

CAREER: Secure and Trustworthy Ocular Biometrics

Challenge:

To attain a heretoforeunreached level of security by devising novel methods for liveness detection and for resisting coercion attacks while improving biometric accuracy.

Solution:

Combine high accuracy method such as iris with high spoofing resistant method as biometrics via eye movements.

Broader Impacts:

- Advances state of the art in liveness detection
- Aids all iris recognition systems to be more secure
- Involves minorities in research
 - 10 peer-reviewed journal articles, 16 conference papers, 2 abstracts, in addition to two live demoes presented at South by Southwest Festival (SXSW) in 2014 and 2016 by the PI and his students

Scientific Impact:

- Researched solution will provide a biometric method that will be highly accurate and almost impossible to spoof.
- Research will provide the assessment of individuality, variability, scalability, and longevity of ocular traits.
- Understanding of accuracy and spoof resistance provided by eye movement traits alone.



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