Onur VAROL

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School of Informatics and Computing Indiana University
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RESEARCH
INTERESTS

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

PUBLICATIONS

Journal

J.1 **O. Varol**, D. Yuret, B. Erman, A. Kabakçıoglu **"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 Kabakçıoglu

Istanbul Technical University, Istanbul, TURKEY

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

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

Research

Detecting Early Signature of Persuasion in Information Cascades (DESPIC)

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

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> 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 Kabakçıoglu

Research on Transcriptional regulatory networks.

> Advisors: Assist. Prof. Deniz Yüret, Assist. Prof. Alkan Kabakçıoglu

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)

Microsoft Research, Redmond WA, USA

Research Intern (June 2014 - September 2014): I worked in CLUES group at MSR. I studied how individuals in social networks optimizes their behavior to satisfy their intent. I carried out experiments on Amazon Mechanical Turk platform to justify our hypothesis in micro level and analyzed Twitter data to validate effects on macro level.

Stonefish Software Consultant, Istanbul, Turkey

Software Developer (August 2009 - March 2010): I 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

Intern (June 2009 - August 2009): I studied different forms of network programming for data transfer. I also worked on implementation of observation station platform for unmanned vehicles.

Istanbul Technical University Computer Center, Istanbul, Turkey

Intern (June 2008 - August 2009): I manufactured a temperature monitoring device using DS2019 sensor on Atmega16 microprocessor. Communication between microprocessor and server is implemented via RS232 protocol. Server and clients communicated through WPF on .NET framework.

Control Avionic Laboratory, Istanbul Technical University, Istanbul, Turkey

Intern (June 2007 - August 2007): I worked on improving distortion problem for the robotic testbed using MATLAB and OpenCV.

Research Asistantship Indiana University (2012-2015)
Student travel grant (COSN'14 Conference, Boston)
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

- 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, LATEX
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