

# HALE ERTEN

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## SUMMARY

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Recent Ph.D. graduate in Computer Science with research interests as algorithms, computational geometry and in particular mesh generation. Author of the licensed quality triangulation software aCute. Experienced in developing different kinds of software, especially the ones related to challenging computational geometry problems. Innovative problem solver who demonstrated ability to acquire technical knowledge and skills rapidly. Exceptional academic achievements and strong leadership/organization skills.

## EDUCATION

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**University of Florida** Gainesville, FL  
Department of Computer and Information Sciences & Engineering 2005 - Expected December 2009  
PhD Candidate; current GPA of 4.00/4.00  
Advisor: Dr. Alper Üngör  
Successfully Defended Dissertation Title: Premium Quality Steiner Triangulations

**University of Florida** Gainesville, FL  
Department of Computer and Information Sciences & Engineering 2005 - 2008  
Non-Thesis M.S. Degree received, GPA of 4.00/4.00

**Bogazici University** Istanbul, Turkey  
Department of Computer Engineering 2000 - 2005  
B.S. degree, GPA of 3.67/4.00; graduated at 3<sup>rd</sup> place

## COMPUTER SKILLS

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**Languages:** C, C++, Fortran, Java, Perl, Assembly, ProLog, Scheme, C#, Korn Shell Scripting, BASH Shell Scripting, RPAL, OpenGL

**Web Technologies:** HTML, XML, ASP.NET, CGI, VBScript, JavaScript, PHP

**Operating Systems:** MS-DOS, Windows 98/2k/Xp/2003 Server, Unix/Linux OS, Solaris

**Others:** MS Office(Excel, Word, PowerPoint, Visio, Access), SQL Server, Microsoft Visual Studio, MATLAB, Arena, L<sup>A</sup>T<sub>E</sub>X, Xlinux, PostGreSql Server, MPich, TORA, ORACLE, MySQL

## WORK EXPERIENCE

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**Research Assistant** August 2008 - Present  
CISE University of Florida May 2006 - January 2007  
Gainesville, FL

- Mesh generation and triangulation related projects.

**Teaching Assistant** August 2005 - May 2009  
CISE University of Florida Gainesville, FL

- Software Engineering (discussion leader)
- Applications of Discrete Structures (discussion leader)
- Introduction to Programming in Java
- Analysis of Algorithms (graduate level)
- Advanced Programming in Java
- Introduction to Programming in C

**Research Assistant** February 2008 - May 2008  
Anesthesiology Department University of Florida Gainesville, FL

- MATLAB-based project related to detecting blood vessels on medical video data.

**Software & Database Specialist** March 2007 - April 2007  
OACR University of Florida Gainesville, FL

- Online survey system (CAT)
  - Implemented/modified in HTML, Perl/CGI languages to be used by more than 250 departments.
  - Upon completion, Access database was designed and necessary queries were created for data processing.
  - Sample reports and charts were created as part of the final data compilation.

## INTERNSHIP EXPERIENCE

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**SolidWorks Corporation** May/June/July/August 2008  
**3D Mechanical Design and 3D CAD Software** Concord, MA

- 3D mesh generation (for solid bodies).
  - Worked on developing a new algorithm for 3D mesh generation feature of SolidWorks.
  - Completed the necessary preliminary research and development work.
  - The project aimed to create high quality mesh elements quickly and in parallel.

**Sandia National Laboratories** May/June/July 2007  
**Computer Science Research Institute (CSRI)** Albuquerque, NM

- Mesh generation and optimization for domains with curved boundaries.
  - Literature survey on mesh generation and optimization for domains with curved boundaries.
  - Theoric-based algorithms have been implemented in C++ language.
  - A short paper on the work for Proceedings of Sandia National Laboratories.

**Turkcell Communication Services**

- Database operations in a large datawarehouse.
  - Wrote Unix Shell Scripts and C programs for updating database tables by the help of SqlPlus.
  - Implemented some Procedures and Triggers on TOAD for certain operations onto the tables.

July/August 2004

**Microsoft Corporation**

- Microsoft Summer School Program 2004.
  - Worked on Windows 2003 Server for implementation and management of network services in a real system.
  - Wrote applications on MS SQL Server 2003 and completed a web portal on MS Visual Studio 2005 in C#

January/February 2004

**Veripark A. S.**

- Automation project.
  - Designed and improved user interfaces for an existing intranet project.
  - Constructed technical notes about the use cases in the project.

Istanbul, Turkey

**PUBLICATIONS/TALKS**

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**Talks**Hale Erten, *Premium Quality Steiner Triangulations*, Intel Corporation, Lithography Group, September 2009.**Journal Papers**Hale Erten, Alper Üngör, *Computing Triangulations without Small and Large Angles*, Applied Numerical Mathematics, submitted 2009.Hale Erten, Alper Üngör, *Quality Triangulations with Locally Optimal Steiner Points*, SIAM Journal of Scientific Computing, 31:3 (2008), pp. 2103-2130.**Conferences/Workshops**Hale Erten, Alper Üngör, Chunchun Zhao, *Mesh Smoothing Algorithms for Complex Geometric Domains*, in Proceedings of the 18<sup>th</sup> International Meshing Roundtable, Salt Lake City, UT, October 2009.Hale Erten, Alper Üngör, *Computing Triangulations with No Small No Large Angles*, in Proceedings of the 6<sup>th</sup> International Symposium on Voronoi Diagrams, Copenhagen, Denmark, June 2009.Hale Erten, P. M. Knupp, *Mesh Optimization for Curved Domains with Target-Matrix Paradigm*, in CSRI Summer Proceedings, Sandia National Laboratories, Albuquerque, NM, December 2007, pp. 166-175.Hale Erten, Alper Üngör, *Computing Acute and Non-obtuse Triangulations*, in Proceedings of the 19<sup>th</sup> Canadian Conference on Computational Geometry, Ottawa, Canada, August 2007, pp. 205-208.Cem Boyacı, Hale Erten, Alper Üngör, *Triangulations Loosing Bundles and Weight*, in Proceedings of the 19<sup>th</sup> Canadian Conference on Computational Geometry, Ottawa, Canada, August 2007, pp. 201-204.Hale Erten, Alper Üngör, *Triangulations with Locally Optimal Steiner Points*, in Proceedings of the Eurographics Symposium on Geometry Processing, Barcelona, Spain, July 2007, pp. 143-152.Hale Erten, Alper Üngör, *On Computing Meshes with Large Smallest Angles*, in Proceedings of the 16<sup>th</sup> Fall Workshop on Computational and Combinatorial Geometry, Smith College, Northampton, MA, November 2006.**HONORS/AWARDS/LICENSES**

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**Licensee**

- aCute: A Premium Quality Meshing Software, a University of Florida licensed product, 2009.

**Recipient**

- RGP Travel Grant, Office of Research and Graduate Programs, University of Florida, 2009.
- CISE Travel Grant, Department of Computer & Information Science & Engineering, University of Florida, 2009.
- Grace Hopper Celebration of Women in Computing Full NSF Scholarship, 2009.
- CRA-W Career Mentoring Workshop Scholarship, 2009.
- Certificate of Appreciation for the Outstanding Contribution to the Success of the Bi-annual CISE Career Development Workshop, Department of Computer & Information Science & Engineering, University of Florida, Fall 2008 and Spring 2009.
- Certificate of Achievement for Outstanding Academic Accomplishment, University of Florida International Center, 2006 and 2007.
- Admitted to Ph.D. program with a Full Assistantship in Department of Computer & Information Science & Engineering, University of Florida, 2005.
- Ranked 3<sup>rd</sup> place, Department of Computer Engineering, Bogazici University, 2005.
- Graduated as a High Honor Student from Bogazici University, 2005.

**Participant**

- Selected for participating competitions as a member of High School Math Team for Turkish Math Olympics, 1999.

**LEADERSHIP/MEMBERSHIP ACTIVITIES**

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**Vice President**

University of Florida ASCIE: Association of Graduate Students in Computer Info. &amp; Sci. and Eng. 2008 - Present

University of Florida TSA: Turkish Student Association 2006 - 2007

**Founder Member** 2005**Member** IEEE Women in Engineering Branch Bogazici University, Turkey

IEEE, Institute of Electrical and Electronics Engineers 2001 - 2005

School Handball Team and National Folk Dance Group (Ranked 2<sup>nd</sup> place in Regional Championships)**REFERENCES**

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Available upon request.