

SANDY PONCET

3RD YEAR PHD STUDENT

3D modelling of H2 combustion in direct injection

Contract with IFPEN: 2022-2025



CONTACT

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SKILLS

Scientific

- Combustion
- Turbulence
- Modelling (CFD, CAO)
- Fluid mechanics
- Aerodynamics
- Thermodynamics
- Heat transfers

Informatics

- Softwares: *Paraview*, *GT-POWER*, *Fluent*, *CATIA*, *OpenFOAM*, *Amesim*
- Solvers : *CONVERGE*, *Cantera*, *Yales2*
- Programming : *Python*, *Fortran*





Languages

-  - Anglais **TOEIC 885**
-  - Espagnol **Level B2**
-  - Italien **Level A1-A2**

DIPLOMAS AND TRAINING

-  **Engineering degree awarded by the National Institute of Applied Sciences (INSA) of Rouen Normandy**
Energy and Propulsion Department | 2018 - 2022 |
Speciality "Propulsion Systems"
Core curriculum "Science and Technology for Engineering" | 2016 - 2018 |
-  **Technical university of Riga in Latvia (Erasmus+)**
| *January-June 2020* |
Faculty of Mechanical Engineering, Transport et Aeronautics
-  **Scientific baccalaureate with Mathematics speciality**
Mention Very Well | 2016

EXPERIENCES

-  **Engineering internship "LES approach applied to lean H2-air mixture deflagration in a semi-confined environment"**
IFP Énergies Nouvelles | *August-December 2021*
 - Study of lean hydrogen flame propagation
 - Development of a methodology for modelling the combustion of a reactive mixture in a semi-confined environment
 - Application to an industrial configuration
-  **Engineering internship "Model reduction and optimisation of under-hood thermal management"**
Stellantis (formerly PSA Peugeot Citroën) | *February-July 2021*
 - Identification of the needs of the design teams
 - Development of a model reduction methodology for engine dynamics under rough driving conditions
 - Identification of critical operating points
-  **Erasmus+ student**
Technical university of Riga, Latvia | *January- June 2020*
 - Meeting and sharing experience and culture with international students
 - Improving communication skills in foreign languages (English, Spanish and Italian)
-  **Au pair job**
High-Wycombe, England | *June-August 2019*
 - Perfecting my English
 - Taking responsibility and initiative

HOBBIES

Arts

- Sewing: clothing design
- Museums and art exhibitions

Dance

- Salsa, Bachata
- Hip-Hop/Dancesoul
- Modern-jazz