SUMMER SCHOOL

ON FORECASTING AND MATHEMATICAL MODELING FOR RENEWABLE ENERGY

A PIMS CRG on Forecasting and Mathematical Modeling for Renewable Energy

JULY 14 - 26, 2024

BANFF INTERNATIONAL RESEARCH STATION (BIRS), UBC OKANAGAN, KELOWNA

Wind and solar power are the primary sources of renewable energy, and both driven by the weather, hence stochastic and variable. To solve the grand challenges related to their optimal deployment requires an interdisciplinary approach combining expertise in mathematics, statistics, atmospheric sciences, fluid dynamics, engineering and economics. In this summer school, the students will receive training in key methodologies for forecasting and mathematical modeling of renewables.

Delivery method: In-person/ Virtual
We will be hosting the students at BIRS-UBC Okanagan to enable in person peer to peer interaction to form a friendly and energetic atmosphere.

Courses are designed and delivered by a team of instructors. All courses will have lecture and exercise components. Some lectures will be delivered online; however, there will be an instructor on site for each course to assist students during the exercise sessions which will take place in person. Exercise components will include group projects and group presentations.

Financial support:
All admitted students will be provided free accommodation at the UBC Okanagan campus and financial support up to **500 CAD** to cover travel expenses. Some lunches will be provided and students will be given **200 CAD** allowance for meals.

We offer the following mini courses:

- **Stochastic dynamical systems, uncertainty quantification, extreme events:** Whitney Huang (Clemson University), Mustafa Mohamad (University of Calgary)
- **Meteorology of Wind Energy for Complex terrains and Off-shore Wind:** Richard Karsten (Acadia University), Adam Monahan (University of Victoria)
- **Optimization and applications to microgrids and remote communities:** Serasu Duran (University of Calgary), Joshua Brinkerhoff (University of British Columbia at Okanagan)
- **Mean field games and applications to modeling of electricity markets:** Roxana Dumitrescu (King's College London), Michael Ludkovski (University of California at Santa Barbara)

Lectures available online | Please register online | Students in graduate programs are eligible to apply |
Apply by May 10 at 5 PM MT |
https://www.pims.math.ca/events/240713-ssofmmfre

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