INTERNATIONAL

GREENLAB-VILLUM FELLOWSHIP PROGRAM

Academically hosted by Technical University of Denmark (DTU) and Aarhus University (AU)

Apply before 30th November 2023

GreenLab

CALL FOR APPLICATIONS
Agriculture-Energy Nexus

VILLUM FONDEN

DTU Technical University of Denmark

AARHUS UNIVERSITY

GreenLab

- GreenLab, VILLUM Fonden, Technical University of Denmark (DTU) and Aarhus University (AU) are pleased to announce up to five joint theme-based research fellowships in the period from January 2024 to December 2025. The research program focuses on challenges related to the ever-increased interplay between the agricultural sector and the energy sector, with PtX-related production of Green Fuels combined with novel and innovative sustainability initiatives in agricultural production as the focal points.
- This two-year fellowship initiative invites candidates from both Danish and top-tier international universities to participate. DTU and AU serve as the academic host institutions for this program and GreenLab is setting the scene for green transition challenges to be battled through the program.

What is GreenLab and Why Apply?

A global research platform fit for today's challenges

- GreenLab is the ideal research platform for businesses that want to contribute to the green transition and conduct their R&D efforts where rubber meets the road. We work with mission-driven research and we are a living lab for solving wicked problems.

We connect researchers with businesses

- At GreenLab, some of the world's best researchers collaborate with ambitious businesses in interdisciplinary, applied research projects. Our focus is mainly on, but not limited to, energy technologies, Power-to-X, bio-economy, sector integration, circular economy, and eco-industrial cluster development.

Mission-Driven Research

- The fellowship candidates will be working with projects with strong links between novel agricultural industrial processes and the green energy sector – all with direct applicability to the eco-industrial cluster of GreenLab in Skive, Denmark.

GreenLab

Who can apply?

The call is open for researchers of any nationality and from all disciplines with research profiles within the thematic scope of the call. The target group of the program is talented researchers at all career stages with **minimum a PhD** at the time of application deadline (we are open for applicants of the final stage of their PhD as well).

Applicants apply individually, but the selected candidates are expected to work closely together as a group during the fellowship. Furthermore, relevant researchers from GreenLab's research team and relevant research centres from all Danish Universities, will be affiliated with the selected group of fellows.

The ideal candidate has a collaborative approach for their research, where they see the opportunity for working with other fields than their own, as the main driver for their future career.

If this speaks to you, apply here by the 30th of November 16:00 CET

GreenLab

Selection Criteria

- **Scientific Excellence:**
  Academic credentials and experience
- **Motivation for Fellowship:**
  Alignment with GreenLab goals, vision and mission-driven research approach
- **Suggested Research Focus:**
  Research topic which falls into the category of the call and is well linked to the industry cluster in GreenLab. Applicants are encouraged to take contact to GreenLab and discuss details of their suggested research topic before applying.
- **Linkage to Host University:**
  Alignment with existing research programs and groups at the two host universities. Applicants are encouraged to make direct contact to relevant groups before applying.
- **Flexibility on research agenda:**
  In an experimental setting of an interdisciplinary fellowship program in a large-scale living lab as GreenLab, opportunities may change over time. Fellow candidates who are curious by nature and willing to explore new topics and interdisciplinary contexts outside their main field of expertise are rated high.

Selection Board

- After the application deadline on November 30, 2023, applications will be subject to an eligibility screening. A review and selection panel will evaluate each eligible proposal and make the final selection
- Our Evaluation and Selection Board consist of leading academic representatives from the Danish Universities and GreenLab

GreenLab

Eoghan Rattigan

PhD in Physics and
Industrial Sustainability Scientist at GreenLab

> “I want to enable more fellow researchers like myself to jump out of their labs and into a real life living-lab setting, paving the road towards industrial sustainability”

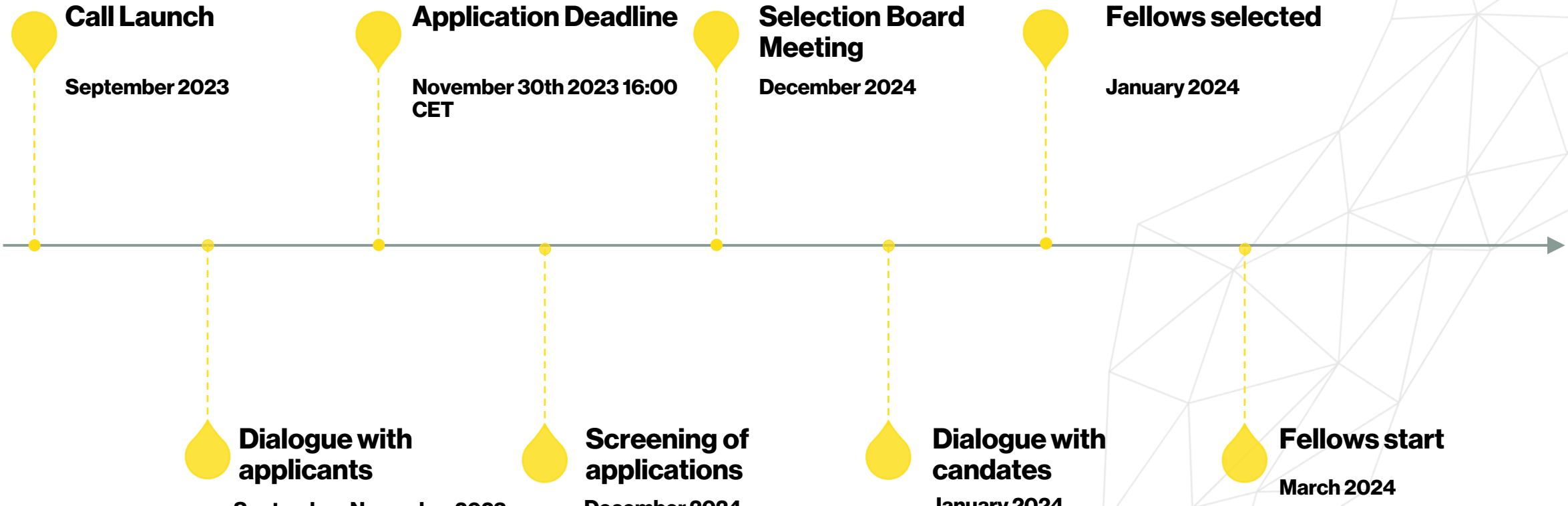
GreenLab

Example of relevant research themes *

- Green biorefinery value chains based on e.g., grass (protein extraction and cascade applications)
- PtX and Green Fuels, e.g., methanation – for biogas and syngas upgrade based on green hydrogen, or the production of MeOH or higher value fuel products
- Drying processes, e.g., value extraction through condensates or utilization of waste heat
- Odor issues when working with agricultural waste to value streams
- Legislation and obstacles in cooperative setups for industrial clusters
- Water reuse between agriculture and PtX-related energy
- Optimizations and balancing of value chains with multiple energy outputs from agricultural waste (e.g., biogas and pyrolysis in combination)
- Utilization of waste and side streams in industrial processes – e.g., biochar or brown juice from grass processing
- Energy and resource optimization in industrial clusters with agricultural value chains – e.g., through digital twins
- Role of industrial clusters in the national energy landscape – e.g., local balancing, absorption of RE fluctuations with flexible energy usage
- Social/public acceptance of energy hubs/eco-industrial parks with significant renewable installations
- Assessment of financing options in eco-industrial parks with focus on green energy and agro-industry. This includes criteria/investment options that fulfil the EU green taxonomy and eligible for green finance
- Incentives and regulations favoring investments in energy hubs with RES and PtX, impact of EU RED II for RFNBO
- Economic incentive and tariff models to benefit industrial co-locations and value chains in the agricultural practices
- Rethinking cooperative models for 21st century eco-industrial clusters in the agriculture-energy nexus

* Note that the list is just examples. Other ideas within the overall topic of "Agriculture-Energy Nexus" are also welcome. We encourage dialogue with GreenLab about options before sending the application

Timeline



GreenLab

Questions? Get in touch

If you are interested in applying for the fellowship program, please get in touch with us. We strongly encourage a direct dialogue with both the GreenLab team and with the host universities before sending an application in order to have a good understanding of what is feasible in the eco-industrial cluster on the time scale of the program.

Furthermore, any questions about the everyday life in the job as a researcher in GreenLab are also welcome. Please reach out to Eoghan Rattigan.

You can learn more about Research at GreenLab here, and more about the host universities Aarhus University (AU) and Danish Technical University (DTU).

Apply Here

Ebbe Kruse Vestergaard
Research Director
ebkv@greenlab.dk

Eoghan Rattigan
Industrial Sustainability Scientist
eora@greenlab.dk

Leon Aahave Uhd
Coordinator DTU
laauh@dtu.dk

Steen Nielsen
Coordinator AU
sni@bce.au.dk

GreenLab