

MONAN Meeting: AI for atmosphere/ocean dynamics

*** Final schedule ***

Day 19/June/2024

Link – YouTube: <https://www.youtube.com/watch?v=u0HtjQ27Z7g>

- 09:00-10:00: MONAN project (Dr. Saulo R. Freitas, INPE)
- 10:00-10:15: Coffee-break
- 10:20-11:20: Nowcasting by radar images using a machine-learning approach (Prof. Fabrício P. Härter, UFPel)
- 11:20-12:20: CIMAER (Brazil): Mission, activities, developments (FAB: Brazilian Air Force)
- 12:00-14:00: Lunch
- 14:00-15:00: Earth-2 project (Dr. Pedro M. Cruz e Silva, Nvidia)
- 15:00-16:00: Nowcasting: Developments and research (Prof. Gutemberg B. França, UFRJ)
- 16:00-16:15: Coffee-break
- 16:20-17:20: Nowcasting: Developments and research (Dr. Alan J. P. Calheiros, INPE)

Day 20/June/2024

Link – YouTube: https://www.youtube.com/watch?v=P6g65RMzJ_k

- 09:00-10:00: Data assimilation by machine learning approaches (Haroldo F. de Campos Velho, INPE)
- 10:00-10:15: Coffee-break
- 10:20-11:20: DDNet: Prediction and data assimilation (Prof. Fangxin Fang, Imperial College London)
- 11:20-12:20: On the potential and limitations of current ML forecast models (Dr. Massimo Bonavita, ECMWF)
- 12:00-14:00: Lunch
- 14:00-15:00: FourCastNet system (Dr. Pedro M. Cruz e Silva, Nvidia)
- 15:00-16:00: GOES16's ML Models Nowcasting (Prof. Eduardo B. da Silva, CEFET/RJ)
- 16:00-16:15: Coffee-break
- 16:20-16:50: Hybrid modeling: Differential equations + AI (Dr. Haroldo F. de Campos Velho and Prof. Gutemberg B. França, INPE / UFRJ)
- 16:50-17:20: AI systems for operational climate impact (Dr. Gabriel Perez, MeteoIA)

Day 21/June/2024

Link – YouTube: <https://www.youtube.com/watch?v=ik8j6eiJQt0>

- 09:00-10:00: Multi-scale physical modeling and AI for solving partial differential equations (Prof. Fangxin Fang, Imperial College London)
- 10:00-10:15: Coffee-break
- 10:20-11:20: Forecasting Global Weather with Graph Neural Networks (Dr. Ryan Keisler – OpenEarthAI)
- 11:20-11:40: Predictability by machine learning (Dr. Haroldo F. de Campos Velho, INPE)
- 11:40-12:10: Book presentation:
“*Computational Intelligence Applied to Inverse Problem in Radiative Transfer*”
- 12:10-13:30: Lunch
- 13:30-15:30: Round Table: AI and MONAN project