# Abdullah Bulbul

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Education

Bilkent University, Faculty of Engineering, Ankara, Turkey

2007 - ...

Department of Computer Engineering, Ph.D.

Scholarship awarded by TUBITAK Supervisor: Asst. Prof. Tolga Capin

CGPA = 3.61 / 4.00

Bilkent University, Faculty of Engineering, Ankara, Turkey

2003 - 2007

Department of Computer Engineering, B.S. Full scholarship awarded by Bilkent University

CGPA = 3.55 / 4.00

 $\begin{array}{c} \textbf{Research} \\ \textbf{Interests} \end{array}$ 

Perception in Computer Graphics Visual Attention and Saliency

Depth Perception

Mobile Computer Graphics

# Journal Publications

- 1. **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.
- 2. **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.
- 3. **Abdullah Bulbul**, Zeynep Cipiloglu, Tolga Capin, "A Perceptual Approach for Stereoscopic Rendering Optimization", *Computers & Graphics*, 34-2, p.145-157, 2010.

# Conference Publications

- 1. 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.
- 2. **Abdullah Bulbul**, Cetin Koca, Tolga Capin, Ugur Gudukbay, "Saliency for Animated Meshes with Material Properties", *Proceedings of the APGV'10*, 2010.
- 3. Zeynep Cipiloglu, **Abdullah Bulbul**, Tolga Capin, "A Framework for Enhancing Depth Perception in Computer Graphics", *Proceedings of the APGV'10*, 2010.
- 4. **Abdullah Bulbul**, Zeynep Cipiloglu, Tolga Capin, "A Face Tracking Algorithm for User Interaction in Mobile Devices", *Cyberworlds*, 2009
- Abdullah Bulbul, Onur Kucuktunc, Bulent Ozguc, "Animation of Boiling Phenomena", Proceedings of 3DTV-CON, May 2008, IEEE Xplore Electronic Publications, Istanbul, Turkey, 2008.

#### **Pending Patents**

1. Provisional Patent Application, Systems, Devices, and/or Methods for Managing Rendering, Abdullah Bulbul, Zeynep Cipiloglu, Tolga Capin, (pending, filed 2009)

#### Experience

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

- Algorithms and Programming II
- Algorithms and Programming I
- Computer Graphics I

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

## 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 2003

# Completed Projects

# Perceptual Refinement of 3D User Interfaces

Spring 2009

User Interface Design course project, refinement of 3D UI scenes to enhance depth perception.

#### **Shooting Range Simulation**

Fall 2008

Modeling and Simulation course project, simulation of shooting a humanoid character with respect to ragdoll physics techniques.

#### Face Tracking for Mobile Devices

Fall 2008

Mobile and Ubiquitous Graphics course project, a face tracking algorithm for direct manipulation in mobile devices.

## Dynamic Convex Hull in 3D

Spring 2008

Computational Geometry course project, an efficient implementation of dynamic convex hull construction in 3D.

# Saliency Computation for Animated Meshes

Fall 2007

Computer Animation course project, proposed a new metric for computing saliency of 3D animated meshes using geometric and motional properties.

#### Bombing Event Analyzer from News

Fall 2007

 $\operatorname{NLP}$  course project, information extraction and categorization of bombing event-related news.

# Animation of Boiling Phenomena

Fall 2007

Applications of Computer Graphics project, presented an efficient method for the simulation of boiling water.

# Various Approaches to Traveling Salesman Problem

2006 - 2007

Senior design project, optimized algorithms for solving TSP. Different algorithms such as genetic, branch & bound, etc. can be run in parallel and evaluated.

#### Computer Skills

C, C++, Java, Matlab, SQL, OpenGL, PHP (Advance)

Assembly, Verilog, C# (Beginner)

## Languages

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

#### References

Available upon request