Computational Visual Media 2016 Programme

Day 1: Wednesday 6 April, 2016

08:50 – 09:00 **Welcome and Opening Remarks**

09:00 – 09:45 **Invited Talk: 4D Vision for Video-Realistic Interactive Animation**
Adrian Hilton (*University of Surrey, UK*)

Session 1 **Modeling from Images** (Session Chair: Yu-Kun Lai)

09:45 – 10:10 Zhe Zhu, Ralph Martin, Robert Pepperell, Alistair Burleigh and Shimin Hu.
3D Modeling and Motion Parallax for Improved Videoconferencing

10:10 – 10:35 Yuliang Rong, Tianjia Shao, Youyi Zheng, Yin Yang and Kun Zhou.
An Interactive Approach for Functional Prototype Recovery from a Single RGBD Image

10:35 – 11:00 Jing Wu, Paul Rosin, Xianfang Sun and Ralph Martin.
Improving Shape from Shading with Interactive Tabu Search

11:00 – 11:20 Coffee Break

Session 2 **Shape Structure** (Session Chair: Ruofeng Tong)

11:20 – 11:45 Qiang Fu, Xiaowu Chen, Xiaoyu Su and Hongbo Fu.
Natural Lines Inspired 3D Shapes Re-Design

11:45 – 12:10 Zishun Liu, Juyong Zhang and Ligang Liu.
Upright Orientation of 3D Shapes with Convolutional Networks

12:10 – 12:35 Haiyong Jiang, Dong-Ming Yan, Weiming Dong, Liangliang Nan and Xiaopeng Zhang.
Symmetrization of Facade Layouts

12:35 – 14:00 Lunch

Session 3 **Geometry Processing** (Session Chair: Caiming Zhang)

14:00 – 14:25 Minfeng Xu and Changhe Tu.
Building Binary Orientation Octree for an Arbitrary Scattered Point Set

14:25 – 14:50 Wenpeng Xu, Wei Li and Ligang Liu.
Skeleton-Sectional Structural Analysis for 3D Printing

14:50 – 15:15 Bo Wu, Kai Xu, Yueshan Xiong and Hui Huang.
Skeleton-guided 3D Shape Distance Field Metamorphosis

15:15 – 15:40 Daniel Beale, Peter Hall, Yongliang Yang, Darren Cosker and Neill Campbell.
Fitting Quadrics with a Bayesian Prior

15:40 – 16:00 Coffee Break

16:00 – 17:00	**Posters**

David Pickup, Xianfang Sun, Paul Rosin and Ralph Martin
Skeleton-Based Canonical Forms for Non-Rigid 3D Shape Retrieval

Hongwei Lin.
A computational model of topological and geometric recovery for visual curve completion

Xiaole Zhao, Yadong Wu, Jinsha Tian and Hongying Zhang.
Single Image Super-Resolution via Blind Blurring Estimation and Anchored Space Mapping

Xiao Dong Tang, Ji Xiang Guo, Peng Li and Jian Cheng Lv.
A surgical simulation system for predicting facial soft tissue deformation

Zhimin Zhou, Xu Zhao and Lei Wang.
Parallelized Deformable Part Models with Effective Hypothesis Pruning

Hao Zhu and Qing Wang.
Accurate Disparity Estimation in Light Field using Ground Control Points

Cuixia Ma, Yang Guo and Hongan Wang.
VideoMap: An Interactive and Scalable Visualization for Exploring Video Content

17:30 – 18:30	**Drink Reception with Snacks**

Day 2: Thursday 7 April, 2016

09:00 – 09:45	**Invited Talk: Computational Imaging and Display – Hardware-Software Co-design for Imaging Devices** Wolfgang Heidrich (*KAUST*)

Session 4	**Stereoscopic Video** (Session Chair: Yong-Liang Yang)
09:45 – 10:10	Miao Wang, Xi-Jin Zhang, Jun-Bang Liang, Song-Hai Zhang, Ralph Martin and Shi-Min Hu. **Comfort-driven Disparity Adjustment for Stereoscopic Video**
10:10 – 10:35	David Roberts and Ioannis Ivrissimtzis. **Quality Measures of Reconstruction Filters for Stereoscopic Volume Rendering**
10:35 – 11:00	Zhang Chunping, Ji Zhe and Wang Qing. **Decoding and Calibration method on Focused Plenoptic Camera**
11:00 – 11:20	Coffee Break

Session 5	**Recognition** (Session Chair: Peter Hall)
11:20 – 11:45	Yun-Hao Yuan, Yun Li, Hong-Wei Ge, Xiao-Bo Shen, Guoqing Zhang and Xiaojun Wu. **Learning Multi-kernel Multi-view Canonical Correlations for Image Recognition**
11:45 – 12:10	Ashwan Abdulmunem, Yukun Lai and Xianfang Sun. **Saliency Guided Local and Global Descriptors for Effective Action Recognition**
12:10 – 12:35	Xi-Jin Zhang and Yi-Fan Lu. **Multi-task Learning For Food Identification and Analysis with Deep Convolutional Neural Network**
12:35 – 14:00	Lunch

Session 6	**Image Processing** (Session Chair: Wolfgang Heidrich)
14:00 – 14:25	Xiang Chen, Weiwei Xu, Sai-Kit Yeung and Kun Zhou. **View-aware Image Object Compositing and Synthesis from Multiple Sources**
14:25 – 14:50	Liqiong Wu, Caiming Zhang and Yepeng Liu. **High-resolution Image Based on Directional Fusion of Gradient**
14:50 – 15:15	Wenqian Deng, Xuemei Li and Caiming Zhang. **A Modified Fuzzy C-means Algorithm for Brain MR Image Segmentation and Bias Field Correction**
15:15 – 15:35	Coffee Break

Session 7　　　**Scene Analysis** (Session Chair: Changhe Tu)

15:35 – 16:00　　Shi-Sheng Huang and Shi-Min Hu.
Structure Guided Interior Scene Synthesis via Graph Matching

16:00 – 16:25　　Wei Qi, Ming-Ming Cheng, Ali Borji, Huchuan Lu, Lian-Fa Bai.
SaliencyRank: Two-stage Manifold Ranking for Salient Object Detection

16:25 – 16:50　　Zhendong Wang, Tongtong Wang, Min Tang and Ruofeng Tong.
Efficient and Robust Strain Limiting and Treatment of Simultaneous Collisions with Semidefinite Programming

18:00 – 20:00　　**Banquet**

Day 3: Friday 8 April, 2016

09:00 – 09:45　　**Invited Talk: Digital Avatars for All: Interactive Face and Hairs**
Kun Zhou (*Zhejiang University, China*)

Session 8　　　**Alignment and Calibration** (Session Chair: Ralph Martin)

09:45 – 10:10　　Tong Lin, Yao Liu, Bo Wang, Liwei Wang and Hongbin Zha.
Local Orthogonality Preserving Alignment for Nonlinear Dimensionality Reduction

10:10 – 10:35　　Ke-Li Cheng, Xuan Ju, Ruo-Feng Tong, Min Tang, Jian Chang and Jian-Jun Zhang.
A Linear Approach for Depth and Colour Camera Calibration Using Hybrid Parameters

10:35 – 10:55　　Coffee Break

Session 9　　　**Miscellaneous** (Session Chair: Shi-Min Hu)

10:55 – 11:20　　Craig Henderson and Ebroul Izquierdo.
Rethinking Random Hough Forests for video database indexing and pattern search

11:20 – 11:45　　Lu, Shaoping; Dauphin, Guillaume; Lafruit, Gauthier; Munteanu, Adria.
Color retargeting: Interactive time-varying color image composition from time-lapse sequences

11:45 – 12:10　　Daniel Kauker, Martin Falk, Guido Reina, Anders Ynnerman and Thomas Ertl.
VoxLink – Combining Sparse Volumetric Data and Geometry for Efficient Rendering

12:10 – 12:25　　**Closing Session**
12:25 – 13:30　　Lunch

CVM 2016 Conference Venue

The conference will be held in **Trevithick Building, Cardiff University, 5 The Parade, Cardiff CF24 3AA, UK.**

University Map: http://www.cardiff.ac.uk/visit/map
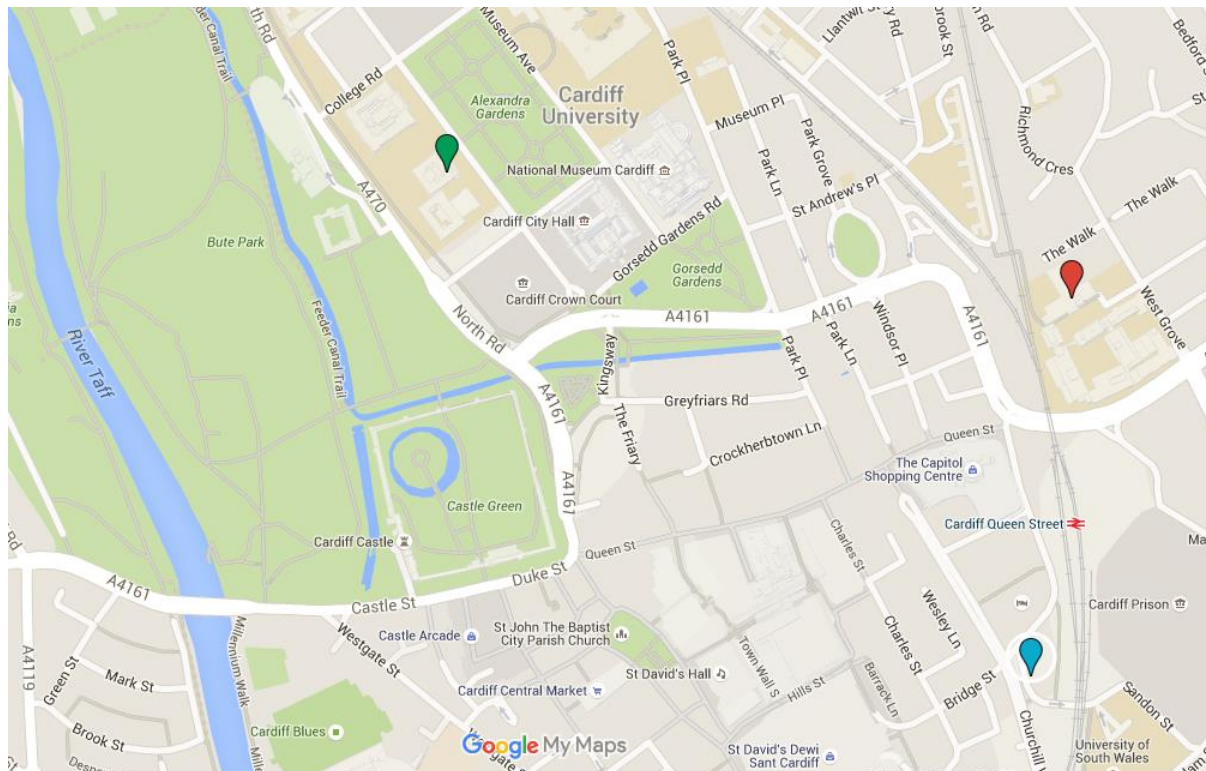
Event Locations:

📍 **Registration Desk**: Foyer at Trevithick Entrance (Opens from 8am Wednesday 6/4/2016)

📍 **CVM Conference**: Faculty Lecture Theatre T/2.09 (second floor, upstairs from the Trevithick foyer)

📍 **Lunches and Coffee Breaks**: Coffee Shop (ground floor)

📍 **Conference Banquet**: Madeira Restaurant (see the map above)

📍 **Conference Drink Reception**: Glamorgan Building (see the map above)

Please enter the building at the Trevithick entrance, which is on your right hand side after passing the car park barrier. There are signs in the building to guide you between these rooms. You may also get assistance from local participants.