

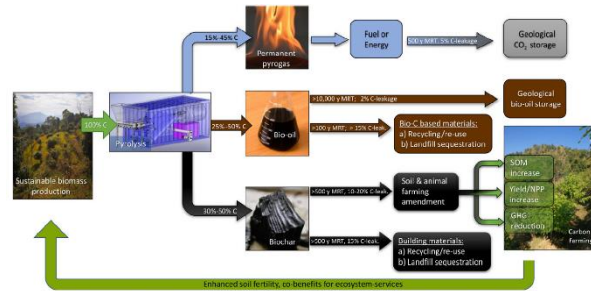


We are looking for a PhD student for the



Development of an Advanced Control Strategy for Pyrolysis Processes

The climate crisis requires new solutions for **managing carbon flows** and enabling ways to store and utilize carbon in ways that prevent the further enrichment of carbon dioxide in the atmosphere. A promising pathway for this is based on the **pyrolysis of biomass**. This process can produce valuable substances, in particular biochar that can be used in agriculture and for various branches of industry.



Advanced control of the pyrolysis process will be crucial for fuel and product flexibility. In a planned PhD project by the **Institute of Automation and Control** of **TU Graz**, to be performed in collaboration with **BEST – Bioenergy and Sustainable Technologies GmbH**, advanced control strategies, based on state observers are to be developed and validated.

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Christian Doppler
Forschungsgesellschaft



Your Tasks:

- Data and **system analysis** of a state-of-the-art research pyrolysis plant (operated by BEST at location Wieselburg as part of the Green Carbon Lab)
- **Modelling** and design of novel **control strategies** for this type of plant
- **Design of state observers** for quantities that are not directly measurable
- Test of the control strategies in **simulation studies**
- **Validation** of the control strategy at the research plant



Your Profile:

- Diploma or master's degree in a technical field of study (e.g. electrical or mechanical engineering, information & computer engineering) with focus on **control engineering**
- Programming experience, preferably with MATLAB
- Interest in complex scientific problems, structured way of working, flexibility, team spirit

We offer:

- Working in the field of future green technologies
- Excellent working atmosphere and pleasant working environment
- Personal development opportunities (e.g. a wide range of possible training programs)
- Location of employment: Graz (with some experimental work to be done in Wieselburg)

In the interest of diversity, applications from women are especially welcome!

Please send your application documents in the form of a letter of motivation, curriculum vitae including relevant references to:

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