

Xiaoqin Wang

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RESEARCH INTERESTS

Visual sensor networks, 3D video processing, computer vision, and robotics.

EDUCATION

Doctor of Philosophy, Electrical and Computer Systems Engineering Mar. 2012 – present
Monash University, Australia
Supervisors: Dr. Y. Ahmet Sekercioglu and Prof. Tom Drummond.
RESEARCH AREAS – visual sensor networks, 3D video coding, and computer vision.

Master of Science, Communication and Signal Processing Sept. 2011
Imperial College London, UK
Thesis: Resource Allocation in Wireless Ad-Hoc Networks

Bachelor of Engineering (Hons.) First Class, Electrical and Communication Engineering, June 2010
The University of Birmingham, UK
Thesis: Link Budget Analysis for Wireless Communication Systems

EXPERIENCE

Researcher Mar. 2012 – Present
Australian Research Council Center of Excellence for Robotic Vision and Wireless Sensor And Robot Networks Laboratory (WSRNLab), Monash University.

- Developing computer vision based techniques and tools for automated localization and efficient visual and depth data communication between networked mobile sensors/robots. This research involving multiple projects includes capturing data from robot networks, information extraction, image processing, computer vision, network modeling, pattern recognition, and end-to-end system building.

Teaching Associate Mar. 2013 – Present
Department of Electrical and Computer Systems Engineering, Monash University.

- Lab demonstrating and tutoring undergraduate modules:
 - ECE2041: Telecommunications
 - ECE3091: Engineering Design
 - ECE4024: Wireless Communications

Research Assistant Mar. 2011 – Sept. 2011
Intelligence Systems and Networks Group, Imperial College London.

- Investigating 3G and enhanced 3G mobile-telephony communications protocols, especially the High-Speed Downlink Packet Access (HSDPA). Developing resource allocation methods for efficient communication between wireless linked clients.

PUBLICATIONS

Journal Articles

- **Xiaoqin Wang**, Y. A. Sekercioglu, T. Drummond, E. Natalizio, and I. Fantoni, “*Relative Pose Based Redundancy Removal: Collaborative RGB-D Data Transmission in a Mobile Visual Sensor Network*”, (under review).
- **Xiaoqin Wang**, Y. A. Sekercioglu, T. Drummond, E. Natalizio, I. Fantoni, and V. Fremont, “*Fast Depth Video Compression for Mobile RGB-D Sensors*”, IEEE Transactions on Circuits and Systems for Video Technology (accepted).
- **Xiaoqin Wang**, Y. A. Sekercioglu, T. Drummond, “*Vision-Based Cooperative Pose Estimation for Localization in Multi-Robot Systems Equipped with RGB-D Cameras*”, Robotics 2015, 4, 1-22.

Conference Proceedings

- **Xiaoqin Wang**, Y. A. Sekercioglu, and T. Drummond, “*Self-Calibration in Visual Sensor Networks Equipped with RGB-D Cameras*”, 40th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Brisbane, Australia, April 2015.
- **Xiaoqin Wang**, Sekercioglu, Y.A., Drummond, T., “*A Real-Time Distributed Relative Pose Estimation Algorithm for RGB-D Camera Equipped Visual Sensor Networks*”, Seventh ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2013), Palm Springs, California, USA, October 2013.
- **Xiaoqin Wang**, Sekercioglu, Y.A., Drummond, T., “*Multiview Image Compression and Transmission Techniques in Wireless Multimedia Sensor Networks: A Survey*”, Seventh ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2013), Palm Springs, California, USA, October 2013.
- **Xiaoqin Wang**, Sekercioglu, Y.A., Drummond, T., “*PhD Forum: An Efficient Communication Scheme for Mobile Visual Sensor Networks Equipped with RGB-D Cameras*”, Seventh ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2013), Palm Springs, California, USA, October 2013.

PROGRAMMING SKILLS

C++/C, Matlab, Java, CSS & HTML.

HONORS

Australian Research Council Center of Excellence for Robotic Vision Scholarship, 2015
Monash Graduate Scholarship, 2012
Monash Department Scholarship, 2012
UoB Outstanding Engineering Student Award, 2009

MEMBERSHIPS

IEEE, IEEE Signal Processing Society, IEEE Robotics & Automation Society student member.

REFERENCES

Dr Ahmet Sekercioglu (Current supervisor)
Senior Lecturer
Department of Electrical and Computer System
Engineering
Monash University
Clayton, VIC 3800
Tel: +61-3-9905 3503
Homepage: <http://titania.ctie.monash.edu.au/>
Email: Ahmet.Sekercioglu@monash.edu

Prof Tom Drummond (Current supervisor)
Professor
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