

Hossein Rahmani

Computer Science & Software Engineering

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EDUCATION

The University of Western Australia, WA, AUSTRALIA

- PhD, Computer Science, Thesis Title: “3D Human Action Recognition”, 2016

Shahid Beheshti University, TEHRAN, IRAN

- MSc, Software Eng., Thesis Title: “Image watermarking in Frequency domain”, 2010 (**Best GPA in Department**)

Isfahan University of Technology, ISFAHAN, IRAN

- BSc, Software Eng., 2004

COMPUTER SKILLS

C#, C/C++, ADO.NET, Microsoft SQL Server, Deep learning (Caffe & MatConvNet), Matlab & Simulink

PUBLICATIONS

1. **Hossein Rahmani**, A. Mahmood, D. Huynh, A. Mian, “Histogram of Oriented Principal Components for Cross-View Action Recognition,” *IEEE Transactions on Pattern Analysis & Machine Intelligence (PAMI)*, 2016.
 - IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI) is the top ranking journal in the area of Computer Vision (impact factor=5.8). PAMI is also ranked number one among 209 Electrical Engineering titles according to the latest Journal Citation Reports.
2. **Hossein Rahmani**, A. Mian, “3D Action Recognition from Novel Viewpoints,” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016. (**Oral**)
 - International Conference on Computer Vision and Pattern Recognition (CVPR) is the top conference in the area of Computer Vision.
3. **Hossein Rahmani**, A. Mian, “Learning a Non-Linear Knowledge Transfer Model for Cross-View Action Recognition,” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.
 - International Conference on Computer Vision and Pattern Recognition (CVPR) is the top conference in the area of Computer Vision.
4. **Hossein Rahmani**, A. Mahmood, D. Huynh, A. Mian, “HOPC: Histogram of Oriented Principal Components of 3D Point Clouds for Action Recognition,” *European Conference on Computer Vision (ECCV)*, 2014.
 - European Conference on Computer Vision (ECCV) is among the second best conference in the area of Computer Vision.
5. **Hossein Rahmani**, A. Mahmood, D. Huynh, A. Mian, “Action classification with Locality-constrained Linear Coding,” *International Conference on Pattern Recognition (ICPR)*, 2014 (**Best Scientific Paper AWARD**).
6. **Hossein Rahmani**, A. Mian, Mubarak Shah, “Learning a deep model for human action recognition from novel viewpoints,” *Submitted to IEEE Transactions on Pattern Analysis & Machine Intelligence (PAMI)*, 2016 (<http://arxiv.org/abs/1602.00828>).
7. **Hossein Rahmani**, D. Huynh, A. Mahmood, A. Mian, “Discriminative Human Action Classification using Locality-Constrained Linear Coding,” *Pattern Recognition Letters (PRL)*, 2016 (**Invited paper from ICPR 2014**).
8. **Hossein Rahmani**, A. Mahmood, A. Mian, D. Huynh, “Real Time Action Recognition Using Histograms of Depth Gradients and Random Decision Forests,” *IEEE Winter Applications of Computer Vision (WACV)*, 2014.

9. **Hossein Rahmani**, M. R. Bonyadi, A. Momeni, M. E. Moghaddam, M. Abaspour, “Hardware Design of a New Genetic Based Disk Scheduling Method,” *Real-Time Systems*, 47(1), 2011.
10. **Hossein Rahmani**, M. M. Faghih, M. E. Moghaddam, “A New Real Time Disk-Scheduling Method Based on GSR Algorithm,” *Journal of Systems and Software*, 83(11), 2010.
11. M. R. Bonyadi, **Hossein Rahmani**, M. E. Moghaddam, “A Genetic Based Disk Scheduling Method to Decrease Makespan and Missed Tasks,” *Information Systems*, 35(7), 2010.
12. **Hossein Rahmani**, R. Mortezaei, M. E. Moghaddam, “A New Robust Watermarking Scheme to Increase Image Security,” *EURASIP Journal on Advances in Signal Processing*, 2010.
13. **Hossein Rahmani**, M. E. Moghaddam, “A Semi-Blind Robust Watermarking Scheme Based on Most Perceptually Important Region of Images,” *International Conference on Electronics and Information Engineering (ICEIE)*, 2010.
14. **Hossein Rahmani**, R. Mortezaei, M. E. Moghaddam, “A New Lossless Watermarking Scheme Based on DCT Coefficients,” *6th International Conference on Digital Content, Multimedia Technology and its Applications (IDC2010)*, 2010.
15. **Hossein Rahmani**, M. E. Moghaddam, “An Efficient Disk Scheduling Algorithm for Multimedia System Based on GSR Algorithm,” *IEEE International Advance Computing Conference (IACC)*, 2009.
16. **Hossein Rahmani**, S. Arshad, M. E. Moghaddam, “A Disk Scheduling Algorithm Based on ANT Colony Optimization,” *22nd International Conference on Parallel and Distributed Computing and Communication Systems (PDCCS)*, 2009.

HONORS, AWARDS AND RESEARCH FOUNDS

- **\$3000 Research Fund:** “Efficient Disk Scheduling Using Artificial Intelligence Techniques”, Shahid Beheshti University, G.C., Tehran, Iran, 2009.
- **\$10000 Research Fund:** “Image-based adult-content filtering”, Iranian Telecommunication Research Center, Tehran, Iran, 2010.
- **\$2000 Research Fund:** “A New Method to Detect Persian Sign Language Alphabets”, Shahid Beheshti University, G.C., Tehran, Iran, 2011
- **\$1500 Award:** Master Thesis, Awarded as one of the selected master thesis, Iranian Telecommunication Research Center, Tehran, Iran, 2010
- **Honor:** Ranked 1st among all M.Sc. students in Computer Engineering Department, Shahid Beheshti University, 2010.
- **\$29000 per Year, Award:** Scholarship for PhD Studies by The University of Western Australia, 2012.
- **2000 SEK, Award:** Best Scientific Paper Award, ICPR 2014, 2014.

- **\$2500, Award:** Conference Travel Award from the School of Computer Science and Software Engineering, University of Western Australia, 2015.
- **\$3000, Award:** Conference Travel Award from the School of Computer Science and Software Engineering, University of Western Australia, 2016.

RESEARCH EXPERIENCE

- **Computer Vision and Pattern Recognition**
 - **2012 to present:** Video Analysis, 3D Images and Videos, Human Activity Recognition, Event Localization, Deep Neural Networks
- **Image Processing**
 - **2008 to 2010:** Watermarking Algorithms in Combination with Fuzzy and AI-based Methods, Color Constancy under Uniform and Non-uniform Illuminations
 - **2009 to 2010:** Image understanding and classification
- **Scheduling Algorithms**
 - **2006 to 2011:** Real-time Disk Scheduling, Multimedia Disk Scheduling, Multi-processor Task Scheduling, and Job Shop Scheduling, Task Scheduling in Cloud Computing Systems
- **Artificial Intelligence and Applications**
 - **2007-2008:** Fuzzy Logic
 - **2008 to present:** Population-Based Optimization Algorithms: Genetic Algorithm, Ant Colony Optimization, and Particle Swarm Optimization

WORK EXPERIENCE

- **Postdoctoral Research Fellow**
 - **2016 to present:** School of Computer Science and Software Engineering, The University of Western Australia
- **Software Engineer**
 - **2006 to 2012:** Ashkan System Bushehr Company
 - **2004 to 2006:** Talash Rayaneh Hemmat Company

TEACHING EXPERIENCES

- ❖ **2008 to 2010:** Casual Lecturer in Azad University, Booshehr, Iran:
 - Algorithm design and foundations; Data Structures; Machine Language; Digital Design

Supervisor of several thesis including image processing (watermarking, color constancy), real-time disk scheduling, task scheduling
- ❖ **2004 to 2007:** Casual Lecturer in Azad University, Fars, Mamasani, Iran:
 - Algorithm design and foundations; Data Structures; Machine Language; Advanced computer programming (Pascal, C and C++); Databases

Supervisor of several thesis including real-time disk scheduling, task scheduling
- ❖ **2005 to 2007:** Casual Lecturer in Azad University, Fars, Kazeran, Iran:
 - Data Structures; Machine Language; Advanced computer programming (C and C++); Databases