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News & Events

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Clarkson University Computer Science Professor & Grad Student Earn Best Paper Award

Computer security is a constant game of escalation between attackers and defenders, says Clarkson University Associate Professor of Computer Science Jeanna Matthews. Fortunately, as of this fall, the good guys are ahead.

Matthews and engineering science Ph.D. student Joshua White can share credit for that status. Earlier this fall, they attended the eighth International Conference on Malicious and Unwanted Software, where their presentation was awarded the Best Paper designation.

Anyone whose computer has been mired in malware can applaud the computer science professor and White for their detective work in determining a way to identify tweets generated by the web threat known as Blackhole Exploit Kit (BEK).
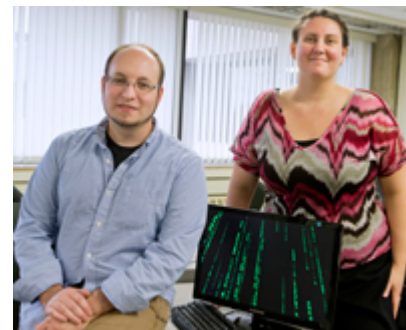
"We've been looking at security aspects for quite a while," says Matthews. "Attackers work from a pretty substantial business model now, so the threat of infection is constant."

Discussing her research in an October 25 article in PC Magazine, Matthews said it's estimated that BEK was involved in more than half of all malware infestations in 2012. Malware is certainly frustrating. It also can be expensive as victims try to protect, clean or repair their computers. User's personal information may be stolen and sold, too. And these days, malware like BEK uses social media services like Twitter to spread.

With that in mind, the Clarkson duo carefully sorted through Twitter data and figured a way to separate infected accounts from clean ones. Matthews' hope is that Twitter can then warn users whose accounts are involved.

"My work is relevant to everyday life and that feels good," says Matthews, who has taught computer science at Clarkson since 2000.

According to recent media reports, Russian police arrested a person who is believed to have created BEK, but there are plenty of new dangers to come. As Matthews says, "It's a game of one-upmanship with attackers."

Next up, she's turning her research attention to social media and how various topics rise in popularity or public awareness.

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of academic excellence directed toward the world's pressing issues. Through 50 rigorous programs of study in engineering, business, arts, sciences and health sciences, the entire learning-living community spans boundaries across disciplines, nations and cultures to build powers of observation, challenge the status quo, and connect discovery and engineering innovation with enterprise.

Photo caption: Clarkson University Associate Professor of Computer Science Jeanna Matthews (right) and engineering science Ph.D. student Joshua White recently attended the eighth International Conference on Malicious and Unwanted Software, where their presentation was awarded the Best Paper designation.

[A photograph for media use is available at http://www.clarkson.edu/news/photos/matthews-white.jpg .]

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