

Engineer/ PhD in bio-processes:

Development and implementation of modeling solution,
Supervision and diagnosis of biogas plants

Presentation of BioEnTech

BioEnTech has just completed its fundraising to reinforce the technical team. BioEnTech is an innovative start-up dedicated to anaerobic digestion and wastewater treatment. BioEnTech offers services to model, monitor, analyse, optimise and design biogas plants, and software solutions of monitoring and remote-surveillance of biogas plants, regardless of their size or technology, thanks to our range of Methanisation Monitoring system: MeMo either for industrial units, WWTP, or farm biogas plants.

MeMo is an integrated monitoring solution, which computes key parameters of the process in real-time, automatically analyses the process state and proposes new set point values for the process commands (such as input flow-rate, temperature, pH set point...).

MeMo aims to improve the robustness and performances of biogas processes. To do so, it relies on an in-depth knowledge of anaerobic digestion and the development of computation modules to monitor the process in real-time, to provide early detection of perturbations, and to propose actions to optimize process operation. Moreover MeMo facilitates the collection of any kind of data related to the plant and guarantees their accessibility and traceability.

In addition to the MeMo system, BioEnTech offers a remote-surveillance service to complement the on-line automatic monitoring with the knowledge and expertise of our multidisciplinary team.

Missions

You will have to develop the activities of BioEnTech with the main following tasks:

- Studying and supervising the installation of our range MeMo for our customers and prospects (Agro-industrial, food, WWP, Co-digestion units, ...)
- You will also have to exploit existing modelling tool and also to develop new performing modelling tool for the on-line expertise, the process simulation, the control and the diagnosis of the process.

You will work in close collaboration with the LBE of INRA for the biological expertise and with INRIA for our system of information dedicated to the bioprocesses.

You will preferably be based in our office in Lyon or possibly in Narbonne, south of France. Your work shall be shared between LBE, the office work and customer visits in France or EU countries.

Your skills

You are graduated from an engineering school (agriculture, Agro, bioprocesses, energy and environment) or
You have a PhD in bioprocesses.

You wish to invest yourself in an innovating start-up with high potential of development.

You have a strong experience in modeling anaerobic digestion . Proven experience with mathematic programming languages is a must.

Required skills

- Mathematical modelling of anaerobic co-digestion
- Uncertainty and sensitivity analysis
- Model parameter calibration and validation

- PI&D diagrams interpretation
- Laboratory analysis and quality assessment
- Process monitoring and diagnosis (fault detection)
- Programming skills in Modelica/SciLab/Matlab/Python/R
- Good communication skills in French and English

Desirable skills

- Modelling liquid-solid separation, biogas upgrading and CHP units
- Process numerical optimization and control
- Data preprocessing and reconciliation
- SCADA and industrial communication
- Machine learning and time series analysis
- SQL databases
- Version control in Git
- Unix based OS

You also understand what means automation in the industry: instrumentation and control-command.

Required non-technical skills

- Communicating complex technical findings to a non-technical team
- Sharing knowledge and team-work in a multi-disciplinary environment
- Solid understanding of the industry business problems
- Availability to travel for on-site visits
- Capacity to deal directly with the client
- Good organization skills

You like the team work and make easy contact with people to promote our innovating system. You are organized and efficient in your work. Foreign languages such as French or German is appreciated.

Type of contract

Full time job

Application

You can send your application to: info@bioentech.eu

If you need further information you can contact:

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