Zeinab Sadeghipour

MetaOptima Technology Inc.
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Research Interests

⋄ Computer Graphics, Geometry Modeling, Image Processing, Machine Learning

Education

⋄ **M.Sc. in Computer Science**   Sept. 2014 – June 2016
School of Computing Science
Simon Fraser University, Burnaby, BC, Canada
SUPERVISOR: Prof. Hao (Richard) Zhang
GPA: 3.8/4.0

⋄ **B.Sc. in Information Technology Engineering**   Sept. 2010 – June 2014
Department of Computer Engineering
Sharif University of Technology, Tehran, Iran
SUPERVISOR: Prof. Mansour Jamzad
GPA: 17.91/20

Publications

⋄ **Learning 3D Scene Synthesis from Annotated RGB-D Images**
Zeinab Sadeghipour Kermani, Zicheng Liao, Ping Tan, and Hao Zhang.
Computer Graphics Forum (Special Issue of SGP), Vol. 35, No. 5, pp. 197–206, 2016.

Research Experience

⋄ **Research Assistant** at *Graphics and Vision Lab*   Sept. 2014 – Aug. 2016

> M.Sc. Thesis Project: Developing a method to enrich 3D indoor scene data, based on a model learned from real-world RGB-D images, in spite of existing approaches which employ user-designed 3D scenes.

⋄ **Research Assistant** at *Image Processing Lab*   Sept. 2013 – June 2014

> B.Sc. Thesis Project: Worked on a semi-fragile and blind watermarking technique for 3D meshes, which also achieves robustness against translation, rotation and scaling through using Laplacian coordinates and Quantization Index Modulation.

Work Experience

⋄ **3D Imaging Engineer,** MetaOptima Technology Inc.   July 2016 – present

  ⋄ Working as part of the R&D team to research and develop algorithms for 3D image acquisition, visualization, and manipulation tasks.

⋄ **Teaching Assistant,** Simon Fraser University

  ⋄ Multimedia Systems   Spring 2016
  ⋄ Introduction to the Internet and Web Programming   Summer 2015

⋄ **Teaching Assistant,** Sharif University of Technology

  ⋄ Multimedia Systems   Spring 2014
  ⋄ Signals and Systems   Spring 2013, Fall 2013
  ⋄ Programming Courses (Java, C++)   Fall 2012, Fall 2011

Academic Projects

◇ **Mesh Cutting with Semi-Automatic Rotation**   Spring 2015
Developed a mesh cutting tool to assist the user to draw the boundary of segmentation with semi-automatic rotation, using OpenGL.

◇ **Removing Shadows from Images**   Spring 2015
Improved an existing algorithm to recover a 2D chromaticity intrinsic variation of a single RGB image without any prior knowledge about the camera, using MATLAB.

◇ **A Legibility Classifier for Deformed Letters**   Fall 2014 – Spring 2015
Designed and conducted a crowdsourcing user study with Amazon Mechanical Turk to gather legibility scores for deformed letters from the English alphabet, and built a classifier to determine the legibility score for a specific deformed letter shape, using MATLAB.

◇ **Adaptive Homogeneity-Directed Demosaicing**   Spring 2013
Implemented a demosaicing algorithm for addressing color artifacts by applying filterbank techniques to 2D directional interpolation in a nonlinear iterative procedure, using MATLAB.

Related Courses

◇ **Simon Fraser University**

    ◇ Advanced Topics in Geometric Modeling and Optimization
    ◇ Geometric Modeling in Computer Graphics
    ◇ Illumination in Images and Videos
    ◇ Machine Learning
    ◇ Design and Analysis of Algorithms

◇ **Sharif University of Technology**

    ◇ 3D Computer Vision
    ◇ Multimedia Systems
    ◇ Digital Image Processing
    ◇ Signals and Systems

Technical Skills

◇ **Programming:** C/C++, Java, MATLAB, OpenGL, Python, MySQL, iOS programming

◇ **Web Programming:** WebGL, Three.js, HTML, CSS, Javascript, Django, PHP

◇ **Tools:** Visual Studio, Eclipse, Git

◇ **Operating Systems:** Windows, Linux, Mac

Honors and Awards

◇ Was admitted to participate in CRA-Women Grad Cohort Workshop   Jan. 2016

◇ Received Travel award at Simon Fraser University to attend The Canadian Celebration of Women in Computing conference   Dec. 2015

◇ Received Graduate Fellowship award at Simon Fraser University   Sept. 2015

◇ Received Entrance Scholarship award at Simon Fraser University   Jan. 2015

Volunteer Activities

◇ **Women in Tech Panel Moderator**, Try/CATCH, Simon Fraser University   May 2016

◇ **Member of Women in Computing Science**, Simon Fraser University   since Fall 2015

◇ **Executive Staff**, 12th and 15th ACM-ICPC Asia Tehran Regional   Dec. 2010, Dec. 2013