Carl Yuheng Ren

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Current Position

Postdoc researcher with the Robotics Research Group, University of Oxford

Education

DPhil (Oxford PhD) in Engineering Science   2010 - 2014
Department of Engineering Science, Oriel College, University of Oxford, UK
Supervisors: Prof. David Murray and Prof. Ian Reid

B.S. in Computer Science and Technology   2006 - 2010
Honors School, Harbin Institute of Technology (HIT), China.
Thesis title: Diversifying Landmark Image Search Results by Learning Interested Views from Community Photos (Best undergraduate thesis award of Dept. of CS, HIT)
Advisors: Prof. Hongxun Yao (HIT) and Dr. Xinjing Wang (Microsoft)

Experience

Postdoc Researcher   2015 - now
I work with Prof Philip Torr in Oxford Torr Vision Group on large-scale real-time semantic reconstruction and object recognition.
Project: InfiniTAM∞

Research Assistant   2011 - 2014
I worked with Dr Victor Prisacariu and Prof. David Murray to lead Oxford's effort in human pose recovery for the rehabilitation of stroke patients.
Project: REWIRE

Internship   2009 - 2010
I worked with Dr. Xinjing Wang in Web Search and Mining Group of Microsoft Research Asia on travel recommendation based on mining user generated web image.
Project: Agate

Publications

12. Olaf Kaehler, Victor Prisacariu, **(**Carl Yuheng Ren**)**, Xin Sun, Phil Torr and David Murray, Very High Frame Rate Volumetric Integration of Depth Images on Mobile Devices, in *IEEE Transactions on Visualization and Computer Graphics (Proceedings International Symposium on Mixed and Augmented Reality 2015), 21(11)*

11. **Carl Yuheng Ren**, Victor Prisacariu, Olaf Keahler, David Murray and Ian Reid, 3D Tracking of Multiple Objects with Identical Appearance using RGB-D Input, in *Proceedings of 2014 International Conference on 3D Vision (3DV2014)* (**3DV2014**) [**Best Paper Award**]

10. **Carl Yuheng Ren**, Implicit Shape Representation for Efficient 2D/3D Tracking and Reconstruction, Doctoral Thesis in *Oxford University Research Archive*, 2014

9. Victor Prisacariu, Olaf Keahler, Mingming Cheng, **Carl Yuheng Ren**, Julian Valentin, Philip Torr, Ian Reid, David Murray, A Framework for the Volumetric Integration of Depth Images, in *ArXiv e-prints 1410.0925*, 2014

8. **Carl Yuheng Ren**, Victor Prisacariu, David Murry and Ian Reid, STAR3D: Simultaneous Tracking And Reconstruction of 3D Objects Using RGB-D Data, in *Proceedings of 14th IEEE International Conference on Computer Vision (**ICCV2013**)*

7. **Carl Yuheng Ren**, Victor Prisacariu and Ian Reid, Regressing Local to Global Shape Properties for Online Segmentation and Tracking, in *International Journal of Computer Vision (**IJCV**), 2013*

6. Michele Pirovano, **Carl Yuheng Ren**, Iuri Frosio, Pier Luca Lanzi, Victor Prisacariu, David W Murray and N Alberto Borghese, Robust Silhouette Extraction from Kinect Data, in *Proceedings of the 17th International Conference on Image Analysis and Processing (**IEEE ICIAP2013**)*

5. Amaury Dame, Victor A. Prisacariu, **Carl Yuheng Ren** and Ian Reid, Dense Reconstruction Using 3D Object Shape Priors, in *Proceedings of 26th IEEE Conference on Computer Vision and Pattern Recognition (**CVPR2013**)*

4. **Carl Yuheng Ren** and Ian Reid, A unified energy minimization framework for model fitting in depth, in *ECCV 2nd Workshop on Consumer Depth Cameras for Computer Vision (**ECCV2012 workshop**)*

3. **Carl Yuheng Ren**, Victor Adrian Prisacariu and Ian Reid, Regressing Local to Global Shape Properties for Online Segmentation and Tracking, in *Proceedings of The 22nd British Machine Vision Conference (**BMVC2011**)*

2. **Carl Yuheng Ren**, and Ian Reid, gSLIC: a real-time implementation of SLIC superpixel segmentation, *Technical Report, Department of Engineering, University of Oxford*

1. **Yuheng Ren**, Mo Yu, Xin-Jing Wang, Lei Zhang and Wei-Ying Ma, Diversifying Landmark Image Search Results by Learning Interested Views from Community Photos, in *Proceedings of 19th International World Wide Web Conference (**WWW2010**)*

Awards & Honours

International Conference on 3D Vision best paper award	2014
The National Award for Outstanding Self-financed Chinese Students Study Aborad	2014
Oriel College Graduate Studentship	2013
British Machine Vision Conference travel grant	2011
Machine Learning Summer School Scholarship (Singapore)	2011
Wolfson-China Award, China Oxford Scholarship Fund	2010
China Computer-World Scholarship	2010

Microsoft Young Fellowship Award by MSRA	2009
First Price, China Undergraduate Mathematical Contest in Modeling.	2008
Honorable Mention, The Mathematical Contest in Modeling (MCM2007).	2007
People's Scholarship sponsored by China State Council.	2007,2008,2009

`www.robots.ox.ac.uk/~carl`