

## ANNOUNCER'S FORM

INSTITUTION: **Central Mining Institute- National Research Institute**

CITY: Katowice

POSITION: **Assistant Professor (full-time employment)**

SCIENTIFIC FIELD: **environmental engineering mining and power engineering**

ANNOUNCEMENT DATE: **29.09.2023**

TENDER SUBMISSION DATE: **15.10.2023**

WEBSITE LINK: [www.gig.eu](http://www.gig.eu)

KEYWORDS: assistant professor, environmental engineering , power engineering, chemical technology

### **Workplace:**

Central Mining Institute- National Research Institute

Department of Energy Saving and Air Protection (SO)

Mikołów, ul. Podleska 72

### **Description of tasks performed at the position:**

- 1) conducting scientific research within the realm of biomass processing technology, specifically focusing on its applications in the energy industry
- 2) modeling of multiphase and multiphysics processes, conjunction with numerical fluid mechanics using computational fluid dynamics (CFD) techniques
- 3) conducting data analysis using machine learning models
- 4) study of system dynamics in complex systems and processes modeling
- 5) implementation of research projects and market works
- 6) performing techno-economic analysis in biomass conversion bioprocesses along with fermentative hydrogen production
- 7) design and simulation of control systems for multi-scale processes in co-simulation using the Simplorer program
- 8) performing analyzes and evaluation of technologies in the field of energy saving and air protection
- 9) cooperation with domestic and foreign research institutions and companies external

### **Requirements for a candidate applying for the position of an assistant:**

- 1) PhD degree in engineering and technical sciences, especially in automatics, electronics, electrical engineering or a related field
- 2) theoretical and practical understanding of topics concerning on process dynamics, chemical technology, industrial processes automation and modeling of multiphysics multi-scale CFD processes and technologies in the areas of energy conservation and air protection
- 3) ability to modeling and simulating multiphysics processes related to chemical technology and chemical reactor engineering
- 4) documented publication achievements in the field of multiphysics processes industrial modeling and machine learning models of thermochemical syngas processing
- 5) experience in the implementation of research projects,
- 6) verbal and written communication skills in English (at least at B2 level confirmed by a certificate).

### **List of required documents:**

- 1) application for employment as an assistant professor,
- 2) CV,
- 3) copy of the doctoral diploma,

- 4) copy of the higher education diploma
- 5) description of professional experience,
- 6) information on the candidate's scientific interests and current achievements in research and development (list of publications, obtained patents, participation in national and international research projects, etc.),
- 7) candidate's declaration on the acceptance of the contest terms and conditions and a personal survey of a candidate applying for employment.

**Tender submission term and location:**

Tenders with the full set of documents should be e-mailed to: [rekutacja@gig.eu](mailto:rekutacja@gig.eu), filed personally at the GIG General Administrative Office or mailed to: Główny Instytut Górnictwa – Dział Prawno-Organizacyjny i Kadr, Plac Gwarków 1, 40-166 Katowice; Application deadline is 15.10.2023r.

The tenders should be marked as: 3/23 – Adiunkt Zakład SO

Estimated competition end date - November 2023.