### Fourth Symposium on Infrastructure Asset Management – SIAM4

Northwestern University Transportation Center  
600 Foster St.  
Evanston, IL 60208

**Schedule:**

<table>
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<tr>
<th>Time</th>
<th>Session/Activity</th>
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<tr>
<td>8:30</td>
<td><strong>Continental Breakfast</strong></td>
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<td>9:00</td>
<td><strong>Welcome Remarks</strong> – Pablo L. Durango-Cohen, Northwestern University</td>
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| 9:10  | **Keynote Address**  
Robert Peskin  
*Conceptual Model Integrating Transit Asset Management and Financial Planning* |
| 9:45  | **Session 1:** Asset Management Tools to Address Emerging Issues in Planning and Project Delivery  
Session Chair: Joe Schofer  
Daijiro Mizutani  
*Optimal Repair Policies for Infrastructure Systems with Life Cycle Cost Minimization and Annual Cost Leveling*  
Panagiotis Anastasopoulos  
*An In-Depth Econometric Analysis of Pavement Performance and Service Life by Pavement Rehabilitation Treatment Type and Delivery Method* |
| 10:45 | **Coffee Break**                                                                   |
| 11:00 | **Session 2:** Designing and Managing Infrastructure for Equity, Sustainability, and Resilience I  
Session Chair: Bryan Adey  
Jing Yu  
*Considering Environmental Impact in Pavement Design: An Input-Output Model with Substitution*  
Yun-Chi Yu & Paolo Gardoni  
*Optimal Community Planning and Policies for Improving Transportation Connectivity to Essential Facilities after Earthquakes*  
Samer Madanat  
*Tradeoffs Between Optimality and Equity in Transportation Network Protection against Sea Level Rise* |
| 12:30 | **Lunch**                                                                           |
| 2:00  | **Session 3:** Modeling and Tools to Support Asset Management  
Session Chair: Rabi Mishalani  
Craig Richmond  
*Jointly Optimal Policies for Pavement Maintenance, Repaving and Reconstruction: A Different Approach*  
Arnold Yuan  
Ricardo Archilla  
*Optimal Assignment of Safety Treatments to Reduced Roadway Departure (RWD) Crashes* |

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1 All talks are 20 minutes with 10 minutes for Q&A.
3:30  **Coffee Break**

4:00  **Session 4: Asset Management Practice and Research Frontiers**
    Session Chair: Paolo Gardoni

    Angelo Asnake  
    Safety Integrated Strategic Pavement Management Using a Hybrid Approach of Stochastic and Deterministic Process as a Practical Solution in Developing Countries: The Case of Addis Ababa, Ethiopia

    Sue McNeil  
    Asset Management Plans: State-of-the-Practice and Research Opportunities in State Departments of Transportation in the United States

5:00  **Adjournment**

6:30 - 10:00  **Dinner at The Barn**, Rear 1016 Church St. Evanston, IL 60201
Sunday, June 5, 2022

8:30  Continental Breakfast

9:00  Session 5: Designing and Managing Infrastructure for Equity, Sustainability, and Resilience II Session Chair: Robert Peskin
      Rabi Mishalani  Incorporating Resilience in Infrastructure Investment Decision-Making
      Saviz Moghtadernejad  Determination of Post-Disaster Restoration Programs for Road Networks Using a Double-Stage Optimization Approach
      Joe Schofer  Managing Infrastructure Assets for Resilience

10:30 Coffee Break

11:00 Session 6: Managing Rail Infrastructure
      Session Chair: Arnold Yuan
      Bryan Adey  Assessing the Effects of Intervention Free Periods on Railway Intervention Costs and Service
      Adrian Hernandez  Framework to Support Infrastructure Upgrades for Decarbonization of U.S. Freight Rail

12:00 Lunch

1:30 Session 7: Emerging Technologies and Methods to Support Asset Management
      Session Chair: Sue McNeil
      Taichi Ishikawa  Local Anomaly Detection on Slopes Based on Deep Learning with a Point Cloud
      Cristina Torres-Machi  Can Satellite Data Be Used to Estimate Pavement Roughness?
      Jinwoo Lee  Autonomous Condition Monitoring-Based Pavement Management System

3:00 Coffee Break

3:15 Session 8: Emerging Methods and Issues in Asset Management
      Session Chair: Samer Madanat
      Sam Labi  Infrastructure Preparations for CAV: A Conversation on Demand and Supply Perspectives, and a Numerical Case Study on Dedicated Lane Deployment Scheduling
      Jorge Prozzi  Estimating Pavement Friction at a Network Level
      Omar Swei  Electrification of the Vehicle Fleet and its Effect on the Global Warming Potential of Roadways

4:45 Final Remarks and Adjournment