

PhD Student offer at Silesian University of Technology at Faculty of Energy and Environmental Protection

Development methodology for testing retrofitted engine fueled by ammonia under normal working conditions

Topic description:

The general concept of the PhD thesis will be focused on development a new direct-injection concept for ammonia combustion which will be theorized to improve NH₃ engine operation and solve the issue of ammonia slip, NOx emission, efficiency, combustion stabilization, bringing the technology to an application-readiness level. Both NOx and ammonia slip can be handled by modern exhaust after treatment, but it is ideal to manage these emissions during the combustion process as much as possible through optimization. Retrofitted engine uses hypothesis of the direct liquid injection which will provide greater control potential over mixture formation and reduce NOx formation and ammonia slip. Development methodology for controlling NOx emission and ammonia slip during engine normal operation is very demand while it is no trivial task and requires significant study.

Candidates requirements:

Programing skills (Python or equivalent), LabVIEW – experience in Real Time application as well as basic knowledge of programing in FPGA mode, Basic knowledge of internal combustion engines are mandatory, Knowledge of the engine control systems, Master degree, Excellent English skills, Good communication, interpersonal and presentation skills are expected from the candidate

We offer:

- Full PhD Scholar at Silesian University of Technology plus contract of mandate founded from ACTIVATE project
- You will have the chance to work with research groups from other countries, attend conferences and workshops
- Part of the work can be conducted abroad.
- This will help you expand your horizons and enhance your personal development
- The start date is Autumn (01.10) of 2020

Contact:

To apply for the above positions, please send your CV, cover letter and copies of official transcripts of records in a single PDF file to Grzegorz.Przybyla@polsl.pl or Wojciech.Adamczyk@polsl.pl. The CV should contain the statement of consent to the processing of personal data for the purposes of the recruitment process. We reserve the right to contact only selected candidates. More information about recruitment process can be found at <https://rekrutacja.polsl.pl/jdsmain/>.

Programme operated by:

Project consortium: