U IU BLOOMINGTON

Center for Complex Networks and Systems Research



We're moving and hiring!

October 2, 2021 Fil, Filippo, NaN, News, Santo Artificial Intelligence, complex systems, faculty, hiring, network science, networks fil We have two big announcements! First, CNetS (along with IUNI and OSoMe) is moving to the new Luddy Center for Artificial Intelligence. Second, we have a new tenure-track assistant professor position in Artificial Intelligence and Network Science. We welcome any candidates who study AI, complex systems, and network science (all broadly defined). Potential research areas include, but are not limited to, deep learning, graph neural networks, complex systems, complex networks, computational neuroscience, computational social science, social media analytics, agent-based models, and the impacts of AI and social media on society. We especially welcome applications from members of underrepresented groups in computing. More info and application here!

New grant on optimization problems in complex networks

September 27, 2021 Filippo, News filiradi

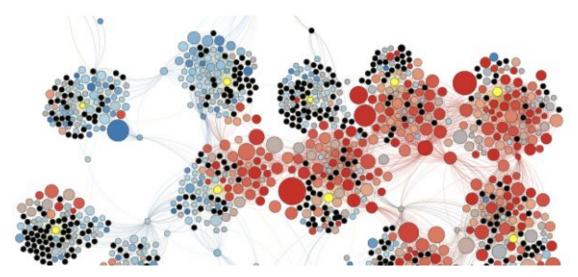
https://cnets.indiana.edu 1/7

U BLOOMINGTON



The US Air Force Office of Scientific Research has awarded the grant Algorithmic and theoretical approaches to optimization problems on complex networks to CNetS faculty Filippo Radicchi. The project will study different classes of optimization problems (OPs) on complex networks, including optimal percolation, optimal sampling, optimal navigation, and optimal seeding. The research will address the practical, algorithmic and theoretical aspects of the OPs, focusing on the generalization of the problem settings to realistic scenarios, the development of numerical techniques for the solution of the OPs, and the establishment of analytical baselines for the objective assessment of the performance of the optimization algorithms.

The total budget of the award is 450,000 USD, the project's duration is three years.



Probing political bias on Twitter with drifter bots

https://cnets.indiana.edu 2/7



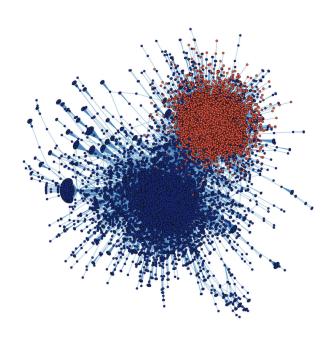
IU BLOOMINGTON

Our latest paper Neutral bots probe political bias on social media by wen Chen, Diogo Pacheco, Kai-Cheng Yang & Fil Menczer just came out in *Nature Communications*. We find strong evidence of political bias on Twitter, but not as many think: (1) it is conservative rather than liberal bias, and (2) it results from user interactions (and abuse) rather than platform algorithms. We tracked neutral "drifter" bots to probe political biases. In the figure, we see the drifters in yellow and a sample of their friends and followers colored according to political alignment. Large nodes are accounts sharing a lot of low-credibility links.

ICWSM Test of Time Award

June 11, 2021 Fil, NaN, News award, ICWSM, papers, social media, social networks, Twitter fil

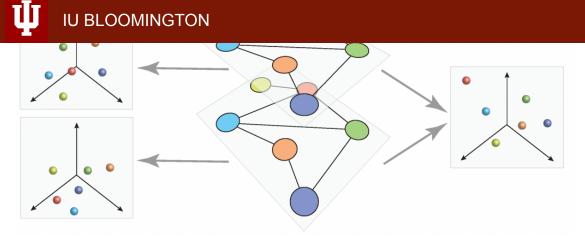
Our 2011 paper Political Polarization on Twitter was recognized at the 2021 AAAI International Conference on Web and Social Media (ICWSM) with the Test of Time Award. First author Mike Conover, who was then a PhD student and is now Director of Machine Learning Engineering at Workday, accepted the award at a ceremony at the end of the ICWSM conference. Other authors are Jacob Ratkiewicz (now a Tech Lead at Google), Bruno Gonçalves (now VP at JPMorgan Chase), Matt Francisco (now Lecturer at IU Luddy School), Alessandro Flammini (Professor of Informatics at IU Luddy), and Filippo Menczer (Distinguished Professor and Director of the Observatory on Social Media at IU).



New grant on AI and multilayer networks

May 9, 2021 News, Santo graph embedding, network science santo

https://cnets.indiana.edu 3/7



The Army Research Office has awarded the grant *Multilayer network embeddings and applications to real-world problems* to CNetS faculty Santo Fortunato and Filippo Radicchi. The project lies at the interface between artificial intelligence and network science and aims at developing embeddings of multilayer networks in vector space. While graph embeddings have become very popular over the past decade, most of the research in this area focuses on the analysis of isolated graphs. However, networks in the real world do not exist in isolation, but they are coupled with other networks. For example in social media, the same person may interact with different individuals depending on the online platform.

Distinguished Master's Thesis Award

November 1, 2020 Fil, NaN, News award, fakey, hoaxy, misinformation, social media, students fil



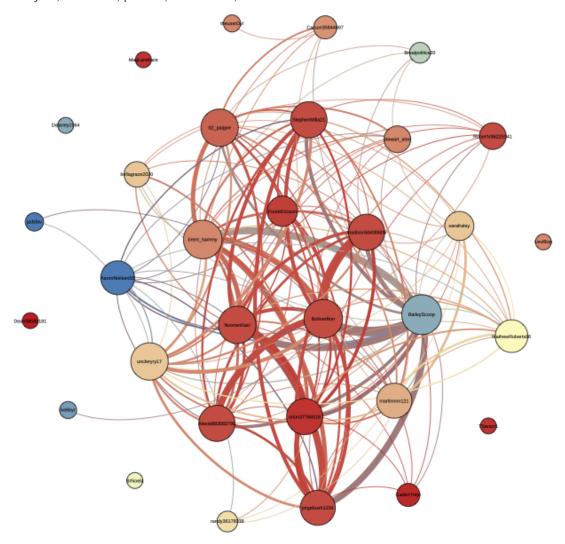
CNetS alumnus Mihai Avram is the recipient of the 2020 Indiana University Distinguished Master's Thesis Award for his work on Hoaxy and Fakey: Tools to Analyze and Mitigate the Spread of Misinformation in Social Media. This award recognizes a "truly outstanding" Master's thesis based on criteria such as originality, documentation, significance, accuracy, organization, and style. Some of the findings in Mihai's thesis have recently been published in the paper Exposure to social engagement metrics increases vulnerability to misinformation, in The Harvard Kennedy School Misinformation Review. Congratulations Mihai!

https://cnets.indiana.edu 4/7

U IU BLOOMINGTON

Evidence of a coordinated network amplifying inauthentic narratives in the 2020 US election

September 25, 2020 Fil, NaN, News manipulation, misinformation, Network Analysis, networks, politics, social bots, Twitter fil



On 15 September 2020, The Washington Post published an article by Isaac Stanley-Becker titled "Pro-Trump youth group enlists teens in secretive campaign likened to a 'troll farm,' prompting rebuke by Facebook and Twitter." The article reported on a network of accounts run by teenagers in Phoenix, who were coordinated and paid by an affiliate of conservative youth organization Turning Point USA. These accounts posted identical messages amplifying political narratives, including false claims about COVID-19 and electoral fraud. The same campaign was run on Twitter and Facebook, and both platforms suspended some of the accounts following queries from Stanley-Becker. The report was based in part on a preliminary analysis we conducted at the request of The Post. In this brief we provide further details about our analysis.

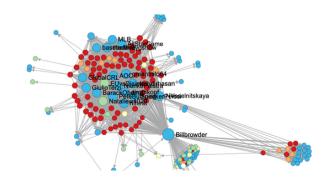
https://cnets.indiana.edu 5/7



UPDATE: BotSlayer tool to expose disinformation networks

September 18, 2020 Fil, NaN, News botometer, misinformation, OSoMe, social bots, social media, social networks, software, tool fil

We are excited to announce the new v.1.3 of BotSlayer, our OSoMe cloud tool that lets journalists, researchers, citizens, & civil society organizations track narratives and detect potentially coordinated inauthentic information networks on Twitter in real-time. Improvements and new features include better stability, a new alert system, a Mac installer, and many additions to the



interface. This version is released in time for those who would like to use BotSlayer to monitor #Election2020 manipulation.

Knight Fellows

August 21, 2020 Fil, NaN, News fellowship, misinformation, OSoMe fil





Indiana University's Observatory on Social Media, funded in part last year with a \$3 million grant from the John S. and James L. Knight Foundation, has named two new Knight Fellows. Matthew DeVerna and Harry Yaojun Yan will help advance the center's ongoing investigations into how information and misinformation spread online. The Observatory on Social Media,

or OSoMe (pronounced "awesome"), is a collaboration between CNetS in the Luddy School of Informatics, Computing and Engineering; The Media School; and the IU Network Science Institute. Congratulations to Harry and Matt! More...

CNetS @ NetSci 2020

July 10, 2020 Fil, NaN, News, Santo network science, talks Diogo Pacheco

CNetS students, postdocs, and faculty members will give 7 regular talks and present 13 posters at NetSci 2020, held online this year due to COVID-19. Regular talks will cover research on many topics including COVID-19, forecasting social contagion of



https://cnets.indiana.edu 6/7



FULFILLING the PROMISE

https://cnets.indiana.edu 7/7