

## Onur VAROL

e-mail: ovarol@indiana.edu

website: www.onurvarol.com

School of Informatics and Computing Indiana University  
919 E. 10th St, Bloomington IN, 47408, USA

---

RESEARCH  
INTERESTS      Complex Systems, Network Theory, Social Dynamics, Statistical Physics  
Bayesian Networks and Inference, Causality  
Machine Learning, Computer Vision, Biomedical Signal Processing

### PUBLICATIONS

#### Journal

J.1 **O. Varol**, D. Yuret, B. Erman, A. Kabakçioğlu “**Mode coupling points to functionally important residues in Myosin II**”, PROTEINS: Structure, Function, and Bioinformatics

#### Conference Proceedings

C.5 **O Varol**, E Ferrara, C Ogan, F Menczer, and A Flammini. “**Evolution of online user behavior during a social upheaval**”. ACM Web Science Conference 2014 (Full paper, acceptance rate 14%)

C.4 **O Varol** and F Menczer. “**Connecting Dream Networks Across Cultures**”. WWW 2014 workshop on ”Connecting Online & Offline Life” (COOL)

C.3 Ferrara, E., **Varol, O.**, Menczer, F. & Flammini, A. “**Traveling Trends: Social Butterflies or Frequent Fliers?**”, ACM Conference on Online Social Networks (COSN 2013) (Full paper, acceptance rate 15%)

C.2 E Ferrara, M JafariAsbagh, **O Varol**, V Qazvinian, F Menczer, A Flammini “**Clustering Memes in Social Media**”, ASONAM 2013 (Full paper, acceptance rate 13%)

C.1 Yasemin Alban; Tuba Ayhan; **Onur Varol**; Müştak Erhan Yalçın “**A Feature Filtering Method for EEG Data Classification**”, Signal Processing and Communications Applications (SIU), IEEE 19th Conference, Antalya, April 20-22 2011.

### EDUCATION

**Indiana University**, Bloomington, IN.

Ph.D., Complex Systems track of the Ph.D. in Informatics  
Minor in Statistics (expected graduation date: June 2016)

**Koç University**, Istanbul, TURKEY.

M.Sc., Computer Science and Engineering (July 2012)

Advisors: Assist. Prof. Deniz Yüret

Assist. Prof. Alkan Kabakçioğlu

**Istanbul Technical University**, Istanbul, TURKEY

B.Sc., Electronics Engineering, (June 2010)

B.Sc., Physics Engineering, ( June 2012)

CONDUCTED  
RESEARCHES AND  
ACADEMIC  
EXPERIENCE

**Research**

Detecting Early Signature of Persuasion in Information Cascades (DESPIC)

PIs: Assoc. Prof. Alessandro Flammini, Prof. Fil Menczer

Research on Modal analysis of Myosin II and Identification of Functionally Important Sites

Advisors: Assist. Prof. Deniz Yüret, Assist. Prof. Alkan Kabakçioğlu

Research on Transcriptional regulatory networks.

Advisors: Assist. Prof. Deniz Yüret, Assist. Prof. Alkan Kabakçioğlu

Research on Sketch Recognition using Dynamic Programming.

Research on Modelling of Social Networks and Phase Transitions of Complex Systems

Advisor: Prof. Ayse Erzan

Research on EEG Signal Processing and Classification.

Advisor: Assoc. Prof. Müstak Erhan Yalçın

**Projects**

Koç University, Istanbul, Turkey

- Community networks and opinion dynamic models (2012)
- Designed and implemented a sketch based map builder in 3D graphics (2011)
- Designed and programmed a [Tourist Guidance Multi Model Interface Application](#)(2011)
- Implemented unsupervised part-of-speech tagger, regression-based statistical machine translation decoder, spam filter using language models in Machine Learning Course (2011)

Istanbul Technical University, Istanbul, Turkey

- EEG Signal Processing and Classification for Mobile Robot Navigation (2010)
- Scanning Tunnel Microscope control electronic design and software implementation (2010)
- Human machine interface for mouse control using hand gestures (2009)
- EKG device electronic and software implementation (2009)

**Teaching Assistant**

**Koç University**, Istanbul, TURKEY.

Machine Learning (Spring 2012)

Microprocessors (Fall 2011)

Probability and Random Variables (Spring 2011)

Discrete Mathematics (Fall 2010)

WORK  
EXPERIENCE

Stonefish Software Consultant, Istanbul, Turkey

Software Developer (August 2009 - March 2010) worked on an enterprise web application development (using C#, ASP.NET, MSSQL)

Istanbul Technical University Computer Center, Istanbul, Turkey

Asistant Student (April 2008 - August 2009)

ASELSAN, Ankara, Turkey

Network programming and implementation of observation station simulation of unmanned vehicle. Intern (June 2009 - August 2009)

Istanbul Technical University Computer Center, Istanbul, Turkey

Manufacture of temperature monitoring device design for server room and implementation web service for temperature data monitoring. Intern (June 2008 - August 2009)

Control Avionic Laboratory, Istanbul Technical University, Istanbul, Turkey

Image processing for distortion problem of robotic testbed. Intern (June 2007 - August 2007)

#### HONORS AND AWARDS

Research Asistantship Indiana University (2012-2014)  
Scholarship from TUBITAK(2010-2012)  
Graduate scholarship from Koç University (2010-2012)  
Electrical Engineering Society (EMO) Project Competition 1st Rank (2010)  
Bosch Scholarship for Undergraduate Education (2009)  
Istanbul Technical University Student Council Vice President (2009)  
Microsoft Student Partner (2008-2010)  
Euroskills 2010, Portugal, Mobile Robotic Expert  
Worldskills 2009, Canada, Mobile Robotic Competitor  
Euroskills 2008, Netherland, 3rd rank in Mobile Robotic

#### WORKSHOPS AND SUMMER SCHOOLS

- A Workshop on the Allosteric Mechanisms in Protein Regulation, Koç University (July 2012)
- Computational Methods for Life Sciences and Nanotechnology, Koç University (January 2012)
- Phase Transition and Renormalization Groups, Feza Gürsey Institute (August 2010)
- International Summer School and Research Workshop on Complexity, Feza Gürsey Institute - Imperial College (September 2011)

#### COMPUTER AND LANGUAGE SKILLS

##### **Programming Languages and Skills:**

Python, C / C++, C#, Java, MATLAB, R, OpenBUGS, L<sup>A</sup>T<sub>E</sub>X  
ASP.NET, HTML, CSS, Javascript  
MSSQL, NoSQL, Map-Reduce  
OpenCV, OpenGL  
Cisco Routing

##### **Languages:**

English (fluent), German (beginner), Turkish (native)

#### INTERESTS

Basketball, swimming, puzzle, tracking