Workshop
Science & The Energy Challenge on Offshore Wind

Part I

Jeroen Witteveen (CWI)
Gijs van Kuik (TU Delft)
Michiel Zaaijer (TKI WoZ)
Carlos Simao Ferreira (TU Delft)
Erik Langereis (DIFFER)

Centrum Wiskunde & Informatica (CWI)
National Scientific Research Center for Mathematics and Computer Science
Science Park 123, 1098XG Amsterdam
Welcome

Amsterdam Science Park:
- NWO institute CWI
- FOM institutes Nikhef and AMOLF
- SARA ICT foundation
- University of Amsterdam

Centrum Wiskunde & Informatica:
- Independent national scientific research institute
- Discovery of knowledge and transfer to society and industry
- Research staff, Postdocs, PhD students
Centrum Wiskunde & Informatica

Broad, societally-relevant research themes:

- Energy (Eric Pauwels)
- Logistics (Rob van der Mei)
- Software (Frank de Boer)
- Information (Lynda Hardman)
- Life Sciences (Roeland Merks)

Research groups active in the Energy theme:

- Scientific Computing: Computational fluid dynamics (Jeroen Witteveen)
- Multiscale Dynamics: Plasma physics (Ute Ebert)
- Intelligent Systems: Smart power grids (Han La Poutré)
- Life Sciences: Biofuels (Roeland Merks)
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Workshop goals:

- Discuss long-term scientific challenges in offshore wind energy
- Strengthen the multi-disciplinary network of energy researchers involved

European Academy of Wind Energy (EAWE):

- Overview of fundamental research questions in Europe
- In progress, to be presented later this year

Today’s opportunity:

- Sneak preview of EAWE report
- Discuss and translate to strengths of the Dutch research environment
## Science & The Energy Challenge on Offshore Wind

Selection of topics relevant to the Dutch sector (Part I):

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<th>Topic</th>
<th>Introduction by</th>
<th>Discussion leader</th>
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<tr>
<td>Aerodynamics</td>
<td>Carlos Simao Ferreira (TU Delft)</td>
<td>Leo Veldhuis (TU Delft)</td>
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<td>Hydrodynamics, Soil characteristics,</td>
<td>Andrei Metrikine (TU Delft)</td>
<td>Michiel Zaaijer (TKI WoZ)</td>
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<td>Floating</td>
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<td>Materials and Structures</td>
<td>Rogier Nijssen (WMC)</td>
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<td>Control and System Identification</td>
<td>Jan-Willem Wingerden (Duwind)</td>
<td>Marco de Baar (DIFFER, TU/e)</td>
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<td>Wind and Turbulence</td>
<td>Joachim Peinke (Forwind, University of Oldenburg, Germany)</td>
<td>Richard Stevens (Johns Hopkins University, USA)</td>
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Interested in (co-)organizing an energy workshop on your field of expertise?
The workshop format is an initiative of FOM and its energy institute DIFFER, but is intentionally chosen to be an open format to encourage those interested to adopt it for future workshops to be organized. If preferred by interested parties, DIFFER can play a facilitating and supporting role in the workshop organization.

Do you like to stay informed on the workshop and related activities?
To obtain a better overview of the energy research in the Netherlands and the professionals associated working at universities, institutes and companies, you are invited to subscribe to the mailing list. You are kindly requested to provide some information on your main interests and fields of expertise (send email).

Please feel free to contact dr. Erik Langereis (DIFFER) for additional information or requests.
The workshop format Science & the Energy Challenge serves as an open platform to build a multidisciplinary community of researchers working on energy in the Netherlands.

- **Grand challenges on energy & climate**

  The transition to a fully sustainable energy infrastructure is one of the grand challenges facing us this century. Innovation and scientific breakthroughs on existing and future technologies are essential to foster this transition. [Read more](#)

- **Role of scientific research**

  In order to drive the transition to sustainable energy, we need to accelerate energy innovation throughout the technology chain. A key enabling factor is scientific research with a focus on fundamental understanding and driven by application. [Read more](#)

- **Building a national community on energy research**

  Multidisciplinary scientific collaboration and breakthroughs are needed to tackle the energy transition. By building an active network of researchers working on energy we will create a promising soil for future energy solutions. [Read more](#)
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Workshop in Euler Room Z009

Lunch in Newton Room Z010 (12:30h)

Breaks and drinks in hal (11:30h, 15:00h, 16:30)

Wireless Wifi connection: WCW-zalen, no password needed

Introduction: The EAWE research challenges on offshore wind
Gijs van Kuik (EAWE, TU Delft)
Science & The Energy Challenge on Offshore Wind

Thank you for your attention
Questions?