
Serhat Selçuk BUCAK

Curriculum Vitae

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Education

- **Michigan State University** (Sept. 2008 to present)
PhD candidate in Computer Science
COURSEWORK: Computer Vision, Data Mining, Machine Learning, Recognition by Machine, Designs & Theory of Algorithms, Advanced Computer Networks and Communications
- **Istanbul Technical University** (Sept. 2006 – June 2008)
MSc. in Electronics and Communication Engineering (GPA: 3.83/4.00)
COURSEWORK: Pattern Recognition, Video Processing, Detection and Estimation Theory, Probability and stochastic Processes, Digital Communication Theory, Information Theory, Statistical Signal Processing, Numerical Methods in Optimization
- **Istanbul Technical University** (Sept. 2002 – June 2006)
BSc in Electronics and Communication Engineering (GPA: 3.24/4.00)

Awards and Fellowships

- Google scholar award for ICCV 2009 (JPY 50,000)
- Ranked in the top 50 (17th and 49th) among 105,500 applicants twice in the Turkish Nationwide Graduate Education Exam (2005 and 2007)
- Michigan State University FS08 Fellowship (2008, \$2,000)
- Inanc High School full scholarship (1995-2002, \$84,000)
- TUBITAK-BIDEB Scholarship for Graduate Education in Turkey (2006-2008)
- TEV fellowship for Undergraduate Education (2002-2006)
- Istanbul Technical University Merit Scholarship (2002)
- Ranked in the top 30 twice in the Turkish National Antalya Math Olympics (2000 and 2001)

Computer Skills

Matlab, C

Languages

- Turkish (Native)
- English (Fluent)

Research Experience

MSU Pattern Recognition and Image Processing (PRIP) Lab.

Research Assistant under the supervision of Prof. Anil K. Jain (Sept. 2008 - present)

- Working on multi-label learning algorithm with large number of classes.

- Developing efficient multiple kernel learning algorithms

Istanbul Tech. Uni. Multimedia Signal Proc. & Pattern Recog. Lab (2006-2008)

Research Assistant under the supervision of Prof. Bilge Günsel

- Developed nonnegative matrix factorization based incremental algorithms.
- Participated in the audio fingerprinting project sponsored by TUBITAK.

Publications

Journal Papers

1. S.S. Bucak and B. Günsel, "Incremental Subspace Learning via Non-negative Matrix Factorization," *Pattern Recognition*, vol 42(5), pp. 788-797, May 2009.

Selected Conference Papers

1. V. Sindhwani, S.S. Bucak, J. Hu, A. Mojsilovic, "One Class Matrix Completion with Low Density Factorizations," *IEEE International Conference on Data Mining (ICDM 2010)*, Sydney, Australia, December 14-17, 2010
2. S.S. Bucak, R. Jin, A.K. Jain, "Multi-label Multiple Kernel Learning by Stochastic Approximation: Application to Visual Object Recognition," *NIPS*, Vancouver, B.C., Canada, December 6-9, 2010.
3. S.S. Bucak, P.K. Mallapragada, R. Jin and A.K. Jain, "Multi-label Learning with Many Classes," *ICCV*, Kyoto, Japan, 2009.
4. S.S. Bucak and B. Günsel, "Incremental Clustering via Nonnegative Matrix Factorization," *International Conference on Pattern Recognition (ICPR)*, Florida, USA, 2008.
5. S.S. Bucak and B. Günsel, "Video Content Representation by Incremental Non-negative Matrix Factorization," *IEEE International Conference on Image Processing (ICIP)*, San Antonio, Texas, USA, 16-19 September 2007.