The Computer Scientist

Mohammed Zaki
Professor, Computer Science, Rensselaer Polytechnic Institute, 1998 - current

CURRENT RESEARCH

Meaning extraction from large-scale and diverse information and data sources

With the increasing availability of data and computational power at our fingertips, a growing number of organizations and individuals are able to analyze and extract knowledge. Dr. Mohammed Zaki, of Rensselaer Polytechnic Institute, is working to create novel models, algorithms, and systems to enable a more intuitive use and development of data mining and analysis in all areas and especially for applications in bioinformatics and social networks. Dr. Zaki hopes to use his research to make data mining and learning easier for both experts in the Computer Science field as well as non-experts, who are usually professionals with no formal background in Computer Science and Statistics but nevertheless are compelled to analyze huge amounts of data. His research is focused on scalable new methods and novel tools and platforms for coding, mining, and analyzing massive, complex, and interconnected data. The applications of what he terms "intuitive data mining" will allow other researchers in social sciences, biology and life sciences, data journalism, and many other areas to better access, organize and mine relevant information. It will also allow data science experts to reach new advances due to more sophisticated technology.

Dr. Zaki's highly technical research is grounded in real-world applications, especially in bioinformatics, and social and citation networks. For example, in bioinformatics tremendous gains are possible when scientists simultaneously mine the data from genomes, protein structures and networks, metabolic pathways, drug interactions, and numerous other curated datasets. Dr. Zaki is developing novel methods for integrated and holistic mining of omics-scale data to better understand complex systems....

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AFFILIATION

Rensselaer Polytechnic Institute

EDUCATION

- Ph.D. in Computer Science, 1998
University of Rochester
- M.S. in Computer Science, 1995
University of Rochester
- B.S. in Computer Science and Mathematics, 1993
Angelo State University

AWARDS

- 2013 Board of Directors (Executive Committee), ACM Special Interest Group on Knowledge Discovery and Data Mining (SIGKDD), 2013-Present
- ACM Distinguished Scientist, 2010
- DOE Office of Science Early Career Principal Investigator Award in Applied Mathematics, Computer Science and High-Performance Networks, U.S. Department of Energy, 2002
- NSF Faculty Early Development Award (CAREER Award), National Science Foundation, 2001
- Google Faculty Research Award, 2011
- and 2 more...

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Informational Sciences / Internet, IOT, Devices, Data

FUNDING REQUEST

Your contributions will support Dr. Zaki's research as he works to make data mining and graph analytics tasks scalable and easier for non-experts and experts. Your donation will support the approximately $200-250K per year required for personnel (research assistants and postdoctoral associates), and open-source software and courseware development. In choosing to donate, you will help to contribute to the ultimate vision of easy-to-use data mining tools for data science.