

# Şirag Erkol

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CONTACT INFORMATION	Indiana University Luddy School of Informatics, Computing, and Engineering Center for Complex Networks and Systems Research 1015 E 11 <sup>th</sup> St, Bloomington, IN 47408	(812) 558-8938 serkol@iu.edu siragerkol@gmail.com siragerkol.github.io
EDUCATION	<b>Indiana University</b> , Bloomington, IN <i>Ph.D. in Informatics, Complex Networks and Systems track</i> <ul style="list-style-type: none"><li>• Advisor: <i>Assoc. Prof. Filippo Radicchi</i></li><li>• Minor: Computer Science</li></ul> <i>M.S. in Informatics</i> <b>Boğaziçi University</b> , Istanbul, Turkey <i>M.S. in Industrial Engineering</i> <ul style="list-style-type: none"><li>• Advisor: <i>Assoc. Prof. Gönenç Yücel</i></li><li>• Thesis Title: <i>Influence Maximization Based on Partial Network Structure Information: A Comparative Analysis on Seed Selection Heuristics</i></li></ul> <i>B.S. in Industrial Engineering</i> <ul style="list-style-type: none"><li>• Graduation Project: <i>Analyzing Parking Stand Requirements for Istanbul Ataturk Airport</i></li></ul>	<b>August 2017 – present</b> <b>September 2014 – August 2016</b> <b>September 2010 – June 2014</b>
ACADEMIC EXPERIENCE	<b>Indiana University</b> , Bloomington, IN <i>Research &amp; Teaching Assistant</i> <ul style="list-style-type: none"><li>• Assisted courses: INFO-I 369 - Performance Analytics (Spring 2020, Spring 2021)</li></ul> <b>Boğaziçi University</b> , Istanbul, Turkey <i>Research &amp; Teaching Assistant</i> <ul style="list-style-type: none"><li>• 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)</li><li>• Assistant at Socio-Economic System Dynamics (SESDYN) Laboratory</li></ul>	<b>August 2017 – present</b> <b>October 2014 – August 2017</b>
WORK EXPERIENCE	<b>Pacific Northwest National Laboratory</b> , Richland, WA <i>Ph.D. Intern</i> <p>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.</p>	<b>June 2021 – August 2021</b>
HONORS & AWARDS	IU Luddy Summer Research Award (\$4400)	<b>2022</b>
PUBLICATIONS	<b>Published:</b> Effective submodularity of influence maximization on temporal networks <b>Ş. Erkol</b> , D. Mazzilli and F. Radicchi, <i>Physical Review E</i> , 106, 034301 (2022) [DOI] [arXiv]	

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]

## 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:** Applied Mathematics and Computation; Chaos, Solitons & Fractals; Expert Systems with Applications; IEEE Transactions on Network Science and Engineering; Journal of Computational Science; Pattern Recognition

**Journal Subreviewer:** PLoS One

## COMPUTER SKILLS

Frequent user of Python, L<sup>A</sup>T<sub>E</sub>X  
Experience in Django, NetLogo, HTML, CSS  
Familiar with MySQL, C, R, Git, Stella

## LANGUAGES

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

*Last updated: September 2, 2022*