

Ali Kemal Sinop

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- EDUCATION
- ◇ **Carnegie Mellon University**, Pittsburgh, PA.
Ph.D. in Computer Science, in progress. August 2007 - Present.
 - ◇ **University of Pennsylvania**, Philadelphia, PA.
M.S.E. in Computer and Information Science, September 2004 - August 2005.
CGPA: 3.92/4.00.
 - ◇ **Bilkent University**, Turkey.
B.Sc. in Computer Engineering, September 2000 - June 2004.
CGPA: 3.95/4.00 (Major: 4.00/4.00).
Ranking: 2/100+.
- RESEARCH INTERESTS
- ◇ Combinatorial optimization and spectral graph theory with applications to computer vision and machine learning.
- CONFERENCE PUBLICATIONS
- ◇ L. Grady, **A.K. Sinop**, “Fast Approximate Random Walker Segmentation Using Eigenvector Precomputation,” to appear in Computer Vision and Pattern Recognition '2008.
 - ◇ **A.K. Sinop**, L. Grady, “A Seeded Image Segmentation Framework Unifying Graph Cuts And Random Walker Which Yields A New Algorithm,” in Proceedings of IEEE International Conference on Computer Vision '2007, (accepted for oral presentation, acceptance rate < 4%).
 - ◇ **A.K. Sinop**, L. Grady, “Uninitialized, Globally Optimal, Graph-Based Rectilinear Shape Segmentation — The Opposing Metrics Method,” in Proceedings of IEEE International Conference on Computer Vision '2007.
 - ◇ **A.K. Sinop**, L. Grady, “Accurate Banded Graph Cut Segmentation of Thin Structures Using Laplacian Pyramids,” Proceedings of *Medical Image Computing and Computer-Assisted Intervention '2006*, vol. 2, pp. 869-903 (2006).
- JOURNAL PUBLICATIONS
- ◇ **A.K. Sinop**, T. Abacı, Ü. Akkuş, A. Gürsoy, U. Gündükbay, “PHR: A Parallel Hierarchical Radiosity System with Dynamic Load Balancing,” *Journal of Supercomputing*, vol. 31, pp. 249-263 (2005).
 - ◇ E. Şaykol, **A.K. Sinop**, U. Gündükbay, Ö. Ulusoy, E. Çetin, “Content-Based Retrieval of Historical Ottoman Documents Stored as Textual Images,” *IEEE Transactions on Image Processing*, vol. 13, pp. 314-325 (2004).
- COMPUTER SKILLS
- Programming in MATLAB, Java, C, C++, x86 Assembly, MIPS Assembly, Pascal, MPI, OpenGL, OpenCV, Lisp. Proficient with Windows, Linux.
- WORK EXPERIENCE
- ◇ **Siemens Corporate Research**, Princeton, NJ.
Technical Associate, September 2005 - August 2007. Research projects done:
 - Developed a new, robust, alias-free reconstruction method for parallel Magnetic Resonance images (patent pending.)

- Developed an uninitialized, fully automatic segmentation method for identifying lesion tumors.
- Developed a common framework which combines three segmentation algorithms; graph cut, random walk and weighted shortest distance, which allows for combination of these algorithms (patent pending, paper will appear in ICCV'2007.)
- Developed an uninitialized, globally optimal graph based rectilinear shape segmentation method (patent pending, paper will appear in ICCV'2007.)
- Developed methods for decreasing the time and memory consumption of minimum graph cut segmentation algorithms on images and volumes preserving segmentation accuracy as much as possible (patent pending, paper appeared in MICCAI'2006.)

- SCHOLARSHIPS AND AWARDS
- ◇ Awarded Fellowship from Carnegie Mellon University, School of Computer Science, Computer Science Department, 2007-2008.
 - ◇ Awarded University of Pennsylvania Dean's Fellowship which includes stipend and tuition, 2004-2005.
 - ◇ Awarded Bilkent University Full Scholarship which includes stipend and tuition, 2000-2004.
 - ◇ Awarded TÜBİTAK (National Science and Technology Council of Turkey) Scholarship for Success in Informatics Olympiads which includes stipend, 2000-2004.
 - ◇ Represented Turkey in 11th International Olympiads in Informatics, Antalya, Turkey, 1999.
 - ◇ Won Bronze Medal in 7th Balkan Olympiads in Informatics, Ioanina, Greece, 1999.
 - ◇ Won Silver Medal in 6th TÜBİTAK (National Science and Technology Council of Turkey) National Olympiads in Informatics, Ankara, Turkey, 1998.

- PROFESSIONAL ACTIVITIES
- ◇ Reviewer for: IEEE Transactions on Pattern Analysis and Machine Intelligence.