

CAREER: Data-driven Models of Human Mobility and Resilience for Decision Making

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NSF 1750102, April 2018-2023

Challenge:

- Understand human behaviors during shocks: mobility patterns and resilience
- Provide usable information for decision makers in prevention and response

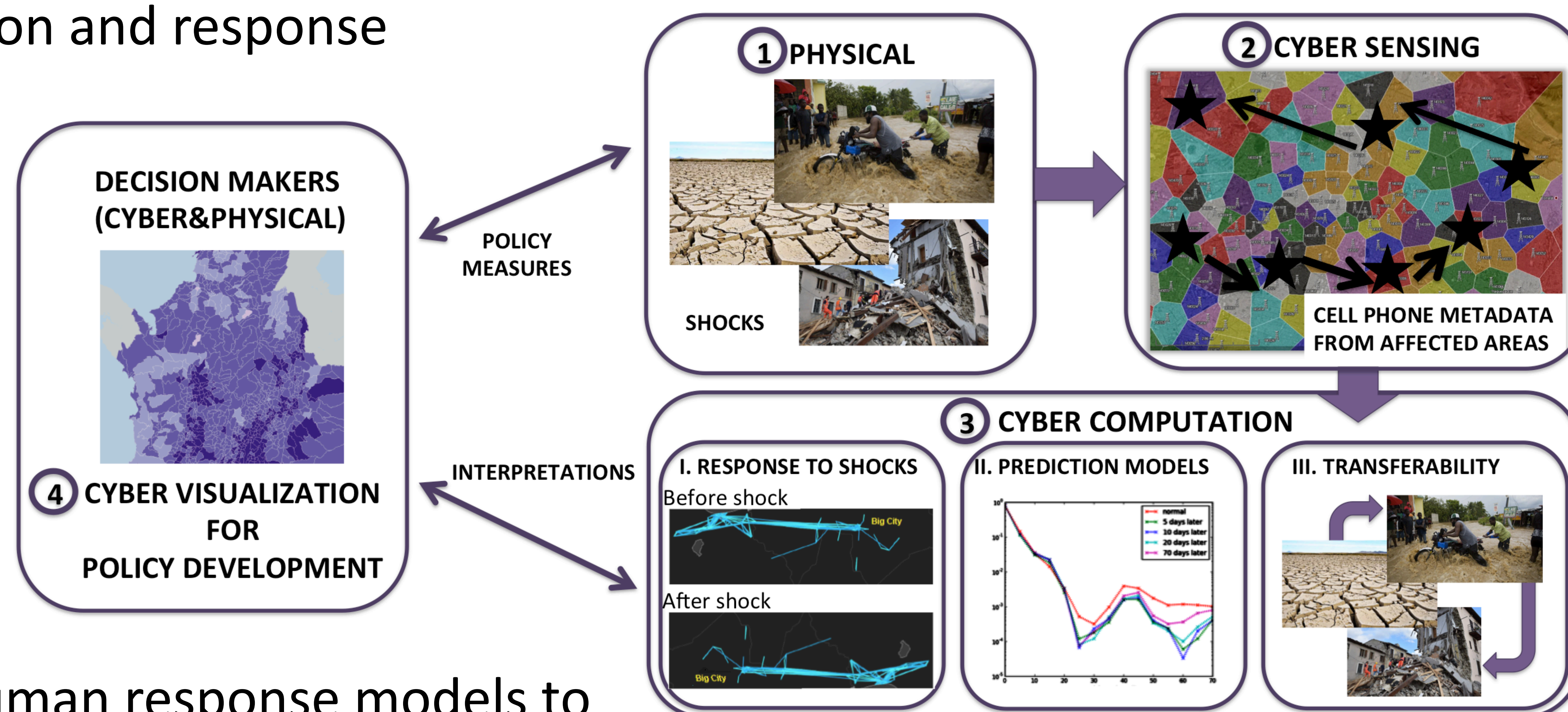
Solution:

Societal-scale CPS with cell-phone based cyber sensing of location information

- Societal response to hurricane Irma

Broader Impact:

- Better understanding of human behaviors at large scale during shocks
- Data-driven tools to enhance decision making processes prior to and during shocks
- Research outcomes beneficial for both organizations working in prevention and response efforts as well as telecommunication companies



Scientific Impact:

- Context-aware human response models to shocks: mobility patterns and resilience
- Prediction of human behaviors during shocks: human mobility and resilience prediction
- Transferability of behavioral patterns across types of shocks (space, time) and datasets