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# Clarkson University Computer Science Professor is Part of Magic Grant Award Winning Team

Tuesday May 22, 2018

Clarkson University Associate Computer Science Professor Jeanna Matthews is leading a Brown Institute Magic Grant funded team that will be working on a project to systematically compare forensic DNA software.

The Brown Institute for Media Innovation, a collaboration between Stanford University's School of Engineering and Columbia Journalism School, is awarding close to \$1 million in funding for 12 projects as part of the 2018-19 Magic Grants. Each year, the Brown Institute awards these grants to foster new tools and modes of expression and to create stories that escape the bounds of page and screen.

Matthews' project, Decoding Difference in DNA Forensic Software, has been awarded a \$75,000 grant, aimed at determining when, why, and by how the results of DNA mixture software programs differ. Real world cases have shown that differences can have a substantial impact on justice, including cases where one program incriminates a suspect while a different program excludes him. The project will move this story beyond anecdotal examples to a systematic investigative strategy, helping to answer the call put out by the Presidential Council of Scientific Advisors on Science and Technology for independent testing of these DNA software programs.



Jeanna Matthews

The project team includes Nathan Adams, a DNA investigations specialist; Jessica Goldthwaite, a defense attorney at The Legal Aid Society; Dan Krane, a Biologist and Professor at Wright State University; Surya Mattu, a Pulitzer Prize-nominated Journalist with Gizmodo and ProPublica; and David Madigan, a Statistician, and Professor at Columbia University.

"We will be comparing the results of probabilistic genotyping software systems," Matthews said. "The results of these systems are treated as highly reliable evidence in court but they often disagree with each other and the producers of these systems aggressively resist third party review - even expert witness review under protective order. This is one important example of black box programs being used to make big decisions about people's lives. As citizens, we should expect rigorous explanations for how these decisions are being made and a feedback loop that identifies and corrects inevitable problems in software."

In the process of their research, the group will explore important issues of algorithmic accountability and transparency, and the role of complex software systems in the criminal justice system and beyond.

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**Photograph for media use is available at:**

</sites/default/files/media/image/2018-05/jeanna-matthews.jpg>

**Photograph Size:**

Width: 933px

Height: 1400px

*News directors and editors: For more information, contact Melissa Lindell, Director of Media Relations, at [315-268-6716](tel:315-268-6716) or [mlindell@clarkson.edu](mailto:mlindell@clarkson.edu).*

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