IMPERIAL

Healthy People and Healthy Planet

Leveraging AI for Decarbonised, Healthy, Inspiring and Energy-Positive Cities

Location: Data Science Institute, South Kensington Campus, Imperial College London, SW7 2AZ

Welcoming session

1.30-2.00 pm Coffee & Tea
2.00-2.15 pm Introduction of the workshop and objectives (Chair Mojtaba Moatamedi, Executive Director, New York Univ. London)

Lecture session: Challenges in NetZero and AI in urban sustainability and management (Chair Mojtaba Moatamedi)

2.15-2.25 pm Challenges in Net Zero: Delivering Healthy Places for social connection, aesthetics, inspiration, safety, health & well-being (Philip Challinor, Architect)

2.25-2.35 pm Introduction of a recently funded EPSRC project: "Hybrid AI and multiscale physical modelling for optimal urban decarbonisation" (Fangxin Fang – Earth Science and Engineering, Imperial College)

2.35-2.50 pm Climate Change Policies Reduce Air Pollution, improve Health and Increase Physical Activity: Benefits, Costs, Inequalities, and Indoor Exposures (Sean Beevers – Environment Research Group, Imperial College)

2.50-3.05 pm Bayesian Source Identification with Dual Hierarchical Neural Networks for Urban Air Pollution (Elissar Al Aawar- KAUST, Saudi Arabi)

3.05-3.20 pm Healthy urban transitions: reducing car dependency (Audrey, de Nazelle – Centre of Environmental Policy, Imperial College)

Visualisation session (Coffee/Tea Break)

3.20-3.30 pm Coffee & Tea

3.30-3.45 pm AI4System in urban environmental prediction and management (Christopher C Pain, Earth Science and Engineering, Imperial College)

3.45-4.00 pm Adaptation and RECLAIM Network Plus (Prashant Kumar- Surrey Univ.)

Lecture session- Challenges in NetZero and AI in urban sustainability and management (Chair Mojtaba Moatamedi) - Continued

4.00-4.15 pm Robust Urban greening, climate and interpretable SciML for fluid flows using multiscale graph neural networks (Romit Maulik- Penn State Univ.)

4.15-4.30 pm From Data to Action: Enhancing Urban Life with Climate Intelligence (Daniil Mintc, OpenWeather Meteorological Service)

4.30-4.45 pm Creating Trustworthy AI for Building Management (Amir Taba- Direk)

Discussion and Closing Remarks (round table) (4.45 – 5.00 pm): Challenges in NetZero and AI in urban sustainability and management (Chair Mojtaba Moatamedi)

1. Leveraging technology to promote healthy living
2. Challenges in existing technologies toward Net-Zero
3. Policy changes and development control using digital tools
4. Energy use, economics and carbon reduction
5. Trustworthy and generative AI
6. Healthy built environment
7. Future/Potential Funding

Networking and Refreshment (5.00 pm onward)