Şirag Erkol

CONTACT INFORMATION	Indiana University	(812) 558-8938
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EDUCATION

Indiana University, Bloomington, IN · **August 2017 − present**

Ph.D. in Informatics, Complex Networks and Systems track
- Advisor: *Assoc. Prof. Filippo Radicchi*
- Minor: Computer Science

M.S. in Informatics

Boğaziçi University, Istanbul, Turkey

M.S. in Industrial Engineering · **September 2014 − August 2016**
- Advisor: *Assoc. Prof. Gönenç Yücel*
- Thesis Title: *Influence Maximization Based on Partial Network Structure Information: A Comparative Analysis on Seed Selection Heuristics*

B.S. in Industrial Engineering · **September 2010 − June 2014**
- Graduation Project: *Analyzing Parking Stand Requirements for Istanbul Ataturk Airport*

ACADEMIC EXPERIENCE

Indiana University, Bloomington, IN

Research & Teaching Assistant · **August 2017 − present**
- Assisted courses:
  INFO-I 369 - Performance Analytics (Spring 2020, Spring 2021)

Boğaziçi University, Istanbul, Turkey

Research & Teaching Assistant · **October 2014 − August 2017**
- Assisted courses:
  IE 312 - Facilities Design and Planning (Fall 2014, Fall 2015, Fall 2016)
  IE 350 - Systems Science and Engineering (Spring 2015, Spring 2016)
  IE 484 - Simulation Gaming and Decision Experimentation (Fall 2016)
  IE 48F - Agent-Based Modeling and Simulation (Spring 2015, Spring 2016, Spring 2017)
  IE 550 - Dynamics of Socio-Economic Systems (Fall 2015)

- Assistant at Socio-Economic System Dynamics (SESDYN) Laboratory

WORK EXPERIENCE

Pacific Northwest National Laboratory, Richland, WA · **June 2021 − August 2021**

Ph.D. Intern

I worked on multiple projects on influence maximization. I designed heuristic methods for the influence maximization problem on static networks, and analyzed their efficiency on small and large scale networks. I worked on the adaptive influence maximization problem in temporal networks, designing methods to increase the effect size of seed sets.

HONORS & AWARDS

IU Luddy Summer Research Award ($4400) · **2022**

PUBLICATIONS

Published:

Who is the best coach of all time? A network-based assessment of the career performance of professional sports coaches
Ş. Erkol and F. Radicchi, *Journal of Complex Networks*, 9, cnab012 (2021)
[DOI] [arXiv] [Website]

Influence maximization on temporal networks
Ş. Erkol, D. Mazzilli and F. Radicchi, *Physical Review E*, 102, 042307 (2020)
[DOI] [arXiv]

Systematic comparison between methods for the detection of influential spreaders in complex networks
Ş. Erkol, C. Castellano and F. Radicchi, *Scientific Reports*, 9, 15095 (2019)
[DOI] [arXiv]

Influence maximization in noisy networks
Ş. Erkol, A. Faqeeh and F. Radicchi, *EPL*, 123, 58007 (2018)
[DOI] [arXiv]

Influence Maximization Based on Partial Network Structure Information: A Comparative Analysis on Seed Selection Heuristics
Ş. Erkol and G. Yücel, *International Journal of Modern Physics C*, 28, 1750122 (2017)
[DOI]

Under review:

Effective submodularity of influence maximization on temporal networks
Ş. Erkol, D. Mazzilli and F. Radicchi
[arXiv]

PRESENTATIONS   **Talks:**

Effective submodularity of influence maximization on temporal networks, NetSci 2022, Online   **July 2022**

Influence maximization on temporal networks, Networks2021, Online   **July 2021**

Influence maximization on temporal networks, University of Limerick, Ireland, Online   **March 2021**

Posters:

Systematic comparison between methods for the detection of influential spreaders in complex networks, NetSci 2020, Online   **September 2020**

Influence maximization in noisy networks, NetSci 2019, Burlington, VT, USA   **May 2019**

COMMUNITY SERVICE   **Journal Reviewer:** Chaos, Solitons & Fractals; Expert Systems with Applications; Journal of Computational Science; Pattern Recognition

Journal Subreviewer: PLoS One

COMPUTER SKILLS   Frequent user of Python, LATEX
Experierce in Django, NetLogo, HTML, CSS
Familiar with MySQL, C, R, Git, Stella

LANGUAGES   English (fluent), Turkish (native), Armenian (native), French (beginner), Spanish (beginner)

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