Abdullah Bulbul

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Post-Doctoral Research
UC Berkeley, School of Optometry, Berkeley, CA 2012 - ...
Marty Banks' Lab
Vision Science

Ph.D.
Bilkent University, Faculty of Engineering, Ankara, Turkey 2007 - 2012
Department of Computer Engineering
Scholarship awarded by TUBITAK
Supervisor: Asst. Prof. Tolga Capin
CGPA = 3.67 / 4.00

B.S.
Bilkent University, Faculty of Engineering, Ankara, Turkey 2003 - 2007
Department of Computer Engineering
Full scholarship awarded by Bilkent University
CGPA = 3.55 / 4.00

Areas of Interest
Computer Graphics
Perception in Computer Graphics
Visual Attention
Depth Perception
3D Displays
Mobile Computer Graphics
Human Computer Interaction

Experience
Post-Doctoral researcher, University of California, Berkeley 2012-current
Research assistant, ALGI, Perceptually Aware 3-D Computer Graphics 2010-2012
Research assistant, 3D-Phone, EU 7th Framework Project 2007-2011
Teaching assistant, Bilkent University 2007-2012
- Algorithms and Programming I & II
- Computer Graphics I

Summer trainee, T.C. Merkez Bankasi Summer 2006
Summer trainee, Mobiliz Bilgi ve İletişim Teknolojileri A.Ş. Summer 2006

Computer Skills
C, C++, Java, Matlab, SQL, OpenGL, PHP, GLSL (Advance)
Assembly, Verilog, C# (Beginner)

Awards and Honors
3 semesters for High Honor student, 4 semesters for Honor student 2003-2007
Member of winner team: SoftwareQuest, CS102 Project 2004
Ranked 67th in National University Entrance Examination
in quantitative (among 1.5 million attendees) 2003

Languages
Turkish (Native), English (Advance), German (Beginner), Arabic (Beginner)

Projects

Perception of Surface Materials 2013-2014
The effects of accommodation, binocular vision, and motion parallax on material perception are investigated. Volumetric multi-plane display is used to provide correct focal cues.

Optimized rendering for Multi-plane Volumetric Displays 2013
A rendering method enabling near-correct presentation of occlusions, reflections, and blur on multi-plane volumetric displays.

3DPhone: All 3D Imaging Phone 2008-2010
A project under EU's 7th framework program. We have developed a mobile device prototype to increase mobile 3D experience. I was responsible for development of 3D rendering system and applications and research about 3D interaction methods and depth perception. Collaborators: Billkent University, Holografika, Telefonica, TAT, Fraunhofer, and Helsinki University

ALGI: Perceptually Aware Computer Graphics 2011-2012
A research projecy funded by TUBITAK (Scientific and Technological Research Council of Turkey). I have mainly worked on determining the visually important regions in a 3D scene and utilizing this information for various computer graphics applications like mesh simplification, artistic rendering, and stereoscopic rendering optimization

Journal Publications

1. Rahul Narain, Rachel Albert, **Abdullah Bulbul**, James F. O'Brien, Gregory Ward, Martin Banks, "Optimal Presentation of Imagery with Focus Cues on Multi-Plane Displays", In Preparation.
2. **Abdullah Bulbul**, Sami Arpa, Tolga Capin, 'A Clustering-Based Method to Estimate Saliency in 3D Animated Meshes", *Computers & Graphics*, to appear, 2014.
3. Zeynep Cipiloglu, **Abdullah Bulbul**, Tolga Capin, "A Framework for Applying the Principles of Depth Perception to Information Visualization", *ACM Transactions on Applied Perception*, 10-4, art.n.19, 2013.
4. Sami Arpa, **Abdullah Bulbul**, Tolga Capin, Bulent Ozguc, "Perceptual 3D Rendering based on Principles of Cubism", *Computers & Graphics*, 36-8, p.991-1004, 2012.
5. **Abdullah Bulbul**, Tolga Capin, Guillaume Lavoué, Marius Preda, "Assessing Visual Quality of 3-D Polygonal Models", *IEEE Signal Processing Magazine*, 28-6, p.80-90, 2011.
6. **Abdullah Bulbul**, Zeynep Cipiloglu, Tolga Capin, "A Color-Based Face Tracking Algorithm for Enhancing Interaction with Mobile Devices", *The Visual Computer*, 26-5, p.311-323, 2010.
7. **Abdullah Bulbul**, Zeynep Cipiloglu, Tolga Capin, "A Perceptual Approach for Stereoscopic Rendering Optimization", *Computers & Graphics*, 34-2, p.145-157, 2010.

Conference Publications

1. Martin Banks, **Abdullah Bulbul**, Marina Zannoli, Rachel A Albert, Rahul Narain, James F OBrien, Gregory Ward "The Perception of Surface Material from Disparity and Focus Cues", Annual Meeting of Vision Sciences Society, 2014.
2. Rachel A. Albert, Marina Zannoli, **Abdullah Bulbul**, Rahul Narain, James F. OBrien, Martin Banks, "Can 3D Shape be Estimated from Focus Cues Alone?", Annual Meeting of Vision Sciences Society, 2014.

3. Marina Zannoli, Rachel A. Albert, **Abdullah Bulbul**, Rahul Narain, James F. OBrien, Martin Banks, "Correct blur and accommodation information is a reliable cue to depth ordering", Annual Meeting of Vision Sciences Society, 2014.
4. Gokcen Cimen, **Abdullah Bulbul**, Bulent Ozguc, Tolga Capin, "Perceptual Caricaturization of 3D Models", Computer and Information Sciences III, (Proceedings of ISCIS 2012), 201-207, 2013.
5. Sami Arpa, **Abdullah Bulbul**, Tolga Capin, "A Decision Theoretic Approach to Motion Saliency in Computer Animations", *Motion in Games Lecture Notes in Computer Science*, Volume 7060/2011, 168-179, 2011.
6. **Abdullah Bulbul**, Cetin Koca, Tolga Capin, Ugur Gudukbay, "Saliency for Animated Meshes with Material Properties", *Proceedings of the APGV'10*, 2010.
7. Zeynep Cipiloglu, **Abdullah Bulbul**, Tolga Capin, "A Framework for Enhancing Depth Perception in Computer Graphics", *Proceedings of the APGV'10*, 2010.
8. **Abdullah Bulbul**, Zeynep Cipiloglu, Tolga Capin, "A Face Tracking Algorithm for User Interaction in Mobile Devices", *Cyberworlds*, 2009
9. **Abdullah Bulbul**, Onur Kucuktunc, Bulent Ozguc, "Animation of Boiling Phenomena", *Proceedings of 3DTV-CON*, May 2008, IEEE Xplore Electronic Publications, Istanbul, Turkey, 2008.

References

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