

CoE-MaSS weekly seminar series

THE DST-NRF CENTRE OF EXCELLENCE IN
MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS)
PRESENTS A SEMINAR BY

Dr Graham Barbour

(Council for Scientific and Industrial Research)

“Matching Fingerprints using Linear Algebra, and why Fingerprint Templates Cannot be secured without a User Key”

Friday, 24 May 2019

10h30-11h30

CoE-MaSS Seminar Room, 1st floor, MSB, Wits.

In this talk we shall demonstrate linear algebra in action, by demonstrating how fingerprints can be matched via searching for “best” linear transformations. Not only is this fingerprint matching method simple (if you know linear algebra), but it is among the best in the world. This talk will introduce fingerprint matching in general, and then focus on a particular linear algebraic method for matching. As a second topic, we shall highlight the information security issues pertaining to transmitting and storing fingerprint templates (mathematical representations of a fingerprint), and we shall prove that hashing such templates is *mathematically impossible*, without a user key.

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Important videoconferencing netiquette:

Please ***mute your microphone*** so that there is no feedback from your side into the virtual room. During the Q&A slot you can then unmute your microphone if you have a question to ask the speaker. Thank you.

