

As part of the initiative of the European Commission Solidarity with Ukraine, the **Department of Thermal Processes** of the Institute of Power Engineering will employ a scientist or specialist from Ukraine as a **research assistant** in the specialization of **computational fluid mechanics (CFD)**.

**Requirements:**

- Experience in CFD modelling of the combustion processes
- Knowledge of Ansys Fluent software
- MSc or PhD in the field of energy/mechanics/mathematics/physics
- Ability to work both in team and independently
- Communicative level of oral and written English

**Description of the work:**

The work, related to the numerical simulations of the hydrogen combustion, will be split into the following sub-tasks:

- scientific literature review and critical analysis in respect to hydrogen firing,
- analysis of the existing combustion models for pure hydrogen combustion and proposal of their modification (if necessary),
- review of the current designs of the pure hydrogen burners,
- conceptual work of the new design of the hydrogen burner,
- definition of the 2-3 burner designs for CFD analysis,
- preparation of the combustion model for hydrogen combustion (with the use of the co-called User Defined Functions – if necessary),
- preparation of the mesh grids,
- conducting the CFD simulations of the selected burner designs,
- selection of the best performing burner design,
- detailed simulations of the selected burner (in respect to NOx emissions),
- application of the NOx reduction measures (if needed) to the burner,
- preparation of the scientific paper for international conference.

**Conditions:**

- Start of the job: as soon as possible
- Duration: 6-12 months
- Type of employment: full-time
- Place: Warsaw, Poland (possibility to work in hybrid mode)
- Possibility for accommodation in business apartment

If you are interested in this position, please contact us via link:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/ua-opportunities>

In the search box please enter: INSTYTUT ENERGETYKI or RETROFEED.

Or write an email to:

[cpc@ien.com.pl](mailto:cpc@ien.com.pl)

and add:

"I consent to the processing of personal data by the Institute of Energy in the field of current and future recruitment processes in accordance with the Act of May 10, 2018 on the protection of personal data (Journal of Laws of 2018, item 1000) and in accordance with the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46 / EC (GDPR) "