

# **The Role of Transportation Systems in Regional Evacuation Models**

Moderator: Herb Engle (DHS S&T)

**Vinayak Dixit, Louisiana State University**

## **Regional Scale Multimodal Evacuation Planning and Analysis**

- Evidence that TRANSIMS can be an effective tool for regional multi-modal evacuation modeling and planning
- Consistent models can be useful in whole or when used separately
- How people behave needs to be incorporated in the simulation

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## Yi-Chang Chiu, University of Arizona

- Evaluating Regional Contra-Flow and Phased Evacuation Strategies: Central Texas Case Study
- Contra-flow plan generally achieves 8% -10% improvement, but certain choke-points can not be relieved
- Contra-flow plan benefits inland evacuees more than those from coastal zones.
- Phase evacuation achieves 5% – 15% travel time reduction for evacuees from flood zone area
- Large-scale regional simulation useful for fast response
  - Parallel analysis of different hurricane trajectory and strength scenarios
  - Rapid decision support

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## Eva Kassens – Noor, Michigan State University

### Planning Against Hazards for a Resilient and Sustainable Community Through Adaptive Transportation Systems

- Flexible, adaptive capacity has to be integrated in our today's standard urban and transport planning approach.
- Adaptation has to be integrated into our built, natural and human environment.
- The concepts of social responsibility and accountability can play a powerful part in transforming communities into sustainable and resilient entities.
- In quantifying the impact, additional members may bring to resilient and sustainable communities three key questions that need to be addressed when integrating adaptive, resilient and sustainable transport systems:
  - Adaptive: “What is the most critical piece of the transport system?”
  - Resilient: “What is the most vulnerable piece of the transport system?”
  - Sustainable: “How can transport resilience and transport adaptation be integrated into the sustainability framework?”