

Gino Lim

<http://www.ie.uh.edu/faculty/lim>

- Ph.D. (2002) University of Wisconsin – Madison
- Chairman, Department of Industrial Engineering, UH 2011 – present
- Organizing Committee INFORMS, IISE, AHFE, POMS, Hurricane Conference
- Program Chair 2017 INFORMS Annual Conference, Houston, TX
- Program Chair 2012 ISERC Annual Meeting, Orland, FL
- Vice President Chapters/Fora of INFORMS
- Chair CIEADH oversight committee for ISERC conference
- Chair Doctoral colloquium, ISERC conference
- Chair Texas Industrial Engineer Life Time Achievement Awards Committee

Awards & Honors - Gino Lim

- Fellow, Institute of Industrial and Systems Engineers 2017
- Hari and Anjali Agrawal Faculty Fellow, UH 2008 – present
- Outstanding Teacher Award, UH College of Engineering 2007 & 2010
- Outstanding Instructor Award, UH Industrial Engineering 2005, 2006, & 2009
- Volunteer Service Award at the Meritorious level, INFORMS, 2016
- Moving Spirit Award, INFORMS, 2006
- Best Paper Award, Energy Systems Division, ISERC 2017
- Pierskalla Best Paper Award, INFORMS, 2002

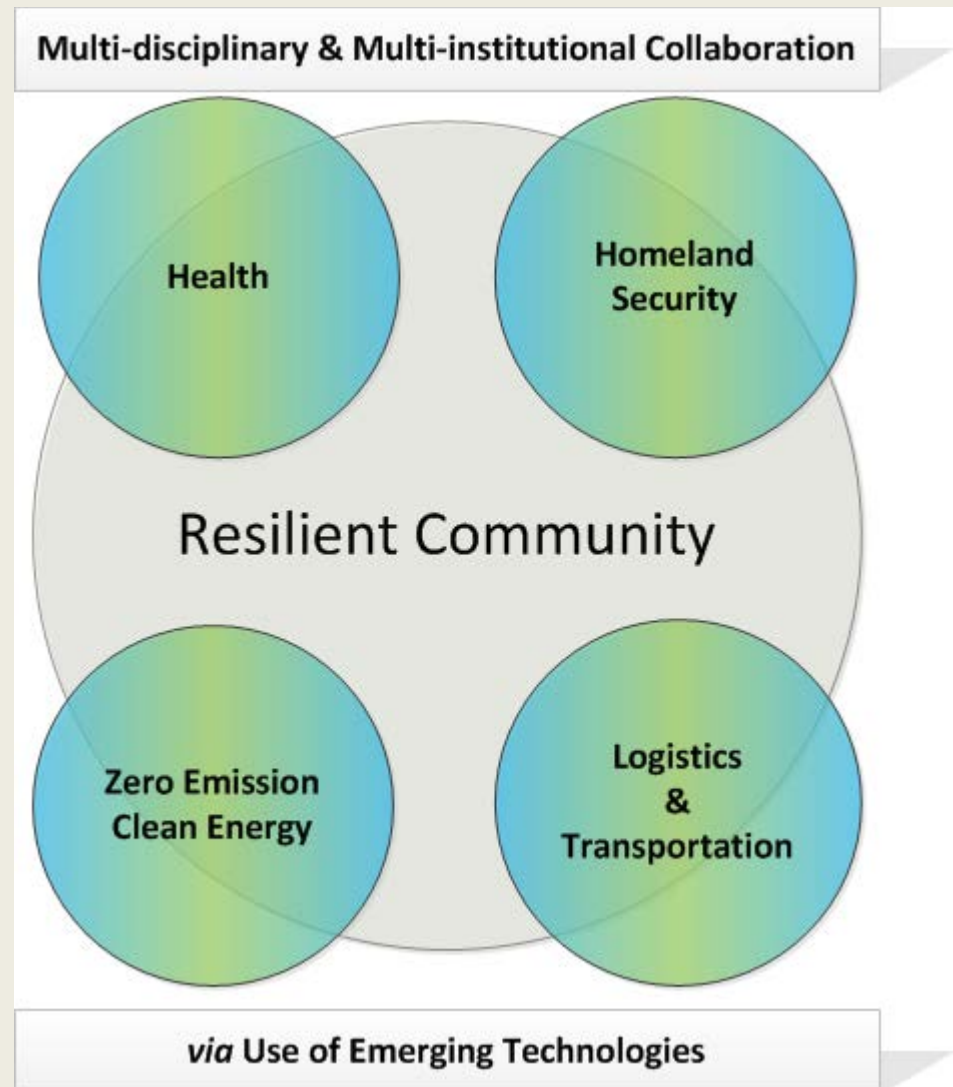
Research

Area of Expertise

- Large Scale Optimization
- Models under Uncertainty
- Decomposition Algorithms
- Parallel Computation

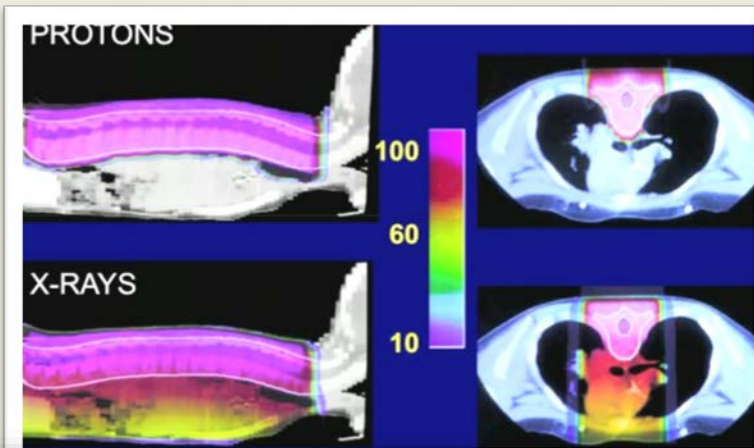
Areas of Research Interests

- Resiliency & Sustainability
- Health
- Logistics & Transportation
- Emerging Technologies (drones, driverless vehicles)
- Clean Energy & Zero Emission



Cancer Treatment

- Radiation Therapy
 - Photon, ion, heat
 - Proton
 - Intensity modulated proton therapy (IMPT)
- Immunotherapy
- Personalized treatment planning
- Biological effects of radiation



Robust Optimization for Intensity Modulated Proton Therapy Plans with Multi-Isocenter Large Fields

Li Liao, MS¹; Gino J. Lim, PhD¹; Yupeng Li, MS²; Juan Yu, PhD^{3,4}; Narayan Sahoo, PhD³; Heng Li, PhD³; Michael Gillin, PhD³; X. Ronald Zhu, PhD³; Anita Mahajan, MD⁵; Steven J. Frank, MD⁵; David R. Grosshans, MD, PhD⁵; Quynh-Nhu Nguyen, MD⁵; Daniel Gomez, MD⁵; and Xiaodong Zhang, PhD³

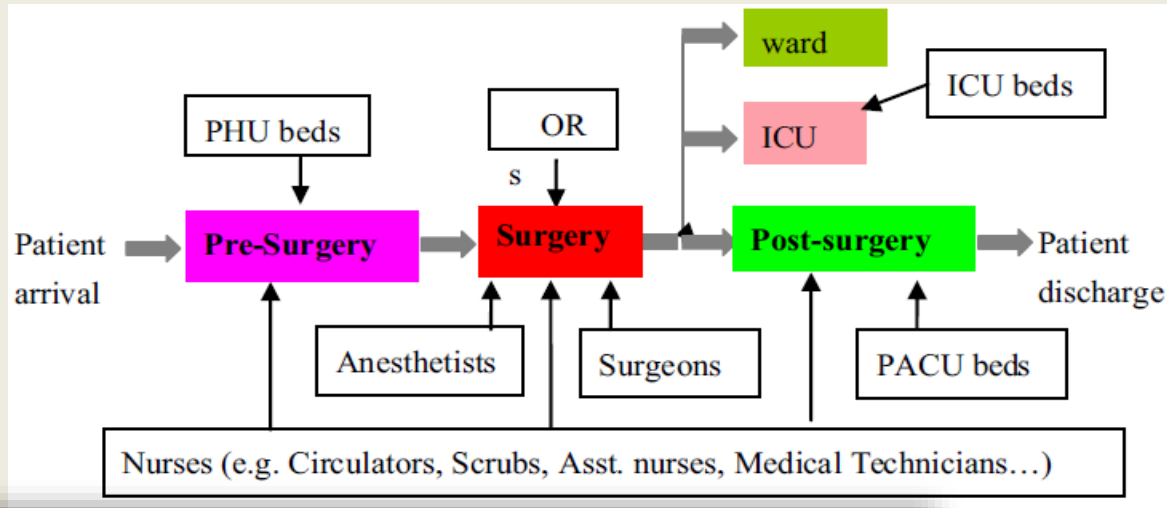
A Chance-Constrained Programming Framework to Handle Uncertainties in Radiation Therapy Treatment Planning

Maryam Zaghian^a, Gino J. Lim^{b,*}, Azin Khabazian^b

A User-centric Fluence Map Optimization Approach under Uncertainty using Chance-Constrained Programming

Azin Khabazian,^{a)} Maryam Zaghian,^{b)} and Gino J. Lim^{c)}

Operating Room Scheduling



Operations Research for Health Care 10 (2016) 35–48



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Operations Research for Health Care

journal homepage: www.elsevier.com/locate/orhc



Nurse scheduling with lunch break assignments in operating suites

Gino J. Lim^{a,*}, Arezou Mobasher^b, Jonathan F. Bard^c, Amirhossein Najjarbashi^d



Artificial Intelligence in Medicine 63 (2015) 91–106

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)



Artificial Intelligence in Medicine

journal homepage: www.elsevier.com/locate/aiim



A short-term operating room surgery scheduling problem integrating multiple nurses roster constraints

Wei Xiang^{a,*}, Jiao Yin^a, Gino Lim^b



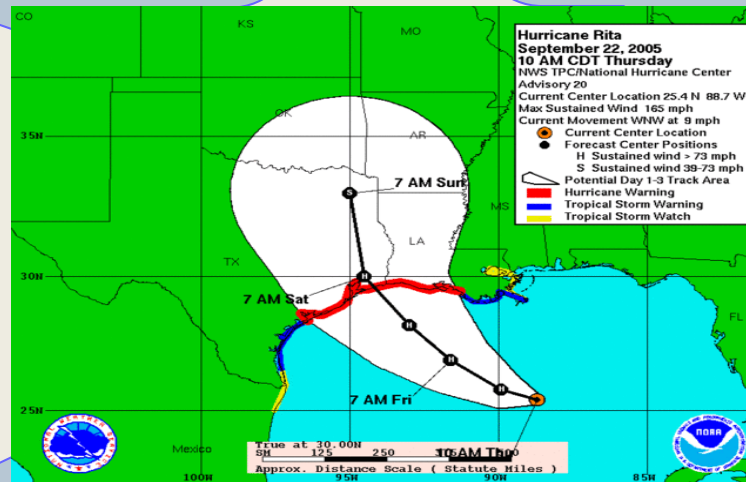
Disaster Planning & Management

Planning: Preparation, Mitigation

- What could happen?
- What would be the consequences?
- Can this be ameliorated?
- What resources are needed?
- Where do the resources need to be?
- What are the roles and responsibilities?
- What are the key actions?

Training

- What scenarios should we train for?
- What will first responders, first receivers, management, the community... experience?
- What resources will they have?
- What environment will they find?
- What tasks will they be performing?
- How will evaluation and feedback occur?



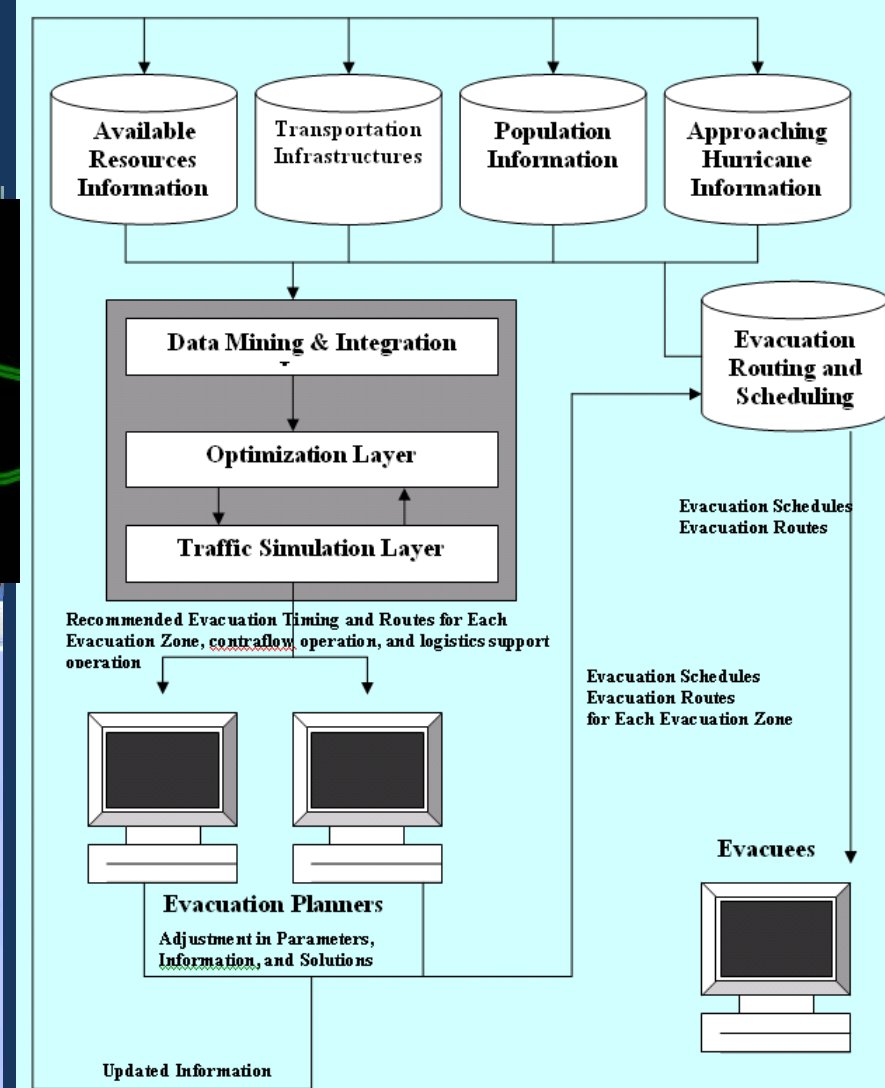
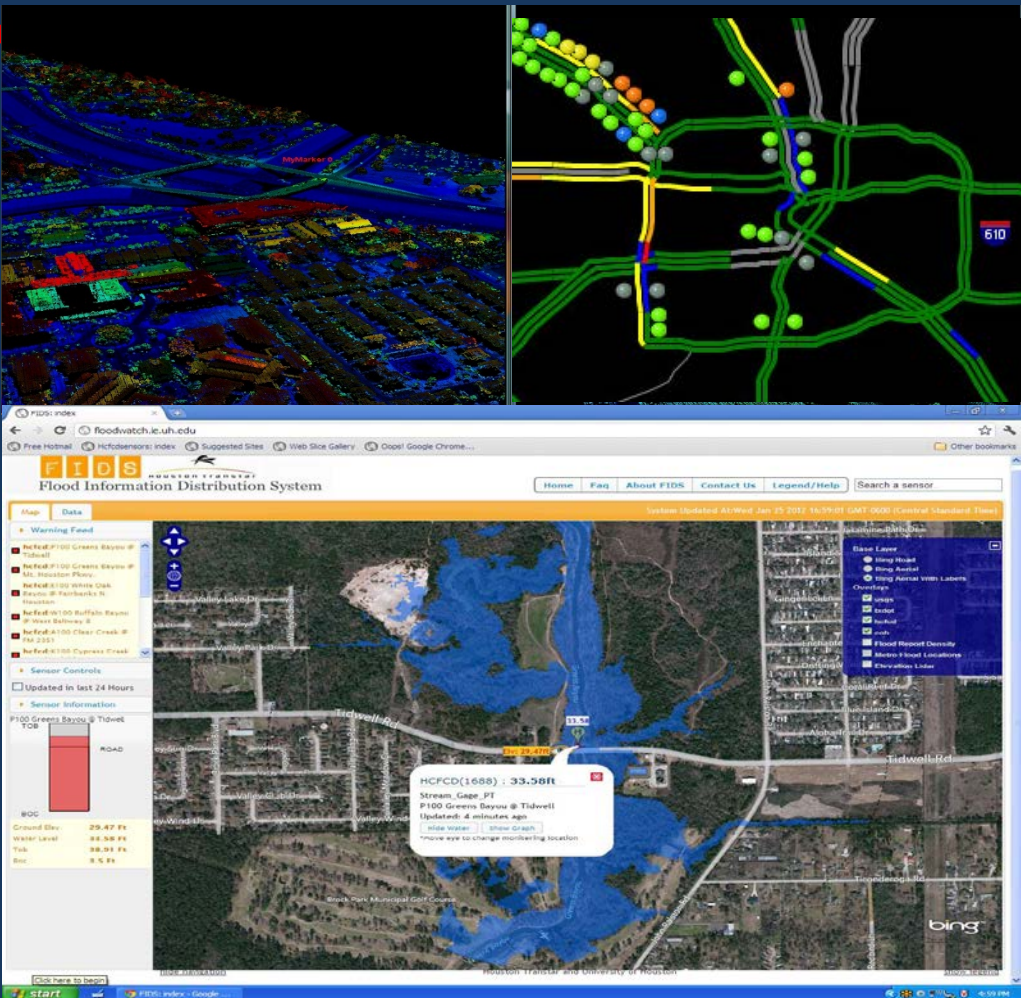
Recovery

- What happened?
- What is the right follow-up?
- What are the lessons learned?
- What resources require replenishment?
- What are the targets and schedule for returning to normalcy??

Response

- What is the situation? Do plans match?
- How should the plan be adapted?
- Are tasks, roles & responsibilities being picked up?
- Are the plans being carried out?
- Are the plans working?

Decision Support System Framework



European Journal of Operational Research

journal homepage: www.elsevier.com/locate/ejor

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Innovative Applications of O.R.

A capacitated network flow optimization approach for short notice evacuation planning

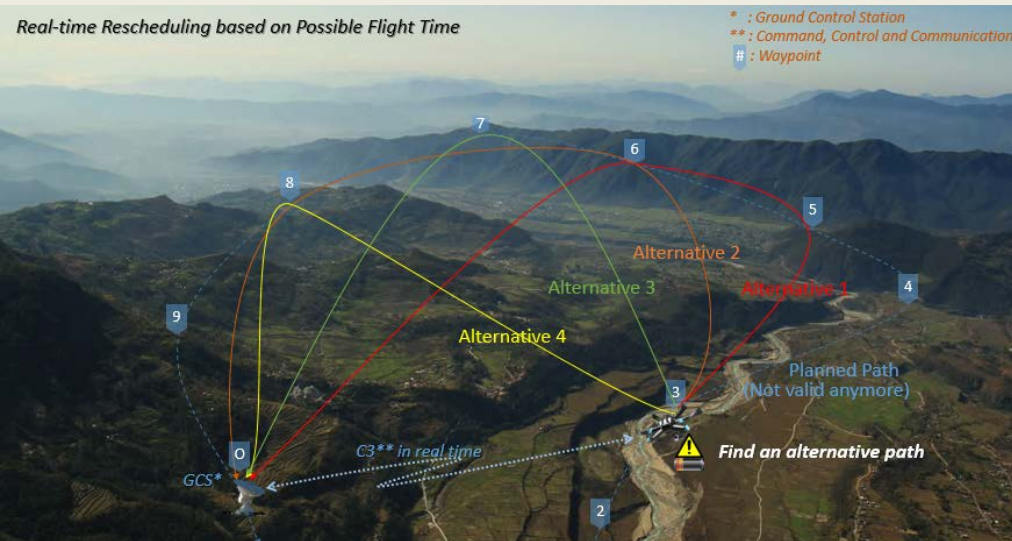
Gino J. Lim^{a,*}, Shabnam Zangeneh^b, M. Reza Baharnemati^a, Tiravat Assavapokee^c

Reliability analysis of evacuation routes under capacity uncertainty of road links

GINO J. LIM^{1,*}, MUKESH RUNGTA² and M. REZA BAHARNEMATI³

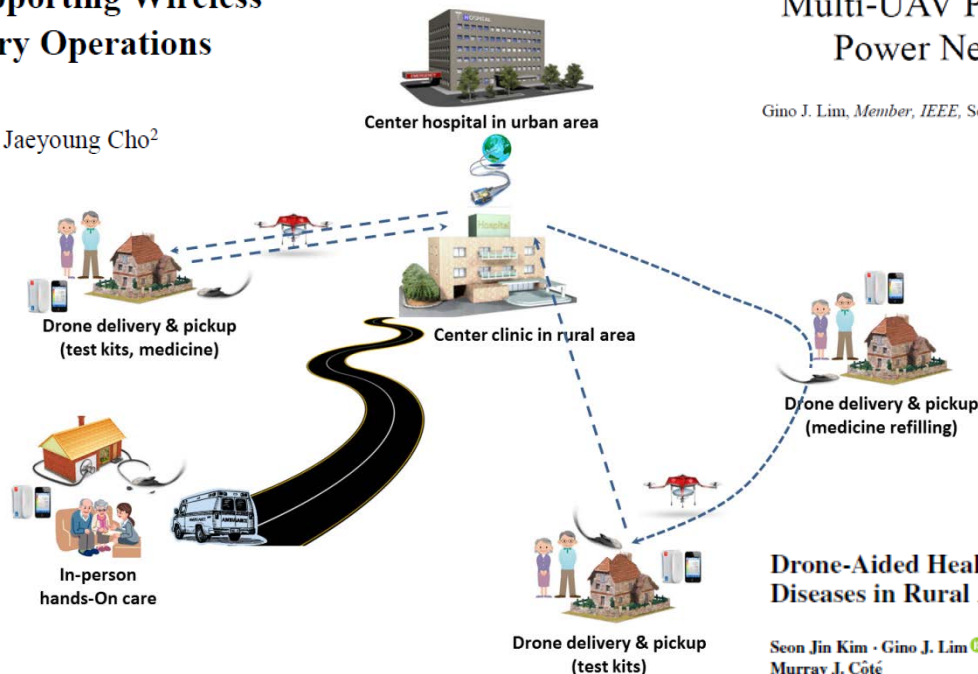
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Drone Placement and Routing



Drone Relay Stations for Supporting Wireless Communication in Military Operations

Seon Jin Kim¹, Gino J. Lim¹ and Jaeyoung Cho²



Multi-UAV Pre-positioning and Routing for Power Network Damage Assessment

Gino J. Lim, Member, IEEE, Seonjin Kim, Jaeyoung Cho, Yibin Gong, and Amin Khodaei, Member,



Drone-Aided Healthcare Services for Patients with Chronic Diseases in Rural Areas

Seon Jin Kim · Gino J. Lim · Jaeyoung Cho · Murray J. Côté

Power Production Planning

Integrated Microgrid Expansion Planning in Electricity Market Under Uncertainty

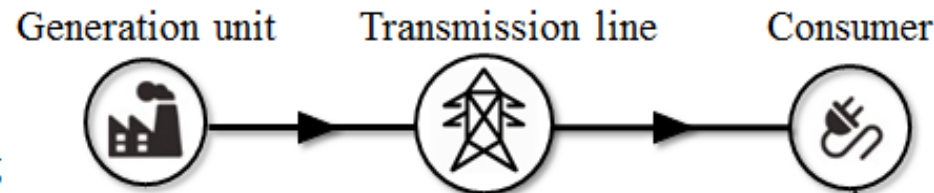
Aida Khayatian, *Student Member, IEEE*, Masoud Barati, *Member, IEEE*, and Gino J. Lim *Member, IEEE*

Market-Based and Resilient Coordinated Microgrid Planning Under Uncertainty

Aida Khayatian

Masoud Barati

Gino J Lim



⇒ Our approach: Integrating

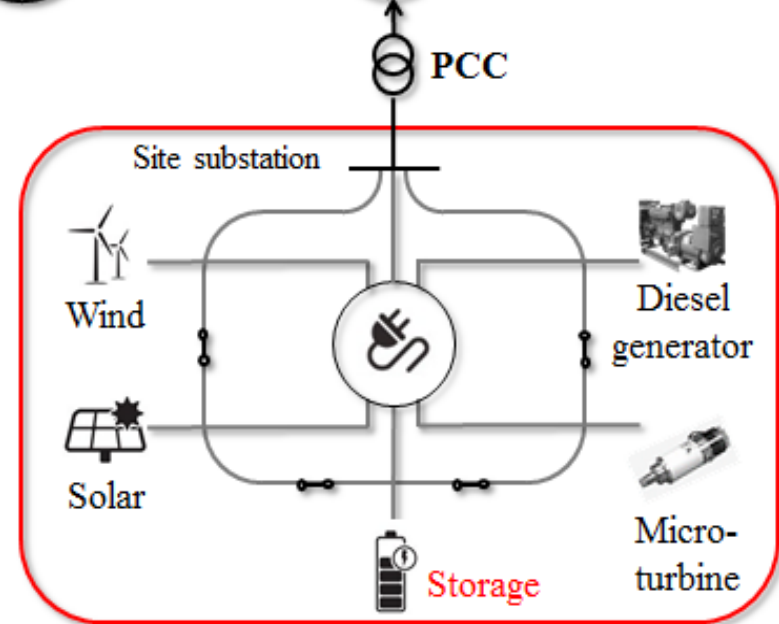
- + Microgrid Expansion Planning
- + Generation Expansion Planning
- + Transmission Expansion Planning

⇒ Our contribution: Main factors

1. Power outage of system
2. Cost of system
3. Environmental emission
4. Rural electrification
5. Market competition

→ Quantifying

→ Policymaking



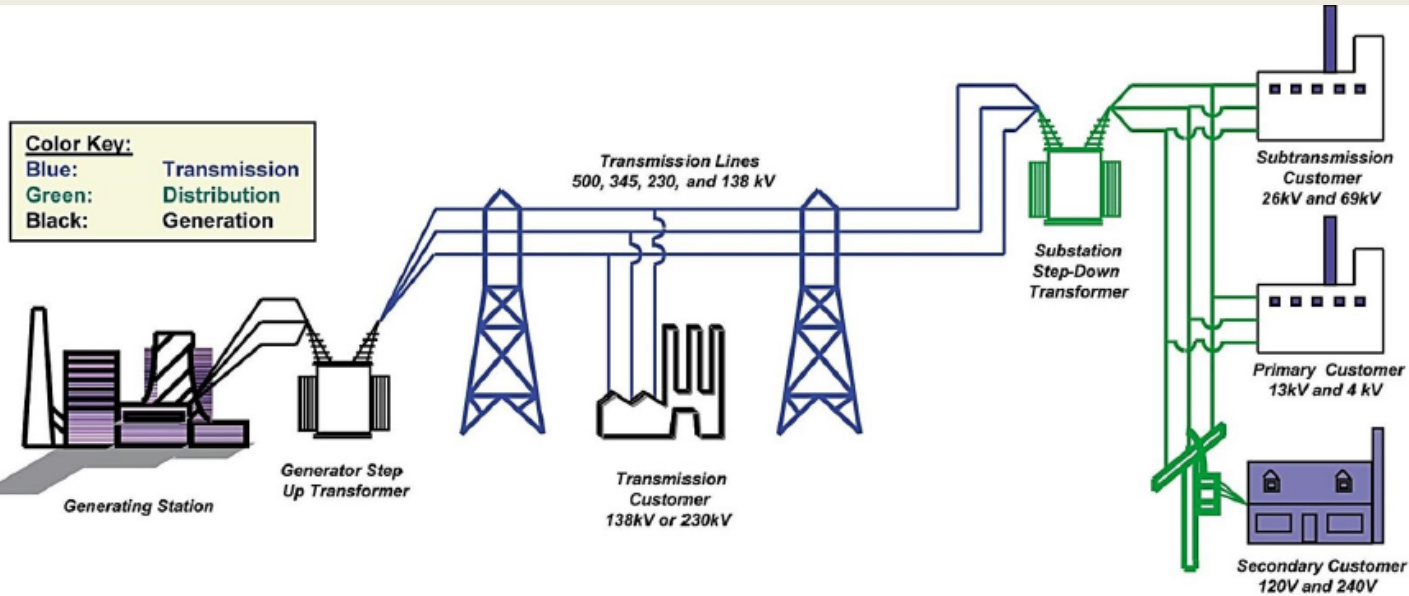
⇒ Modeling and solution approach:

2-stage stochastic integer programming
Benders decomposition

Microgrid [U. S. Department of Energy]:

- Group of interconnected loads and DERs.
- Islanded or grid-connected mode [IEEE 1547.4].

Power Restoration Optimization



A Parallel Sectionalized Restoration Scheme for Resilient Smart Grid Systems

Saeedeh Abbasi, *Student Member, IEEE*, Masoud Barati, *Member, IEEE*, and Gino J. Lim *Member, IEEE*

A GPP-based Sectionalization toward a Fast Power Transmission System Restoration

Saeedeh Abbasi¹, Masoud Barati², and Gino Lim¹,

A Multi-objective MPEC Model for Disaster Management of Power System Restoration

Saeedeh Abbasi, Masoud Barati, Gino Lim
University of Houston
Houston, TX 77004



Smart Ports

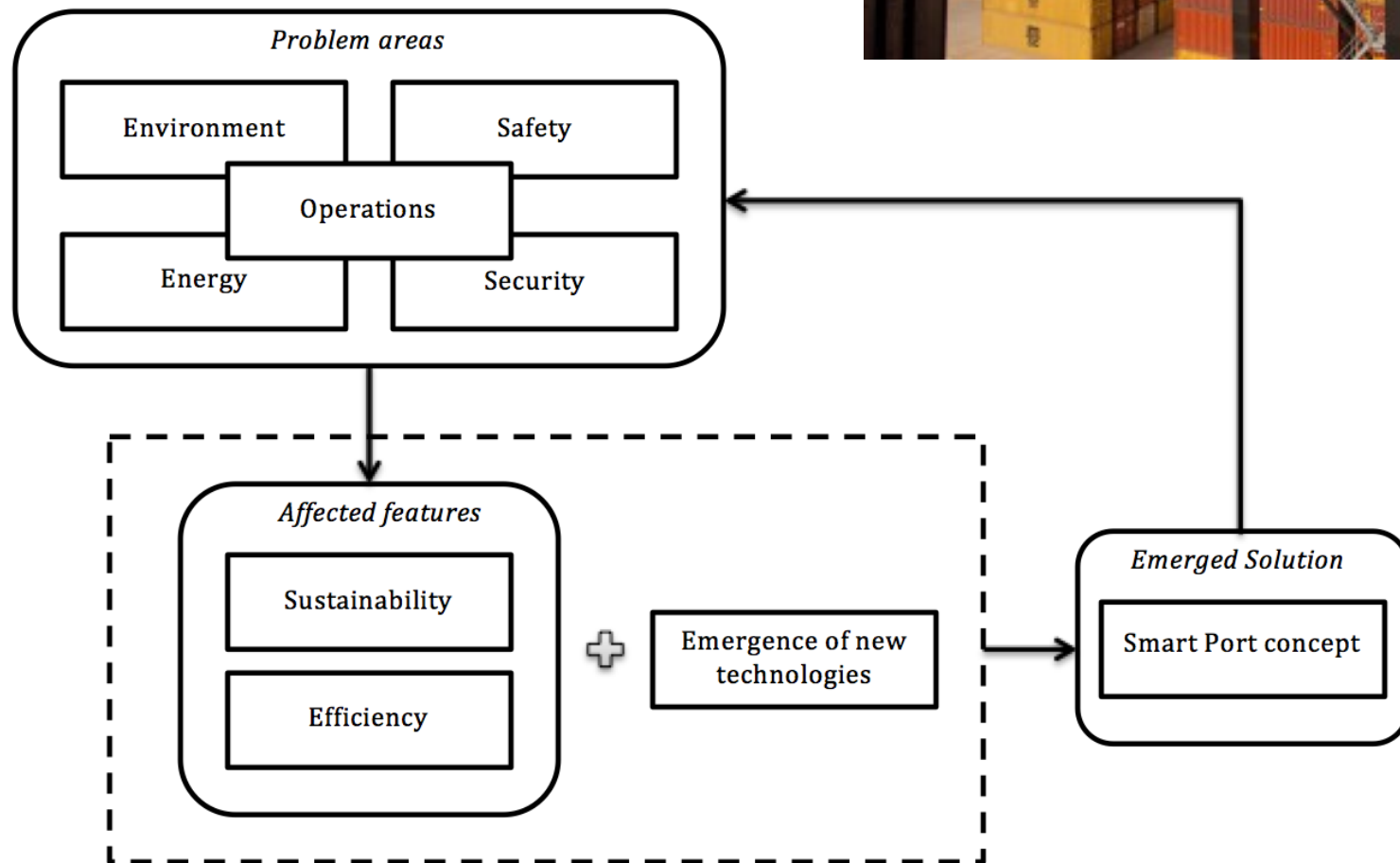
A Framework for Building a Smart Port and Smart Port Index

Anahita Molavi¹, Gino J. Lim², and Bruce Race³

¹Department of Industrial Engineering, University of Houston

²Department of Industrial Engineering, University of Houston

³College of Architecture and Design, University of Houston



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and Planning for Natural Disaster

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News & Events

Emergency Incident Management Seminar

Posted on April 21, 2015

Emergency Incident Management - History, Purpose and Current Practice The Seminar took place on April 17, 2015. The seminar was about the methods currently used by responders to maintain control and...



Inform's Student Chapter

Posted on April 16, 2015

Event Date & Time: 04/24/2015 - 9:00am to 4:00pm

Contact Us

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