

# Şirag Erkol

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CONTACT INFORMATION	Northwestern University Center for Science of Science and Innovation 600 Foster St, Evanston, IL 60208	(812) 558-8938 siragerkol@gmail.com siragerkol.github.io
ACADEMIC POSITIONS	<b>Northwestern University</b> , Evanston, IL <i>Postdoctoral Researcher</i> <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>July 2023 – present</b> <b>August 2017 – May 2023</b> <b>October 2014 – August 2017</b>
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>Thesis: <i>Identifying Influential Spreaders in Complex Networks</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: <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 – May 2023</b> <b>September 2014 – August 2016</b> <b>September 2010 – June 2014</b>
WORK EXPERIENCE	<b>Pacific Northwest National Laboratory</b> , Richland, WA <i>Ph.D. Intern</i>	<b>June 2021 – August 2021</b>
HONORS & AWARDS	IU Luddy Summer Research Award (\$4400)	<b>2022</b>
PUBLICATIONS	<b>Published:</b> Symmetry breaking in optimal transport networks S. Patwardhan, M. Barthélemy, <b>Ş. Erkol</b> , S. Fortunato, F. Radicchi <i>Nature Communications</i> , 15, 3758 (2024) [DOI] [arXiv]	

Consistency pays off in science

**Ş. Erkol**, S. Sikdar, F. Radicchi, and S. Fortunato, *Quantitative Science Studies*, 4, 491 (2023)  
[DOI] [arXiv] [GitHub] [Website]

Effective submodularity of influence maximization on temporal networks

**Ş. Erkol**, D. Mazzilli and F. Radicchi, *Physical Review E*, 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, **July 2022**  
NetSci 2022, Online

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

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

##### Posters:

Consistency pays off in science, ICSSI 2023, Evanston, IL, USA **June 2023**

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

**Conference Reviewer:** ISSI 2023; ICSSI 2024

**Journal Subreviewer:** PLoS One

COMPUTER SKILLS	Frequent user of Python, L <sup>A</sup> T <sub>E</sub> X Experiece 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: July 4, 2024*