ATEŞ AKAYDIN

CONTACT INFORMATION

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PERSONAL INFORMATION

Birth Date: 6 May 1985
Marital Status: Married
Military Status: Fulfilled
Driving License: B Class (18 October 2004)

EDUCATION

- Ph.D., Computer Engineering, Bilkent University, Sept. 2010 - Onwards
  - GPA: **3.53 / 4.00**
  - Research Topic: Interactive Crowd Simulation for Augmented Reality Environments
  - Academic Advisor: Professor Uğur Güdükbay

- M.S., Computer Engineering, Bilkent University, Sept. 2007 - Sept. 2010
  - GPA: **3.79 / 4.00**
  - Thesis Topic: Visualization of Human Crowds in Urban Environments
  - Academic Advisor: Professor Uğur Güdükbay

- B.S., Computer Engineering, Bilkent University, Sept. 2003 - May 2007
  - GPA: **3.14 / 4.00**, *Honor Degree*
  - Senior Project: Feature Based Classification and Retrieval in Multi-Modal Datasets
  - Project Supervisor: Asst. Professor Selim Aksoy
  - Academic Advisor: Assoc. Professor Uğur Güdükbay

PROFESSIONAL EXPERIENCE

- **An Augmented Reality Environment for Interactive Crowd Simulation - TÜBİTAK Project (Grant No: 112E110)**, Bilkent University, Ankara, Turkey **September 2012 - September 2015**
  Worked as a researcher on developing methods for real-time interactive simulations in Augmented Reality environments.
- **Meteksan Defence Industry Inc.**, Bilkent University - Cyberpark, Ankara, Turkey **October 2009 - February 2011**
  Employed as a Software Engineer in Simulations and Applications Software Department. I was assigned to the DEHOS(Naval War Game Simulation System) project. Project was developed for Turkish Naval Forces Command.

- **Developing an Urban Visualization System for Virtual Environments using Computer Graphics - TÜBİTAK Project (Grant No: 104E029)**, Bilkent University, Ankara, Turkey **July 2007 - September 2009**
  Worked as a researcher on developing methods for simulating large scale crowds in virtual urban environments.
- **Retina Research Project**, Retina Vision & Learning Group, Bilkent University - Deparment of Computer Science, Ankara, Turkey **June 2006 - August 2006**
  Summer Intern for research and development of a system for Content-Based Classification and Retrieval of Images and Videos. Supervised by Asst. Professor Selim Aksoy and Asst. Professor Pınar Duygulu Şahin.

- **Smartsoft Information Technologies Ltd.**, Bilkent University - Cyberpark, Ankara, Turkey **June 2006 - July 2006**
  Summer Intern for developing an Online Turkish Educational Dictionary.

- **BOTT Information Systems Ltd.**, Middle East Technical University(METU) - Technopolis, Ankara, Turkey **June 2005 - July 2005**
  Summer Intern for developing an interactive database management system for recipients of governmental support in the city of Kayseri(A part of Nationwide E-State Project).

Research Interests

Augmented Reality, Virtual Reality, Crowd and Flock Simulation, Robot Locomotion & Motion Planning, Physically-Based Modeling and Simulation

Journal & Conference Papers

- Aytek Aman, Ateş Akaydın, Uğur Güdükbay. "Interacting with Boids in an Incompressible Fluid Environment", In Proceedings of International Computer Graphics, Animation and Gaming Technologies (EURASIA GRAPHICS 2014), Ankara, Turkey, October 2014.
- Aytek Aman, Ateş Akaydın, Uğur Güdükbay. "Interactive Crowd Simulation on Mobile Devices in an Augmented Reality Environment", 27th Int. Conf on Computer Animation and Social Agents, May 26-28, 2014, Houston, Texas, U.S.A.
- Ateş Akaydın, Aytek Aman, Uğur Güdükbay. "Interactive Crowd Simulation for Augmented Reality Environments", 26th Int. Conf. on Computer Animation and Social Agents, May 16-18, 2013, İstanbul, Turkey.
- Ateş Akaydın, Uğur Güdükbay, "Adaptive Grids: An Image-based Approach to Generate Navigation Meshes", Optical Engineering, Vol. 52, No. 2, Article No. 027002, 12 pages, February 2013.
- Oğuzcan Oğuz, Ateş Akaydın, Türker Yılmaz, Uğur Güdükbay, "Emergency Crowd Simulation for Outdoor Environments", Computers & Graphics(An International Journal of Systems & Applications in Computer Graphics). Volume 34, Issue 2, April 2010, Pages 136-144.

Skills & Activities

- **Programming Skills:** C, C++, C#, Java, Javascript, PHP, HTML, MATLAB, Compute Unified Device Architecture(CUDA)
- **Shading Languages:** OpenGL Shading Language(GLSL), Nvidia C for Graphics(Cg)
- **Frameworks & Libraries:** Open Graphics Library(OpenGL), Unity3d Game Engine, Qt C++ Framework, Open Source Graphics Engine(Ogre3d)
- **Modeling & Visualization Tools:** 3D Studio Max(Intermediate), Maya(Basic)
- **Operating Systems:** Linux, Windows
- **Databases:** MySql, SqLite
- **Spoken Languages:** Turkish (Native), English (Advanced)
- **Extracurricular Activities:** Swimming, Piano, Kendo

Awards and Achievements

- 2012 - 2015 Graduate Scholarship, *An Augmented Reality Environment for Interactive Crowd Simulation - Grant No: 112E110*, TÜBİTAK (The Scientific and Technological Research Counsel of Turkey)
- 2007 - 2008 Graduate Scholarship, *Developing an Urban Visualization System for Virtual Environments using Computer Graphics - Grant No: 104E029*, TÜBİTAK (The Scientific and Technological Research Counsel of Turkey)
- 2003 - 2007 Bilkent University Honor Student

Teaching Experience

- **Teaching Assistantship**
  CS465 - Computer Graphics I; CS201 - Fundamental Structures of Computer Science I; CS281 - Computers and Data Organization; CS101/102 - Algorithms and Programming

Courses Taken

- **Selected Graduate Courses**
  Real-Time 3D Graphics and Game Programming; Computer Animation; Applications of Computer Graphics; Advanced Topics in Computer Graphics; Computational Geometry; 3D User Interfaces; Robot Motion, Control and Planning; Dynamics; Mathematical Techniques in Mechanical Engineering; Finite Element Methods; Fluid Mechanics; Computer Vision; Pattern Recognition; Chip Multiprocessors.

- **Undergraduate Elective Courses**
  Computer Graphics I; Computer Graphics II; Artificial Intelligence; Image Analysis; Numerical Methods

Test Scores

- Oct. 2008 TOEFL IBT Score: 104 (Reading:29, Listening:26, Writing:27, Speaking:22)

References

- Prof. Dr. Uğur Güdükbay, Bilkent University, Dept. of Computer Eng.
  Office: EA 403, Phone: +90 (312) 290 1386
  E-Mail: gudukbay@cs.bilkent.edu.tr
- Assoc. Prof. Dr. Tolga Çapın, TED University, Dept. of Computer Eng.
  Department Chair, Phone: +90 (312) 585 0000
  E-Mail: tolga.capin@tedu.edu.tr