

Data Science and Analytics Thrust, Information Hub  
The Hong Kong University of Science and Technology (Guangzhou)

# SPATIO-TEMPORAL FORECASTING

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Deterministic Graph Neural Networks for Carbon Emissions and Generative  
Probabilistic Stochastic Differential Equation-based Diffusion for Traffic Flow

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Presented by Mingze Gong on August 12, 2024

# RESEARCH QUESTIONS IN THE PAPER

## Feeder

What real-time data/information can be gained from the LiW feeder signals that relate to changes in powder properties beyond mass flow?

- » **Context:** LiW feeders control mass flow rates of powders, essential for continuous manufacturing precision.
- » **Signals Indicators:** Changes in screw speed, motor torque, and weight fluctuations may reflect variations in:
  - Density
  - Particle size
  - Flowability
- » **Goal:** Utilize feeder signal variations to infer real-time changes in powder properties, improving product quality and process consistency.

## References



THANK YOU!