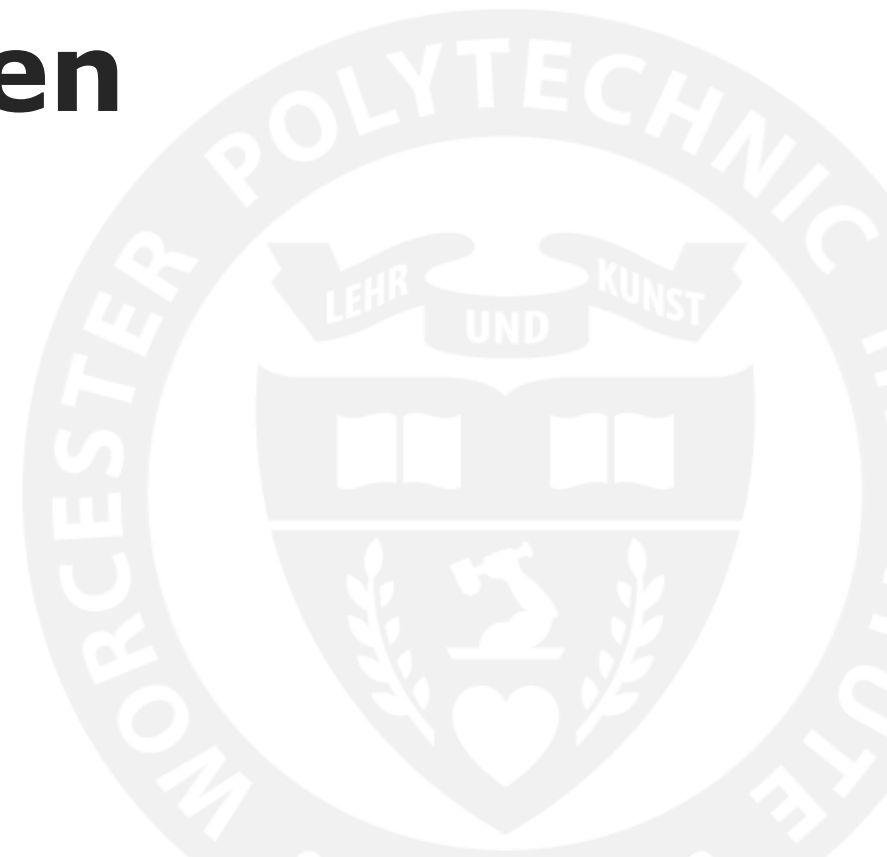




# WPI

## **Challenges with using open source SCL databases**

Dev Mehta, WPI



# Need...

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- Replication
- Standardization
- Availability of datasets
  - Testing new metrics
  - New algorithm development
  - Teaching purposes
- **Ease of use**



# File Format

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- File format – type of datasets
- Data format
  - Numpy, trs, etc.
- Compressed vs uncompressed
  - Zip, tar, etc.
- Opensource compatibility
- Metadata
- Conversion between file formats
  - API: no reliable universal implementation
  - Documentation: scattered/unavailable
  - Learning curve: ~10 hours for beginner
  - A barrier to entry for students


## ChipWhisperer

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**RISCURE**

Driving your security forward

 ANSSI-FR / ASCAD Public

 google / sedpack Public

 Ledger-Donjon / lascar Public

 decryptofy / scarr Public

## The SMAesH dataset

# Storage structures

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- The hierarchy of data structure – json, hdf, zarr custom, etc.
- File sizes
- Multiple files vs single files for a trace set
- Accompanying information: documentation, scripts, metadata, etc.
- Test scripts

# Challenges

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- The dataset should be easily distributable
- Capability to share partial datasets
- Language used to access the data – scripts
- API creation – from either the provider of dataset or the user
- Incorporation of different datasets into the flow requires time from the user



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# Thank you



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