Elmedin Selmanović

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EDUCATION

University of Warwick May 2009 – June 2013
Ph.D. in Engineering
Thesis: "Stereoscopic High Dynamic Range Imaging"

University of Buckingham - Sarajevo School of Science and Technology October 2004 – June 2008
B.Sc. in Computer Science
The Best Academic Performance Award

TEACHING EXPERIENCE

Assistant Professor, University of Sarajevo, Faculty of Science 2014 – current

Assistant Professor, International Burch University 2013 – 2014

Teaching Assistant, **University of Warwick** 2012 – 2013

Demonstrator, Sarajevo School of Science and Technology 2006 – 2008

WORK EXPERIENCE

Consultant, goHDR June 2012 – July 2013
- Developed rendering solution for industrial application

Research Assistant, University of Warwick April 2012 – June 2012
- Worked on developing HDR display technology

Research Assistant, University of Warwick November 2008 – April 2009
- Created 3D characters, assets and environment for the project *"Serious game for childhood obesity"*
- Developed virtual environment for the "*Interactive highly realistic virtual reality for analysis and management of paranoid thinking"* project

Software Engineer, Integrated Business Solutions June 2008 – November 2008
- Developed custom SAP programs using ABAP

IT Support, Sarajevo Graduate School of Business December 2006 – May 2008
- Maintaining computer network

PROJECT PARTICIPATION

COST Action IC1005: HDRi March 2014 – March 2015
- The digital capture, storage, transmission and display of real world lighting
- Participant

ORGANISATIONAL EFFORTS

Local Organising Committee Member March 2014

- HDRi 2014: Second International Conference and SME Workshop on HDR imaging

Local Organising Committee Member March 2014

- EU IC1005 Cost Action WG and MC semi-annual project meetings

GRANTS

Short Term Scientific Mission April 2014 – May 2014

- Awarded by: Management Committee of the COST Action IC1005
- Host institution: University of Warwick
- Topic: HDR Tile Visualisation

Short Term Scientific Mission January 2012 – January 2012

- Awarded by: Management Committee of the COST Action IC1005
- Host institution: Linkoping University
- Topic: Stereoscopic High Dynamic Range Imaging

SKILLS

Computer Languages: C, C++, C#, Java, Python, Matlab, ABAP, Mel-Script, JavaScript, PHP, SQL, HTML, CSS
APIs and Frameworks: DirectX, OpenCV, Android, Play, Node.js
Software: Maya, 3D Studio Max, MotionBuilder, Photoshop, Illustrator, After Effects, Nuke, Poser Pro, Unity, Latex, MS Office, Windows, Linux
Algorithm Implementations: SIFT, RANSAC, Optical Flow, Stereo Correspondence algorithms (Sum of Averaged Differences, Averaged Differences Census, Matching using graph cuts, Matching using belief propagation), Mean Shift Image Segmentation, Stereo Image Rectification, Poisson Image Editing, PatchMatch

INTERESTS

Computer vision, Stereo matching, High dynamic range imaging, Image and video compression, Object recognition, Serious games, GPGPU, Machine learning, Algorithms, Data Structures

PUBLICATIONS

K. Debattista, T. Bashford-Rogers, E. Selmanovic, R. Mukherjee, A. Chalmers, “Optimal exposure compression for high dynamic range content”, in *The Visual Computer*, vol. 31, 2015

M. R. Broome, E. Zányi, T. Hamborg, E. Selmanovic, S. Czanner, M. Birchwood, A. Chalmers, S. P. Singh, “A high-fidelity virtual environment for the study of paranoia”, in *Schizophrenia research and treatment*, 2013

L. P. Santos, J. Wood, E. Selmanovic, C. Harvey, K. Debattista and A. Chalmers, “Bespoke high-fidelity visualization of tiling”, in *HDRi 2013: First International Conference and SME Workshop on HDR Imaging* (short paper), 2013

E. Selmanovic, T. Bashford-Rogers, K. Debattista, and A. Chalmers, "Enabling Stereoscopic High Dynamic Range Video", in *Elsevier Signal Processing: Image Communication*, 2013

E. Selmanovic, K. Debattista, T. Bashford-Rogers, A. Chalmers, "Generating stereoscopic HDR images using HDR-LDR image pairs", in *ACM Transactions on Applied Perception (TAP)*, 2013

E. Selmanovic, K. Debattista, T. Bashford-Rogers, A. Chalmers, "Backwards Compatible JPEG Stereoscopic High Dynamic Range Imaging", in *Theory and Practice of Computer Graphics*, 2012

- Won the "Best Technical Student Paper" award.

S. Scarle, I. Dunwell, T. Bashford-Rogers, E. Selmanovic, K. Debattista, A. Chalmers, J. Powell and W. Robertson, "Complete Motion Control of a Serious Game against Obesity in Children", in *Games and Virtual Worlds for Serious Applications*, 2011.

E. Selmanovic, "Obesity in Children - A Serious Game", in *Proceedings of CESCG 2010: The 14th Central European Seminar on Computer Graphics*, 2010.

E. Zanyi, E. Selmanovic, M. Broome, S. Czanner, M. Birchwood, A. Chalmers and S. SINGH, "Interactive Highly Realistic Virtual Reality as a Tool for Understanding the Genesis and Treatment of Psychotic Symptoms", in *Studies in health technology and informatics*, vol. 144, p. 138, 2009.

INVITED/KEYNOTE SPEECHES

Keynote Speaker, HDRi 2014: Second International Conference and SME Workshop on HDR imaging

- Topic: Stereoscopic High Dynamic Range Imaging

REVIEWER

EURASIP Journal on Image and Video Processing	2015
Elsevier Computers & Graphics Journal	2014
Elsevier Computers & Graphics Journal	2013
2nd International Conference on Serious Games and Applications for Health, SeGAH 2013	2013
Eurographics	2011