MACHINE WIND

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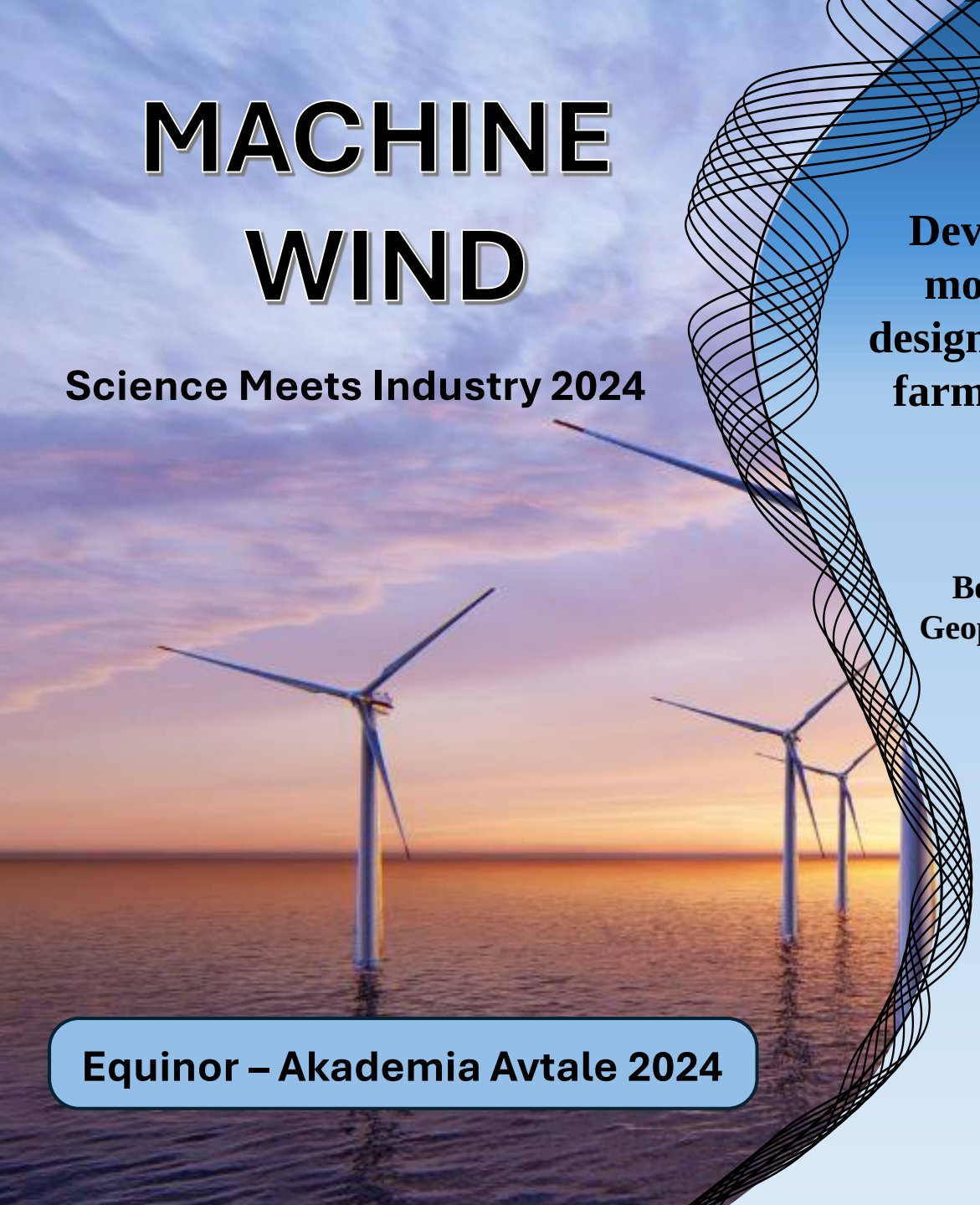

Development of fast aerodynamic models intended for the optimal design and operation of offshore wind farms by using supervised machine learning

Bergen Offshore Wind Centre (BOW), Geophysical Institute, University of Bergen

Leading PI: Prof. Cristian G. Gebhardt
Supporting PIs: Dr. Bruno A. Roccia
Assoc. Prof. Etienne Cheynet
Prof. Magne Haveraaen

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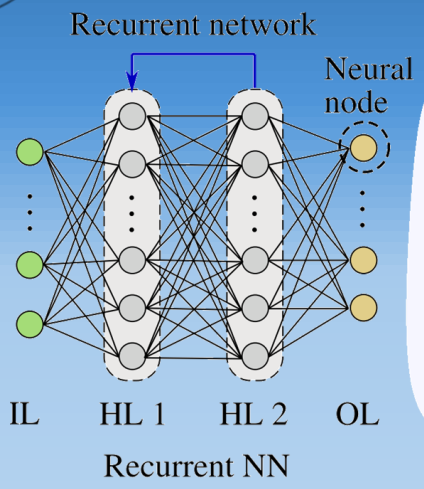
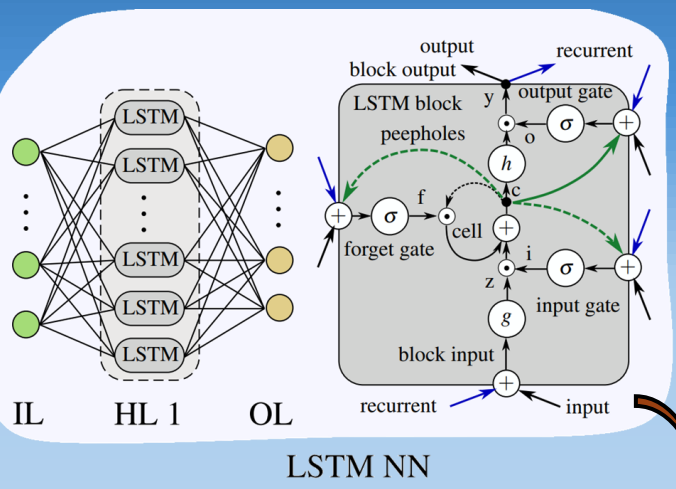
Project objectives





Aerodynamic Model + Machine Learning
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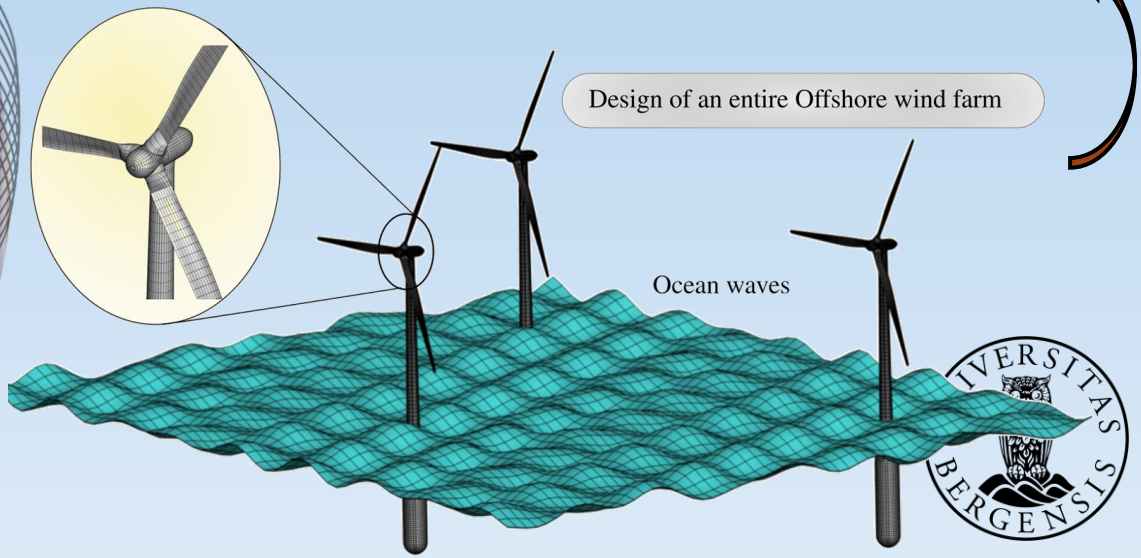

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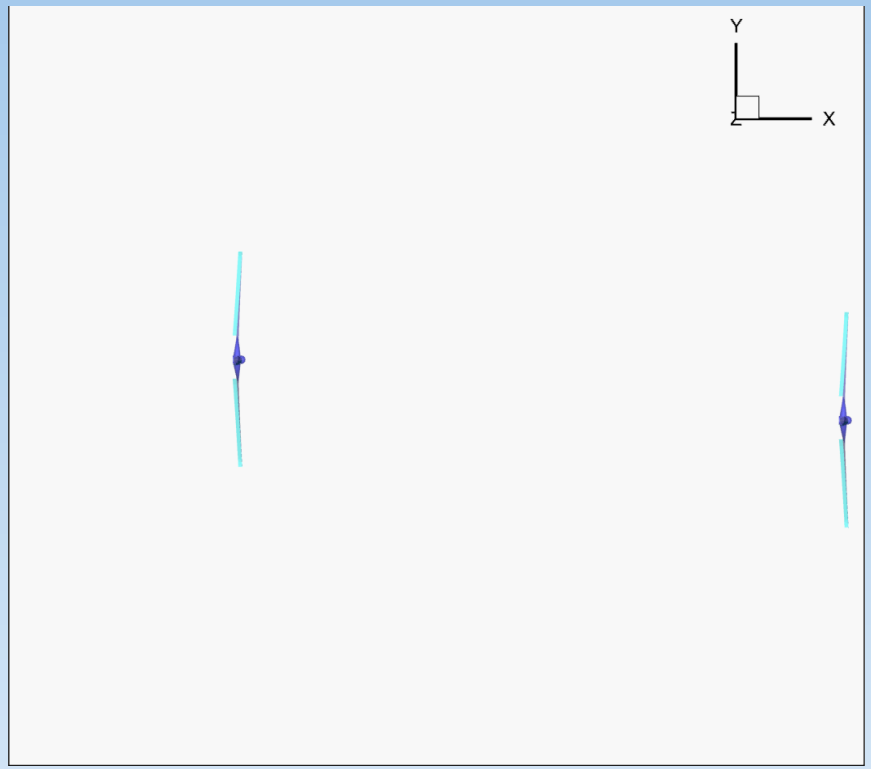
Project plan

- **WP1:** Extension of a UVLM-code to large –scale problems
- **WP2:** Development of fast models via supervised ML
- **WP3:** Robust surrogate modeling assessment
- **WP4:** Showcases



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Project plan

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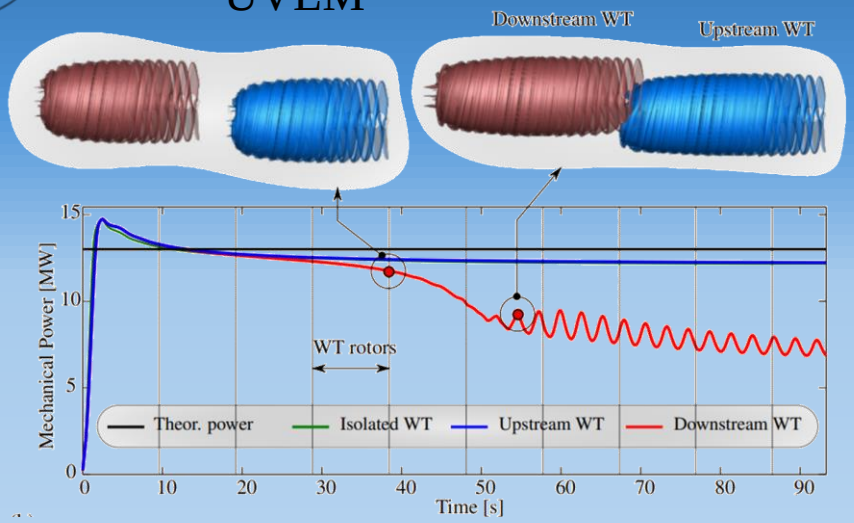
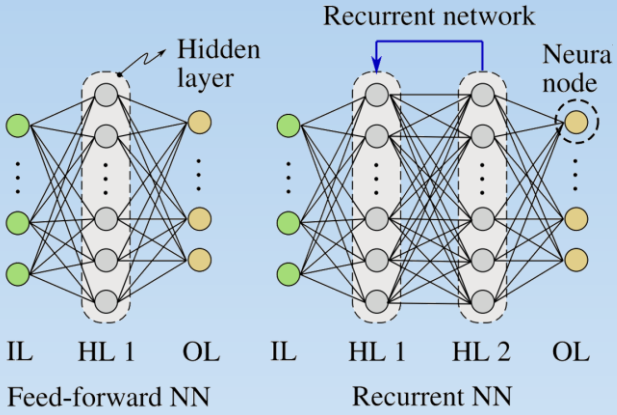
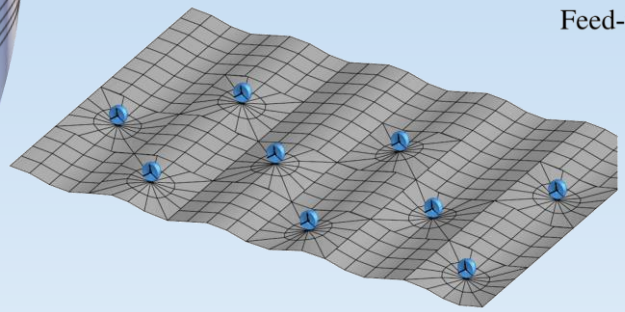
UVLM



Near field

Far field





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Impact & Progress

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New simulation technologies for OWEs

Optimization/operation of OWEFs

Digitalization of OWEFs

IMPACT

Digital twins

Superlative predictive capabilities

Aerodynamic modeling + ML

UNIVERSITAS BERGENSIS

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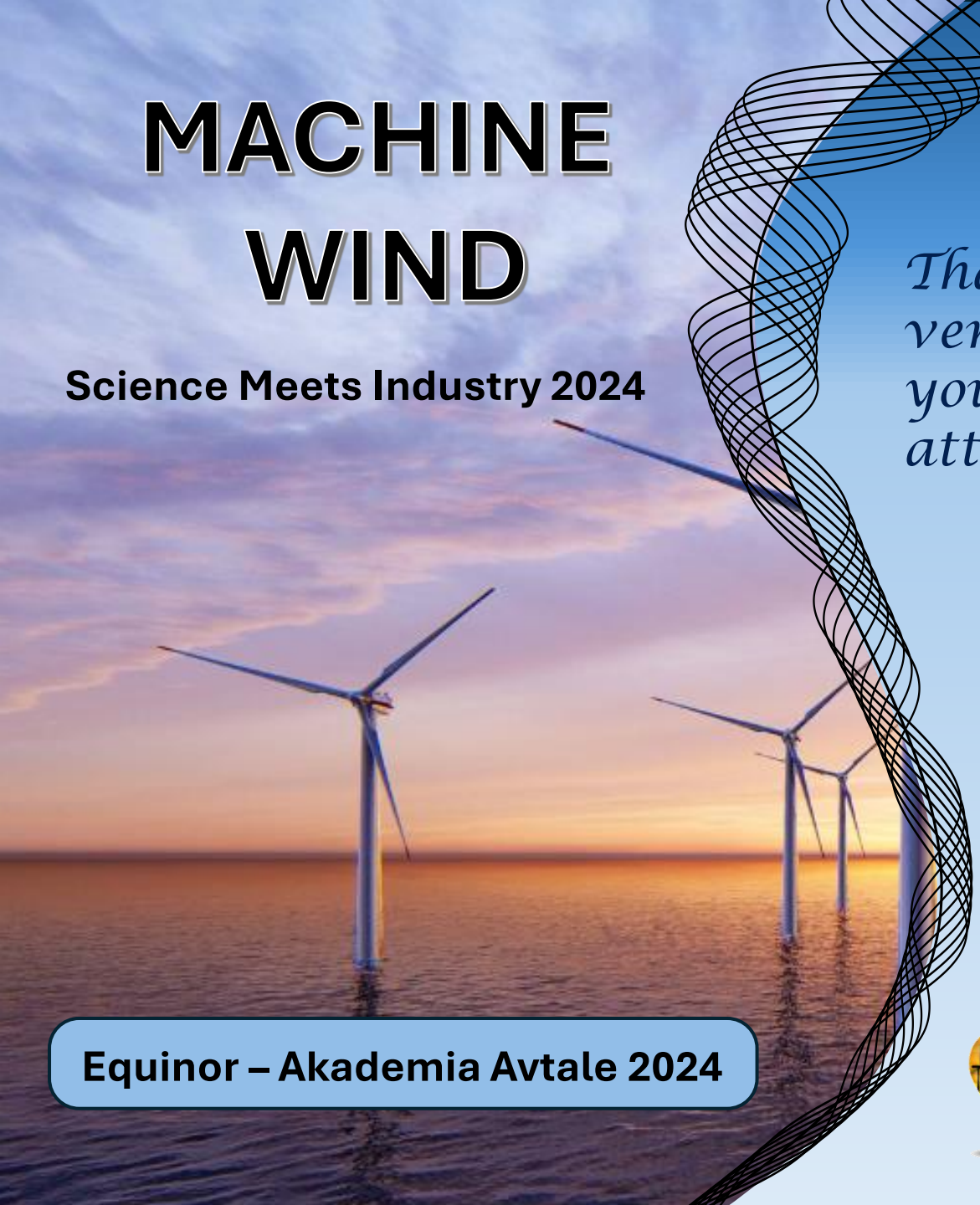

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Thank you very much for your time and attention

Contact