Places of CGI'15

Map legend:

- Tram stop "Université"
- INSA, Location of the Conference
- Lunch at the University Restaurant
- Welcome Reception at the Musée d'art moderne et contemporain
- Boat Tour
- Conference Dinner at the Maison Kammerzell

Map labels:
dépôt SNCF · Rue du Ban · Rue du Rampart · Boulevard de Lyon · Rue de Rosheim · GARE · Strasbourg Ville · Place de la Gare · McDonald's · Rue Déserte · Rue Kageneck · Quai Saint-Jean · Quai Desaix · Rue du Marais Vert · Barrage Vauban · L'Ill · La Petite France · Quai Kléber · PETITE-FRANCE · Université de Strasbourg - Campus de Médecine · Grand Rue · Villa Gourmet · Place Kléber · Quai Schoepflin · place Broglie · Rue Brûlée · Palais Rohan · MAIRIE · Cathédrale Notre Dame de Strasbourg · Place de la République · KRUTENAU · Rue Fritz · Cité Administrative Gaujot · Centre de Culture Numérique · Rue Goethe · Restaurant universitaire La Gallia · Quai Ro... · Allée de la ... · Rue de Rome · Rue Sleidan · Rue Geiler · Avenue...
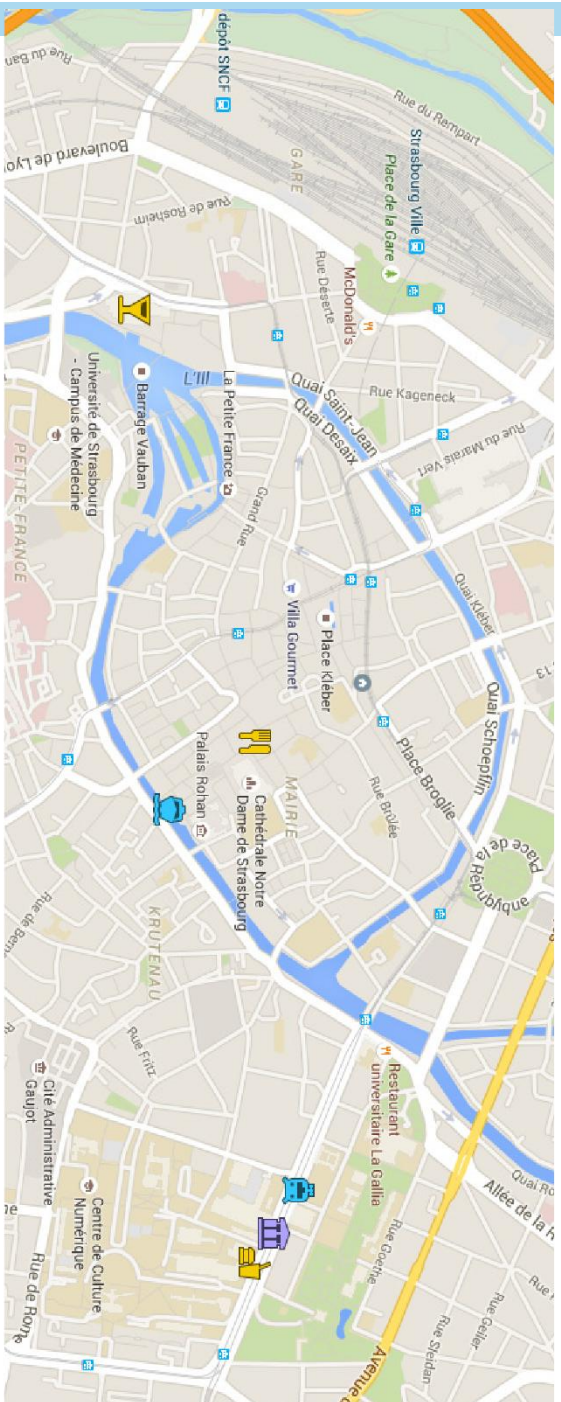

CGI'15
24 - 26 June 2015
Strasbourg, France

THE 32ND ANNUAL CONFERENCE

Sponsors: CNRS · iCube · UNIVERSITÉ DE STRASBOURG · IGG · acm In-Cooperation · Springer · Région Alsace · Strasbourg.eu · CGS · ACMSIGGRAPH · KIST Europe · Visteon

http://cgi2015.unistra.fr/

Panel. What are the great next challenges in Computer Graphics?

16:00 – 16:45, Lecture Room 1 (Chair: Nadia Magnenat-Thalmann, NTU)

Panelists:
Victor Ostromoukhov (University of Lyon 1),
Emmanuel Roncoroni (Visteon),
Daniel Thalmann (NTU)

Closing & Award.

16:45 – 17:15, Lecture Room 1 (Chair: Frederic Cordier, U. Haut Alsace)

Two best paper awards of the conference will be announced by a jury composed of the program and conference chairs, based on the review score as well as the quality of presentation!

Session 13. 2D and 3D Modeling II

13:30 - 15:30, Lecture Room 1 (Chair: Frederic Cordier, U. Haut Alsace)

Adaptive Voids: Primal and Dual Adaptive Cellular Structures for Additive Manufacturing (Special Issue Paper)

Asla Sa, Vinicius Mello, Karina Rodriguez and Derek Covill

Modeling fruits and their internal structure using parametric 3Gmap L-Systems (Special Issue Paper)

Evans Bohl, Olivier Terraz and Djamchid Ghazanfarpour

Virtual Cutting of Deformable Objects based on Efficient Topological Operations (Special Issue Paper)

Christoph Paulus, Lionel Untereiner, Hadrien Courtecuisse, Stephane Cotin and David Cazier

Heterogeneous Object Modeling (Full Paper)

Francisco Conde-Rodriguez, Juan-Carlos Torres-Cantero, Angel Luis Garcia Fernandez and Francisco-Ramon Feito-Higueruela

Automatic Reconstruction of Wall Features under Clutter and Occlusion (Short Paper)

Georgios-Tsampikos Michailidis and Renato Pajarola

Session 14. Character Animation II

13:30 - 15:30, Lecture Room 2 (Chair: Lap-Pui Chau, NTU)

Human Motion Control with Physically Plausible Foot Contact Models (Special Issue Paper)

Jongmin Kim, Hwangpil Park, Jehee Lee and Taesoo Kwon

Efficient Multi-Constrained Optimization for Example-Based Synthesis (Special Issue Paper)

Stefan Hartmann, Elena Trunz, Bjorn Kruger, Reinhard Klein and Matthias B. Hullin

Virtual Ball Player (Special Issue Paper)

Jong In Choi, Shin-Jin Kang, Chang Hun Kim and Jung Lee

Adaptive locomotion on slopes and stairs using pelvic rotation (Special Issue Paper)

Taekgu Lee, Jinho Park and Taesoo Kwon

As-Rigid-As-Possible Mesh Deformation-Based Inverse Kinematics (Short Paper)

Jongmin Kim and Taesoo Kwon

Welcome to CGI 2015

We warmly welcome you to CGI'15, the 32nd annual conference in Computer Graphics. Computer Graphics International is one of the oldest and true international conference in Computer Graphics and one of the five leading ones worldwide. This year, the conference is organized by the Computer Graphics and Geometry group of ICube Laboratory (CNRS/Université de Strasbourg, http://icube.unistra.fr), in cooperation with ACM, Computer Graphics Society (CGS), and Eurographics association. CNRS (Centre National de la Recherche Scientifique; French national scientific research center), University of Strasbourg, the Strasbourg city, the Alsace region, and KIST Europe (Korea Institute of Science and Technology in Europe) have given their support to this conference. We have Springer, and Visteon Co. as exhibitors and industrial partners.

We hope you enjoy the program and the beautiful city of Strasbourg!

The CGI'15 Co-chairs
Hyewon Seo (conference co-chair),
Victor Ostromoukhov (conference co-chair),
Nadia Magnenat-Thalmann (program co-chair),
Frederic Cordier (program co-chair),
Rémi Allegre (local organization chair), and
Basile Sauvage (local organization chair),

On behalf of
International program committee members, and
Local organization team members from Computer Graphics and Geometry group at ICube Laboratory and Congress support team (Cellule de Congres) at the University of Strasbourg.

Conference venue

The conference is hosted at the INSA Strasbourg building in Esplanade campus of the university. Two lecture rooms, **amphitheatre Art & Industrie** (Lecture Room 1) and **amphitheatre Leonardo De Vinci** (Lecture Room 2) are reserved for the two parallel sessions. The building is near to the heart of the city of Strasbourg: the city center, hotels and restaurants are within walking distance.

Address

INSA de Strasbourg
24 Boulevard de la Victoire
67084 Strasbourg

Directions

In order to get to the conference site from the city center or train station, take **Tram line C towards "Neuhof Rodolphe Reuss"** and **stop at "Université"**. The INSA building is almost in front of the tram stop, panels will show you the direction.

⚠ The entrance/exit doors are exceptionally on the <u>left-side</u> of the tram between **"Université"** and **"Esplanade"** stops.

From the conference site to the city center or train station, take Tram line C towards "Gare Centrale" and stop at "Homme de Fer" or at the terminal (Gare Centrale").

Registration and information desk

The registration desk is located in the "egg space (l'espace d'oeuf)", in front of the main session room (amphitheatre Art & Indutrie). The opening hours are:
- Wednesday 24th: 8h-10h and 13h-15h
- Thursday 25th: 8h-9h30 and 13h-14h
- Friday 26th: 8h-9h30.

Internet Access

A wireless network named «**Osiris**» will be available at the hall.
- login: **conf-CGI2015**
- password: **CGI2015**

Session 11. Matching, Segmentation & Recognition

10:00–12:00, Lecture Room 1 (Chair: Soon Ki Jung, Kyungpook Nat'l U.)

Graph-based Deformable Matching of 3D Line Segments with Application in Protein Fitting
Hang Dou, Matthew Baker and Tao Ju

Global Optimal Searching for Textureless 3D Object Tracking
Guofeng Wang, Fan Zhong, Bin Wang and Xueying Qin

Extended Surface Distance for Local Evaluation of 3D Medical Image Segmentations
Roman Getto, Arjan Kuijper and Tatiana Von Landesberger

DTW-based kernel and rank level fusion for 3D gait recognition using Kinect
Faisal Ahmed, Padma Polash Paul and Marina Gavrilova

Joint Entropy based Key-frame Extraction for 3D Animations
Guoliang Luo, Gang Lei and Hyewon Seo

Session 12. Rendering II

10:00–12:00, Lecture Room 2 (Chair: Victor Ostromoukhov, U. Lyon I)

Visual importance-based adaptive photon tracing (Special Issue Paper)
Quan Zheng and Changwen Zheng

Adaptive Highlights Stencils for Modeling of Multi-Axial BRDF Anisotropy (Full Paper)
Jiri Filip and Michal Havlicek

Light Transport Editing with Ray Portals (Full paper)
Thomas Subileau, Nicolas Mellado, David Vanderhaeghe and Mathias Paulin

VR mannequin: multi-layered ray tracing for multiple garment rendering (Full Paper)
Vladimir Lazunin and Vladimir Savchenko

Visually-Realistic Appearance Changes of Fruits and Vegetables using Particle Systems (Short Paper)
Adrien Verhulst, Jean-Marie Normand and Guillaume Moreau

Keynote 3. Motion Capture Processing: Error Recovery, Compression and Application

8:45 – 9:30, Lecture Room 1 (Chair: Nadia Magnenat-Thalmann, NTU)

Speaker. Lap-Pui Chau received the B. Eng degree in Electronic Engineering from Oxford Brookes University, and the Ph.D. degree in Electronic Engineering from The Hong Kong Polytechnic University, in 1992 and 1997, respectively.

In 1996, he joined Tritech Microelectronics as a senior engineer. Since 1997, he joined Nanyang Technological University. His research interests include fast signal processing algorithms, video transmission, mocap processing and human motion analysis.

He was the chair of Technical Committee on Circuits & Systems for Communications (TC-CASC) of IEEE Circuits and Systems Society from 2010 to 2012. Since 2004, he has served as an associate editor for IEEE Transactions on Multimedia, IEEE Signal Processing Letters, IEEE Transactions on Circuits and Systems for Video Technology and IEEE Transactions on Broadcasting. Besides, he is IEEE Distinguished Lecturer for 2009-2014.

Abstract. Motion capture (mocap) is the process of recording the motion of human. In film production and video game industries, it refers to recording motion of human actors, and using that information to animate character models in 2D or 3D animation. As number of sensors increase, a large number of data needs to be stored and transmitted. Reducing data size by compression is always an important topic. Besides, the depth map camera which can be used to generate mocap data becomes more and more popular nowaday, it reduces the cost to develop new mocap application. This talk will (i) simply introduce motion capture , (ii) data recovery due to transmission and occulsion problem, (iii) compression techniques to reduce the data size, and (iv) application on fall detection.

General Information

Information for paper presenters

Please copy your presentation files to the PC located at the speaker's platform. You can use your notebook if you prefer, but please test them with the projector. And please do not forget to check the order of the presentations of your session with the session chair.

Information for poster presenters

On Wednesday morning before the conference starts, poster stands will be prepared at the hall. Please display your poster on Wednesday afternoon (from 13hr30 to18hr). You may ask any help you need at the registration desk during this time.

Please be aware that on Thursday morning during the "Poster Fast Forward" session, each presenter will be given 2 minutes to advertise his/her poster *orally*. This session will be followed by the Poster Exhibition, along with a long coffee break of 1 hour!

Information for session chairs

Please make sure that the presenters of your session are present, that they are aware of the order of the presentations, and that they test their presentation materials (either on the computer at the session room or on their notebooks), before the session begins. Technical assistance will be provided by student volunteers and the local organization team, starting from 25 minutes prior to each session's start time.

Program and schedule

Full conference information is available in this brochure and on the conference web site at http:://cgi2015.unistra.fr.

Lunch

Lunch will be served on the 3rd (2nd in France) floor in the university restaurant building, which is very next to the INSA building. At the entrance, you will need to present your ticket that you've received at the registration desk.

Location

3rd floor (2eme etage)
Restaurant Universitaire de l'Esplanade
32 boulevard de la Victoire
67000 Strasbourg

Friday, June 26th

8:00	Registration & Refreshment (Espace de l'oeuf (Egg space))
8:45	Keynote 3: Motion Capture Processing: Error Recovery, Compression and Application Lap-Pui Chau, Nanyang Technological University (Lecture Room 1)
9:30	Coffee Break
10:00	Session 11: Matching, Segmentation &Recognition (Lecture Room 1) / Session 12: Rendering II (Lecture Room 2)
12:00	Lunch (University Restaurant)
13:30	Session 13: 2D and 3D Modeling II (Lecture Room 1) / Session 14: Character Animation II (Lecture Room 2)
15:30	Coffee Break
16:00	Panel Discussion: "What are the great challenges to come in Computer Graphics?" (Lecture Room 1) Chair:Nadia Magnenat-Thalmann, U. Geneva and NTU Victor Ostromoukhov, Univ. Lyon 1 Emmanuel Roncoroni, Visteon Daniel Thalmann, NTU
16:45	Closing & Award Hyewon Seo, CNRS-Univ. Strasbourg George Papagiannakis, U. Crete (Lecture Room 1)
17:15	

Syuhei Sato, Yoshinori Dobashi, Yonghao Yue, Kei Iwasaki and Tomoyuki Nishita.

Fast Procedural Fluid Flow Simulation on Mobile (Short Paper)
Seungho Shin, Soowan Park, Joonseok Lee, Eunjung Ju and Youngmin Kwak.

Volumetric Surface Deformation with Auxiliary Voxel Grids (Short Paper)
Zhiping Luo, Remco C. Veltkamp and Arjan Egges.

Dynamics Simulation of User-specied Orthotropic Materials (Short Paper)
Jianping Cai, Feng Lin, Yong Tsui Lee, Kemao Qian and Hock Soon Seah.

Social events

Welcome reception

The welcome reception will be on Wednesday evening, 18:30 – 21:30, at the Musée d'art moderne et contemporain (Museum of Modern and Contemporary Art).

   The directions from the conference site:
- Walk to the tram station "Université".
- Take the tram C towards "Gare Centrale" and exit at the stop "Homme de Fer".
- Take the tram B towards "Lingolsheim" and exit at the stop "Musee d'Art Moderne".

Address: 1 Place Hans Jean Arp, 67076 Strasbourg

Boat tour (Batorama)

On Thursday evening, a boat tour is organized just before to the conference dinner. This tour focuses around "La Petite France" district and Strasbourg's historical center which is a Unesco World Heritage site. **Note that you have to be at the "Embarcadere" on time (18:45), in order not to miss the boat!**

   The directions from the conference site:
- Walk to the tram station "Université".
- Take the tram C towards "Gare Centrale" and exit at the stop "Place Broglie".
- Walk along the streets "Rue du Dome", "Place de la cathedrale" and then "Rue du Maroquin".

Address: Place du Marché aux Poissons, 67000 Strasbourg

Conference dinner

The conference dinner will be on Thursday evening, right after the boat tour, at the "Maison Kammerzell (Kammerzell House)". Located on the *Place de la Cathédral*, Maison Kammerzell is one of the most charming buildings of Strasbourg, and a traditional symbol of the city's old values. During the dinner, **CGI career award** will be given in recognition and appreciation of the recipient's devoted time and effort to computer graphics and contributions to the CGI conferences!

Address: 16 Place de la Cathédrale, 67000 Strasbourg

Time		
8:00	Registration & Refreshment Espace de l'oeuf (Egg space), INSA de Strasbourg	
8:45	Opening Hyewon Seo, CNRS-Univ. Strasbourg (conference co-chair) Daniel Thalmann, Nanyang Technological University (honorary member of CGS) Michel De Mathelin, Univ. Strasbourg (director of ICube) Frederic Cordier, Univ. Haute-Alsace (program co-chair) Victor Ostromoukhov, Univ. Lyon 1 (conference co-chair) (Lecture Room 1)	
9:15	Keynote 1: "Big Data and the Pursuit of Visual Realism", Alexei (Alyosha) Efros, UC Berkeley (Lecture Room 1)	
10:00	Coffee Break	
10:30	Session 1: Visualization (Lecture Room 1)	Session 2: Images Processing I (Lecture Room 2)
12:00	Lunch (University Restaurant)	
13:30	Session 3: 2D and 3D Modeling I (Lecture Room 1)	Session 4: Character Animation I (Lecture Room 2)
15:45	Coffee Break	
16:15	Session 5: 3D Geometry Processing and Analysis (Lecture Room 1)	Session 6: Graphics Hardware (Lecture Room 2)
17:30		
18:30	Welcome Reception (Musee d'art moderne et contemporain)	
21:30		

Session 9. Image Processing III

15:30 - 17:30, Lecture Room 2 (Chair: Yasushi Yamaguchi, U. Tokyo)

Direction and Scale Preserving Image Analogies (Short paper)
Hiromu Seki, Masahiro Toyoura and Xiaoyang Mao.

Free from Rules:Data-Driven Photographic Composition Suggestion (Short paper)
Song-Hai Zhang, Zhao Zhao, Shi-Sheng Huang, Ralph Martin and Shi-Min Hu.

A Novel Spatial-Temporal Optical Flow Method Based on Navier-Stokes Equations (Short paper)
Qing Zuo and Yue Qi.

Fast background subtraction based on non-parametric models for freely moving cameras (Short paper)
Feng Sun, Kaihuai Qin, Wei Sun and Guo Huayuan.

AOCCut: Local Interactive Object Segmentation via Delaunay (Short paper)
Yaqi Liu, Qiang Cai, Jian Cao, Xiaobin Zhu and Haisheng Li.

Extracting emotional adjectives from paintings using color combinations (Short paper)
Hyounoh Shim, Dongwann Kang and Kyunghyun Yoon.

Session 10. Deformation & Physics-based Simulation

15:30-17:30, Lecture Room 2 (Chair: Jernej Barbič, U. Southern California)

Novel Adaptive SPH with Geometric Subdivision for Brittle Fracture Animation of Anisotropic Materials (Special Issue Paper)
Chen Li, Changbo Wang and Hong Qin.

Metaballs-based Physical Modeling and Deformation of Organs for Virtual Surgery (Special Issue Paper)
Junjun Pan, Chengkai Zhao, Xin Zhao, Aimin Hao and Hong Qin.

Incompressibility-Preserving Deformation for Fluid Flows Using Vector Potentials (Special Issue Paper)
Syuhei Sato, Yoshinori Dobashi, Yonghao Yue, Kei Iwasaki and Tomoyuki Nishita.

Session 7. Image Processing II

13:30 - 15:00, Lecture Room 1(Chair: Xiaoyang Mao, U. Yamanashi)

Effective Structure Restoration for Image Completion Using Internet Resources (Special Issue Paper)
Miao Hua and Wencheng Wang

Depth-of-Field Analysis for Focused Augmented Mirror (Full Paper)
Jae Seok Jang, Soo Ho Choi, Gi Sook Jung and Soon Ki Jung

Two-Level Joint Local Laplacian Texture Filtering (Full Paper)
Hui Du, Xiaogang Jin and Philip Willis

Co-matting of Image Pairs (Short Paper)
Liu Shang, Jiahe Qiu, Dengming Zhu, Guijuan Zhang and Zhaoqi Wang

Session 8. Rendering I

13:30 – 15:00, Lecture Room 2 (Chair: Mark Jones, Swansea U.)

Relighting of Paintings and Drawings based on Shading-Color Correlation (Full Paper)
Bernardo Henz and Manuel M. Oliveira

Simplification of Meshes with Digitized Radiance (Special Issue Paper)
Kenneth Vanhoey, Basile Sauvage, Pierre Kraemer, Frederic Larue and Jean-Michel Dischler

Perceptual effects of volumetric shading models in stereoscopic desktop-based environments (Full Paper)
Jose Diaz, Timo Ropinski, Isabel Navazo, Enrico Gobbetti and Pere-Pau Vazquez

Using Half-Precision Floating-Point Numbers for Storing Bounding Volume Hierarchies (Short Paper)
Matias Koskela, Timo Viitanen, Pekka Jaaskelainen, Jarmo Takala and Ken Cameron

Keynote1. Big Data and the Pursuit of Visual Realism

9:15 – 10:00, Lecture Room 1 (Chair: Victor Ostromoukhov, U. Lyon I)

Speaker. Alexei (Alyosha) Efros joined UC Berkeley in 2013 as associate professor of Electrical Engineering and Computer Science. Prior to that, he was nine years on the faculty of Carnegie Mellon University, and has also been affiliated with École Normale Supérieure/INRIA and University of Oxford. His research is in the area of computer vision and computer graphics, especially at the intersection of the two. He is particularly interested in using data-driven techniques to tackle problems which are very hard to model parametrically but where large quantities of data are readily available. Alyosha received his PhD in 2003 from UC Berkeley. He is a recipient of CVPR Best Paper Award (2006), NSF CAREER award (2006), Sloan Fellowship (2008), Guggenheim Fellowship (2008), Okawa Grant (2008), Finmeccanica Career Development Chair (2010), SIGGRAPH Significant New Researcher Award (2010), ECCV Best Paper Honorable Mention (2010), and the Helmholtz Test-of-Time Prize (2013).

Abstract. Over the past decade, the Internet has developed into a gargantuan depository of visual data (photos, videos, webcams, 3D models, etc) captured by people (and machines) all over the globe. A pressing research question is how this visual data could be useful in graphics as a way of "crowd-sourcing" visual realism? In this talk, I will give an overview of some of the work on using large online image collections to transfer visual appearance as a way of synthesizing novel visual content. Using graphics as a tool for exploring and visualizing large datasets will also be discussed.

Session 1. Visualization

10:30 – 12:00, Lecture Room 1 (Chair: Hyewon Seo, CNRS–U. Strasbourg)

Interactive Interaction Plot (Special Issue Paper)
Rainer Splechtna, Mai El-Shehaly, Denis Gracanin, Mario Duras, Katja Buhler and Kresimir Matkovic

TimeClassifier: a visual analytic system for the classification of multi-dimensional time series data (Special Issue Paper)
James Walker, Mark Jones, Robert Laramee, Owen Bidder, Hannah Williams, Rebecca Scott, Emily Shepard and Rory Wilson

DynaMoVis: Visualization of dynamic models for urban modeling (Special Issue Paper)
Mark W. Jones, Joel Dearden and Alan Wilson

Texture advection on discontinuous flows (Special Issue Paper)
Angel Rodriguez-Cerro, Ignacio Garcia-Fernandez, Rafael J. Martinez-Dura and Marta Pla-Castells

Session 2. Image Processing I

10:30 – 12:00, Lecture Room 2 (Chair: Shi-Min Hu, Tsinghua U.)

Structure-aware QR Code abstraction (Special Issue Paper)
Siyuan Qiao, Xiaoxin Fang, Bin Sheng, Wen Wu and Enhua Wu

Optimal Exposure Compression for High Dynamic Range Content (Special Issue Paper)
Kurt Debattista, Elmedin Selmanovic, Thomas Bashford-Rogers and Alan Chalmers

Sparse Pixel Sampling for Appearance Edit Propagation (Special Issue Paper)
Tatsuya Yatagawa and Yasushi Yamaguchi

Depth Image Enhancement using 1D Least Median of Squares (Short Paper)
Abm Tariqul Islam, Renato Pajarola, Christian Scheel and Oliver Staadt

Industrial Talk. Computer Graphics Status and Trends in Automotive Industry

10:15 – 10:45, Lecture Room 1 (Chair: Rémi Allegre, U. Strasbourg)

Speaker. Mr. Emmanuel Roncoroni, Head of Graphics Rendering Technology at Visteon.

Abstract. Recently, the computer graphics has operated a breakthrough in the Automotive industry. 2D animation, real-time 3D rendering, augmented reality have emerged in such market where embedded constraints, driver cognitive load and costs are challenging. Visteon will present the status in this market as well as the trends for the connected car.

Posters

10:45 – 11:00, Lecture Room 1 (Chair: Myung-Soo Kim, Seoul Nat'l U.)
11:00 – 12:00, Espace de l'oeuf (Egg space), INSA de Strasbourg

Interactive Augmented Reality System with Kinect
Hyo-Sub Yum and Min Hong

Semi-automatic 3D Garment Converter for Physical Simulation
Eunjung Ju, Jinyong Han, Soowan Park, Sunyoung Han, Jihye Song, Seungho Shin, Jiwon Jeong and Youngmin

Stable Predictive Particle Simulation on Mobile Device
Seungho Shin, Soowan Park, Joonseok Lee, Eunjung Ju and Youngmin Kwak

Circular shapes automatic detection on meshes based on discrete curvatures
Florian Beguet, Sarah Bali, Laurent Jorda, Sophie Viseur, Sylvain Bouley and Jean-Luc Mari

Feature extraction using a shape descriptor graph based on discrete curvature patches,
Arnaud Polette, Jean Meunier and Jean-Luc Mari

Automatic generation of medium-detailed 3D models of buildings based on CAD data
Bernardino Dominguez, Peter van Oosterom, Francisco Feito, Angel Luis Garcia Fernandez and Carlos Javier Ogayar Anguita

Modeling Social interactions using Large Space Virtual Environments
Denis Gracanin, Sean Meacham, Alex Heivilin and Kresimir Matkovic

Keynote 2. Past Forward: When Computer Graphics and Archaeology meet

9:00 – 9:45, Lecture Room 1 (Chair: Hyewon Seo, CNRS-U. Strasbourg)

Speaker. Ayellet Tal received the BSc degree (Summa cum Laude) in mathematics and computer science from Tel-Aviv University, and the PhD degree in computer science from Princeton University. She is a professor in the Department of Electrical Engineering at the Technion and the founder of the Laboratory of Computer Graphics and Multimedia. She served as the program chair of the ACM Symposium on Virtual Reality, Software, and Technology (VRST 2006) and as the chair of Shape Modeling International (SMI 2011). She has also served in the program committees of all the leading conferences in Computer Graphics. She is an associate editor of IEEE Transactions on Visualization and Computer Graphics (TVCG) and of Computers & Graphics and was on the editorial board of Computer Graphics Forum (CGF).

Abstract. Shape analysis has become a lively topic of research in computer graphics. It aims at developing algorithms and technologies for "understanding" shapes. In archaeology, many of the tasks are inherently shape analysis tasks, from documentation, through search, to restoration. However, these are still done manually, involving significant labor and expertise. In this talk, I will give an overview of our attempts to bring these fields together. Archaeology is an interesting domain not only because cultural heritage has been acknowledged worldwide as an important goal, but also because the archaeological domain exposes the limits of current computer graphics techniques. Scanned archaeological artifacts and not clean and nicely-behaved geometries; rather they are broken, eroded, noisy, and ultimately challenging to algorithms that visualize, analyze, or restore.

Session 3. 2D and 3D Modeling I

13:30 – 15:45, Lecture Room 1 (Chair: Francisco Feito, U. Jaén)

Procedural floor plan generation from building sketches (Special Issue Paper)
Daniel Camozzato, Leandro Dihl, Ivan Silveira, Fernando Marson and Soraia Musse

Learning best views of 3D shapes from sketch contour (Special Issue Paper)
Long Zhao, Shuang Liang, Jinyuan Jia and Yichen Wei

A fast approach for perceptually-based fitting strokes into elliptical arcs (Special Issue Paper)
Pedro Company, Raquel Plumed and Peter A.C. Varley

Comparison of Three Bounding Regions with Cubic Convergence to Planar Freeform Curves (Special Issue Paper)
Jaewook Lee, Yong-Joon Kim, Myung-Soo Kim and Gershon Elber

Layer the Sphere for Accurate and Additive Voxelation by Integer Operation (Special Issue Paper)
Ranita Biswas and Partha Bhowmick

Session 4. Character Animation I

13:30 – 15:45, Lecture Room 2 (Chair: Daniel Thalmann, NTU)

Real-time collision-free linear trajectory generation on GPU for crowd simulations (Special Issue Paper)
Öner Barut and Murat Haciomeroglu

A Novel Simulation Framework Based On Information Asymmetry To Evaluate Evacuation Plan (Special Issue Paper)
Xiaodong Che, Yu Niu, Bin Shui, Jianbo Fu, Guangzheng Fei, Prashant Goswami and Yanci Zhang

Generating Animated Paper Pop-ups from the Motion of Articulated Characters (Special Issue Paper)
Conrado Jr. Ruiz, Sang N. Le and Kok-Lim Low

A Path-Based Multi-Agent Navigation Model (Special Issue Paper)
Cumhur Yiğit Özcan and Murat Haciomeroglu

Modeling Physiologically Plausible Eye Rotations: Adhering to Donders' and Listing's Laws (Short Paper)
Andrew Duchowski and Sophie Jorg

Session 5. 3D Geometry Processing and Analysis

16:15 - 17:30, Lecture Room 1 (Chair: Pedro Company, U. Jaume I)

Efficient EMD and Hilbert Spectra Computation for 3D Geometry Processing and Analysis via Space-Filling Curve (Special Issue Paper)
Xiaochao Wang, Jianping Hu, Dongbo Zhang and Hong Qin.

Performance Driven Redundancy Optimization of Data Layouts for Walkthrough Applications (Full Paper)
Jia Chen, Shan Jiang, Zachary Destefano, Sungeui Yoon and M. Gopi.

Progressive compression of generic surface meshes (Short Paper)
Florian Caillaud, Vincent Vidal, Florent Dupont and Guillaume Lavoué.

Session 6. Graphics Hardware

16:15 - 17:30, Lecture Room 2 (Chair: Kaihuai Qin, Tsinghua U.)

Real-time adaptive content retargeting for live multi-view capture and light field display (Special Issue Paper)
Vamsi Kiran Adhikarla, Fabio Marton, Tibor Balogh and Enrico Gobbetti

GPGPU-Perf: Efficient, Interval-based DVFS Algorithm for Mobile GPGPU Applications (Special Issue Paper)
Seongki Kim and Young J. Kim

Efficient Grid Construction on Streaming Architectures (Short Paper)
Vasco Costa, Joao M. Pereira and Joaquim A. Jorge

Thursday, June 25th

8:00	Registration & Refreshment (Espace de l'oeuf (Egg space), INSA de Strasbourg)
9:00	Keynote 2 : "Past Forward: When Computer Graphics and Archaeology meet" Ayellet Tal, Technion - Israel Institute of Technology (Lecture Room 1)
9:45	Coffee Break
10:15	Industrial Talk: "Computer Graphics Status and Trends in Automotive Industry" Emmanuel Roncoroni, Visteon (Lecture Room 1)
10:45	Poster Fast Forward (Lecture Room 1)
11:00	Poster Exhibition (Espace de l'oeuf (Egg space))
12:15	Lunch (University Restaurant)
13:30	Session 7: Image Processing II (Lecture Room 1) / Session 8: Rendering I (Lecture Room 2)
15:00	Coffee Break
15:30	Session 9: Image Processing III (Lecture Room 1) / Session 10: Deformation & Physics-based Simulation (Lecture Room 2)
17:30	
18:45	Boat Tour (Embarcadere)
20:15	Conference Dinner (Maison Kamerzel)