imaging and painting
Session Chair: Parris Egbert, Brigham Young University, USA

T13 “Incremental Voronoi Sets For Instant Stippling” by Lei Ma from University of Chinese Academy of Sciences, China, Yanyun Chen from State Key Laboratory of Computer Science, ISCAS, China, Yinling Qian and Hanqiu Sun from Chinese University of Hong Kong, Hong Kong

T14 “Contrast Preserving Image Decolorization Combining Global Features and Local Semantic Features” by Xiaoli Zhang and Shiguang Liu from Tianjin University, China

A13 “An efficient truncated nuclear norm constrained matrix completion for image inpainting” by Jianwei Zheng and Mengjie Qin from Zhejiang University of Technology, Hongchuan Yu from Bournemouth University, and Wangliang Wangfrom from Zhejiang University of Technology

Session 6 - Virtual Reality and Augmented Reality I
Session Chair: Cai Yiyu, Nanyang Technological University, Singapore

T15 “Time scaled interactive object driven Multi-party VR” by Nisha Jain, Andrzej Wydra, Wen Hai, Nadia Magnenat Thalmann from Institute for Media Innovation, Nanyang Technological University, Singapore and Daniel Thalmann from EPFL, Switzerland

T16 “Real-Time Camera Pose Estimation via Line Tracking” by Yanli Liu, Xianghui Chen, Tianlun Gu, Yanci Zhang from Sichuan University, China and Guanyu Xing from University of Electronic Science and Technology of China

A14 “An EEG-based Evaluation for Comparing the Sense of Presence between Virtual and Physical Environments” by Evangelia Baka from University of Geneva, Kalliopi - Evangelia Stavroulia from Cyprus University of Technology, Nadia Magnenat Thalmann from University of Geneva, and Andreas Lanitis from Cyprus University of Technology

Session 7 - Visual Analytics and Pattern Recognition II
Session Chair: Oliver Staadt, University of Rostock, Germany

T17 “DepthCut: Improved Depth Edge Estimation Using Multiple Unreliable Channels” by Paul Guerrero, Niloy J. Mitra from University College, London, UK Holger Winnemoller and Wilmot Li from Adobe research

T18 “Efficient Image Super Resolution Integration” by Ke Xu, Xin Wang, Xin Yang, Qiang Zhang, Baocai Yin, Xiaopeng Wei from Dalian University of Technology, China, Shengfeng He from South China University of Technology, China and Rynson W.H. Lau from City University of Hong Kong, Hong Kong

T19 “Learning to Restore Deteriorated Line Drawing” by Kazuma Sasaki, Satoshi Iizuka, Edgar Simo-Serra and Hiroshi Ishikawa from Waseda University, Japan

T20 “Cross-Table Linking and Brushing: Interactive Visual Analysis of Multiple Tabular Data Sets” by Rainer Splechtna, Michael Beham, Katja Bühler, Krešimir Matković from VRVis Research Center, Vienna, Austria, Denis Gračanin from Virginia Tech, USA, María Luján Ganuza from VyGLab Research Laboratory, DCIC, UNS, Argentina and Igor Sunday Pandžić, University of Zagreb, Croatia

T21 “Direction Estimation of Moving Pedestrian Groups for Intelligent Vehicles” by Aminsa Bensebaa, Slimane Larabi from USTHB University, Algeria

A30 “Suggesting the Appropriate Number of Observers for Predicting Video Saliency with Eye-Tracking Data” by Chuancai Li, Jiayi Xu, and Jianjun Li, from Hangzhou Dianzi University, and Xiaoyang Mao from University of Yamanashi, Japan

Session 8 – Geometric Modelling II
Session Chair: Franz-Erich Wolter, Leibniz University of Hannover, Germany

T22 “Offsetting Spherical Curves in Vector and Raster Form” by Troy Alderson, Faramarz Samavati from University of Calgary, Canada and Ali Mahdavi-Amiri from Simon Fraser University, Canada

T23 “Wire Cut of Double-sided Minsimal Surfaces” by Hao Hua and Tingli Jia from Southeast University, Nanjing, China

T24 “Lens Flare Prediction based on Measurements with Real-Time Visualization” by Andreas Walch, Christian Luksch, Attila Szabo, Harald Steinlechner, Georg Haaser, Michael Schwarzler, Stefan Maierhofer from VRVis Research Center, Vienna, Austria

T25 “Efficiently Consistent Affinity Propagation for 3D Shapes Co-segmentation” by Xiaogang Wang, Bin Zhou, Zongji Wang, Dongqing Zou, Xiaowu Chen and Qinping Zhao Beihang University, Beijing, China

T26 “Carve in, Carve out -- A Bimodal Carving through Voxelization and Functional Partitioning” by Piyush Kanti Bhunre and Partha Bhowmick from Indian Institute of Technology, Kharagpur, India

A16 “Porous Structure Design Using Parameterized Hexahedral Meshes and Triply Periodic Minsimal Surfaces” by Huawei Chen from Guizhou Normal University, Ye Guo, Reihaneh Rostami, and Zeyun Yu from University of Wisconsin – Milwaukee

Session 9 - Computer Animation
Session Chair: Junfeng Yao, Xiamen University, China

T27 “Perceptual Evaluation of Maneuvering Motion Illusion for Virtual Pedestrians” by Oner Barut, Ebru Akcapinar Sezer from Hacettepe University, Ankara, Turkey and Murat Haciomeroglu from Gazi University, Ankara, Turkey

T28 “3D Cartoon Face Rigging from Sparse Examples” by Jingyong Zhou from Tsinghua University, China, Hsiang-Tao Wu, Zicheng Liu, Xin Tong and Baining Guo from Microsoft Research Asia

A17 “Pixel-Level Character Motion Style Transfer using Conditional Adversarial” by Dong Hu, Shu-Juan Peng, and Xin Liu from Huaqiao University

A18 “Hierarchical Cloth Simulation using Deep Neural Networks” by Young Jin Oh, and Tae Mins Lee, and In-Kwon Lee from Yonsei University

Session 10 - Rendering II
Session Chair: Bruno Levy, INRIA, France

T29 “Multiple Importance Sampling Characterization by Weighted Mean Invariance” by Mateu Sbert from Tianjin University, China and Girona University, Spain, Vlastimil Havran from Czech Technical University in Prague, Czech Republic, Laszlo Szirmay-Kalos from Budapest University of Technology and Economics, Hungary and Victor Elvira from IMT Lille Douai, CRIStAL laboratory, France

T30 “Hybrid Lighting for Faster Rendering of Scenes With Many Lights” by Jesse Archer, Geoff Leach, Pyarelal Knowles and Ron van Schyndel from RMIT University, Melbourne, Australia

T31 “A Detailed Study of Ray Tracing Performance: Render Time and Energy Cost” by Elena Vasiou, Konstantin Shkurko, Ian Mallett, Erik Brunvand and Cem Yuksel from University of Utah, USA

A19 “Further improvements to OIT sort performance” by Jesse Archer and Geoff Leach from RMIT University, Melbourne, Australia

Session 11 – Social Robots
Session Chair: Nadia Magnenat Thalmann, Nanyang Technological University, Singapore

A20 "A Methodology to Model and Simulate Customized Human Robotic Realistic Hand" by Li Tian and Nadia Magnenat Thalmann from Nanyang Technological University, Daniel Thalmann from EPFL, Switzerland, and Jianmin Zheng from Nanyang Technological University

A21 "Understanding Human-Object Interaction in RGB-D videos for Human Robot Interaction" by Zhiwen Fang from Nanyang Technological University, Junsong Yuan from University at Buffalo, and Nadia Magnenat Thalmann from Nanyang Technological University

Session 12 - Display methods
Session Chair: Daniel Thalmann, EPFL, Switzerland

A22 "Towards Efficient 3D Calibration for Different Types of Multi-view Autostereoscopic 3D Displays" by Xinxing Xia and Yunqing Guan: from Nanyang Technological University, Andrei State from University of North Carolina at Chapel Hill, Tat-Jen Cham from Nanyang Technological University, and Henry Fuchs from University of North Carolina at Chapel Hill

A23 "gSMOOTH - A Gradient-based Spatial and Temporal Method of Depth Image Enhancement" by Abm Tariqul Islam, Martin Luboschik, Anton Jirka, and Oliver Staadt from University of Rostock

Session 13 - Human Computer Interaction
Session Chair: Daniel Thalmann, EPFL, Switzerland

T32 "MCAEM: Mixed-Correlation-Analysis based Episodic Memory for Companion-User Interactions" by Juzheng Zhang, Jianmin Zheng and Nadia Magnenat Thalmann from Nanyang Technological University, Singapore

A24 "Real-Time Eye-Gaze Based Interaction for Human Intention Prediction and Emotion Analysis" by Hao He, from Xiamen University & Quanzhou Institute of Equipment Manufacturing CAS, Yingying She, Jianbing Xiahou and Junfeng Yao from Xiamen University, Jun Li from Quanzhou Institute of Equipment Manufacturing CAS, Qingqi Hong and Yingxuan Ji from Xiamen University

Session 14 – Geometric Modelling III
Session Chair: Zhiwen Fang, Nanyang Technological University, Singapore

T33 "Rigid registration of noisy point clouds based on higher dimensional error metrics" by Enkhbayar Altantsetseg, Oyundolgor Khorloo from National University of Mongolia, Mongolia and Kouichi Konno from Iwate University, Japan

A25 “GPU-based Multiple-Choice Scheme for Mesh Simplification” by Naimins Koh Wenjing Zhang, Jianmin Zheng, and Yiyu Cai from Nanyang Technological University

Session 15 - Virtual Reality and Augmented Reality II
Session Chair: Nisha Jain, Nanyang Technological University, Singapore

T34 “A VR-based User Study on the Effects of Vision Impairments on Recognition Distances of Escape-Route Signs in Buildings” by Katharina Krosl, Dominsik Bauer, Georg Suter, Michael Wimmer from TU Wien, Austria, Michael Schwarzler from VRVis Research Center, Austria and Henry Fuchs from University of North Carolina Chapel Hill, USA

T35 “Navigation in AR based on Digital Replicas” by Ojaswa Sharma, Jalaj Pandey, Hammad Akhtar and Gaurav Rathee from Indraprastha Institute of Information Technology Delhi, New Delhi, India

A26 “Sensory and Perceptual Consistency for Believable Response in Action Feedback Loop” by BoYu Gao, Jee-In Kim, and HyungSeok Kim from Konkuk University, Korea

Session 16 – Simulation
Session Chair: Nadia Magnenat Thalmann, Nanyang Technological University, Singapore

T36 “Deformation Simulation Based on Model Reduction with Rigidity-Guided Sampling” by Shuo-Ting Chien, Chen-Hui Hu, Cheng-Yang Huang, Wen-Chieh Lin from National Chiao Tung University, Taiwan and Yu-Ting Tsai from Yuan Ze University, Taiwan

A27 “Point Cloud Based Path Planning for Tower Crane Lifting” by Lihui Huang, Yuzhe Zhangy, and Jianmin Zheng from Nanyang Technological University, Panpan Cai from National University of Singapore, Souravik Dutta, Yufeng Yue, Nadia Thalmann and Yiyu Cai from Nanyang Technological University

A28 “Adaptive Fluid Simulation Using a Linear Octree Structure” by Sean Flynn, Parris Egbert, Seth Holladay, and Jeremy Oborn from Brigham Young University

Session 17 – Video
Session Chair: Nisha Jain, Nanyang Technological University, Singapore

A29 “Temporal Coherent Video Super-resolution via Pre-frame-constrained Sparse” by Qiuxia Lai from The Chinese University of Hong Kong, Yongwei Nie from South China University of Technology, Zhengzong Zhang and Hanqiu Sun from The Chinese University of Hong Kong

Session 18 – Neural Networks
Session Chair: Bin Sheng, Shanghai Jiao Tong University, China

T37 “Detail-Preserved Real-time Hand Motion Regression from Depth” by Qing Fan, Xukun Shen and Yong Hu from Beihang University, Beijing, China

A31 “Mural Sketch Generation via Style-aware Convolutional Neural Network” by Gang Pan, from Tianjin University, Di Sun, from Tianjin University of Science and Technology, Rui Zhan and Jiawan Zhang from Tianjin University

CGI 2018 Conference Dinner

12 June 2018 (Tuesday)

The Kelong Seafood Restaurant

Located at the Western Coast of Nirwana Gardens, The Kelong Seafood Restaurant is the only place to go in Bintan where you can tuck into the richest and freshest seafood, while enjoying the balmy sea breeze and a panoramic view of the South China Sea. Savour signature dishes such as Gong-Gong (sea snails), Black Pepper Crab and Stir Fried Butter Prawns prepared in a unique blend of Chinese and Indonesian culinary styles. Built on stilts just above the sea, dining at The Kelong Seafood Restaurant will be an unforgettable experience!

The coach will depart from Nirwana Resorts Hotel lobby to The Kelong Seafood Restaurant at **7pm**. At 9.30pm, the coach will depart from The Kelong Seafood Restaurant to Nirwana Resorts Hotel.