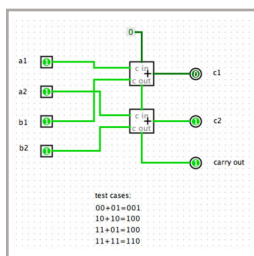# DataScience@SICE

Researchers at Indiana University School of Informatics, Computing, and Engineering (SICE) advance research in data science in areas such as high performance computing, cloud computing, bioinformatics and complex systems. Our cross-disciplinary research, education and innovation transfer in the area of large-scale data and search ranges from data mining, searching for hidden information in large amounts of data, long-term preservation and access to enable computational access to large-scale data, algorithms, database theory and database management.

https://sice.indiana.edu/research/research-areas/data-science.html

Algorithmic & Logical Foundations of Data Science

Study mathematical concepts and theory underlying statistical and machine learning models and optimization algorithms, develop and extend algorithms, statistical and machine learning approaches, and visualization techniques for exploring massive data.
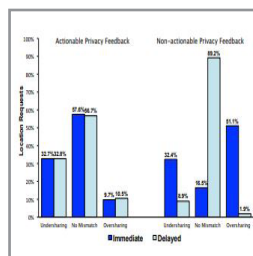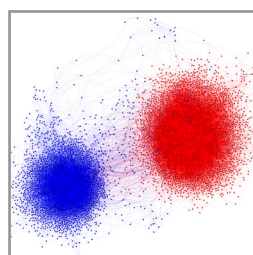

Data Security & Privacy

Study the security and privacy challenges in managing and exploring massive datasets. Develop secure computing techniques to protect the privacy of human subjects.
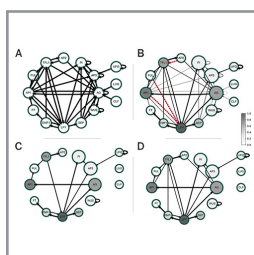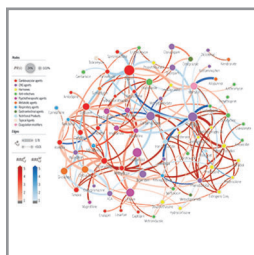

Artificial Intelligence

Develop machine learning models and intelligent systems to explore and mine massive datasets.


Network Science

Study the structure of network datasets from different domains, from social networks to biological networks and the Web, and the dynamics of processes running on them.


Biomedical & Health Data Science

Applications of data science approaches to massive data acquired/collected in biomedical and health science research for improving human health.
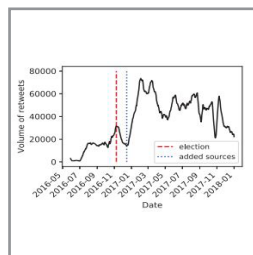
Social & Ethical Aspects of Data Science

Study the social impact and ethical issues in sharing and exploring massive datasets. Address societal challenges using data science approaches.
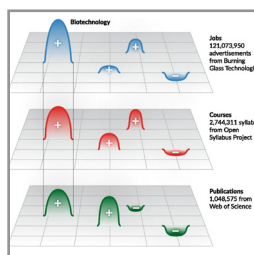
Database & Data Management/Mining & Visualization

Study the data lifecycle, from digital birth to long-term preservation. Develop the techniques for managing and supporting the exploration of massive datasets.
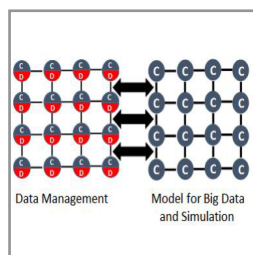
Systems for Big Data Analytics

Design and implement hardware and software systems and infrastructure for efficient acquisition, exploration and mining

Faculty

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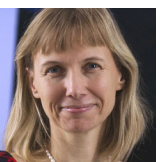
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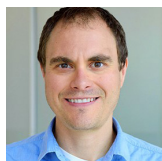
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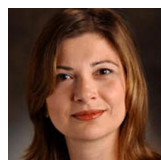
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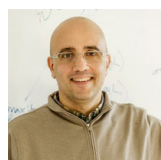
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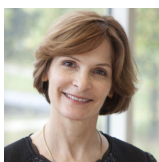*Associate Professor,* kapadia@indiana.edu
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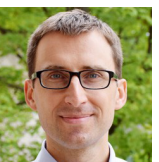
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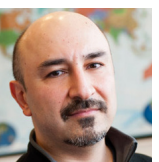
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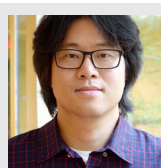Ph.D. in Information & Computer Science
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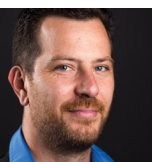Research areas: hyperinfrastructure and e-science, data science, high performance computing, parallel and distributed computing.

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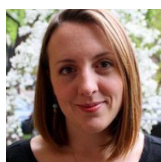Ph.D. in Statistics
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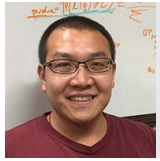
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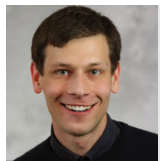*Associate Professor,* djwild@indiana.edu
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Centers, groups, and labs associated with DataScience@SICE:

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- Center for Complex Networks and Systems Research — http://cnets.indiana.edu/
- Data to Insight Center — https://pti.iu.edu/centers/d2i/
- IU Network Science Institute — https://iuni.iu.edu/
- Networks & agents Network (NaN) — http://cnets.indiana.edu/groups/nan/