



Tristan

Postgraduate PhD in ESPRC Nuclear Energy Futures CDT programme

Languages

French: Native
English: Fluent
Spanish: Advanced
Chinese: Elementary

Publications

- Heat and Mass Transfer: A DEM/FFT approach to simulate the effective conductivity of granular media (being reviewed) (2020).
- French Mechanical Congress : Effective properties of granular media: an approach changing DEM and FFT methods (2019).

Software

Programming :
 Python, Java, C++,
 Matlab, Maple,
 Arduino, Excel VBA,
 Linux bash, L^AT_EX

Software :
 Abaqus, Catia,
 Solidworks, Simulink,
 Labview, FlexPDE

Work Experience

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|---|--|----------------------|
| 2019-Present | Imperial College & Culham Center for Fusion Energy (CCFE) | London |
| <p>PhD: Experimental and simulation analysis of creep fatigue crack growth in W-9Cr brazed joints. Identification of promising brazing alloys. Simulation of brazing process. Thermal and mechanical analysis of W-9Cr brazed joints in plasma facing components for reactor operation conditions under ABAQUS software. GTA for 1st and 2nd years course on steels, fracture mechanics course and labs.</p> | | |
| 2018 | Comissariat à l'Énergie Atomique (CEA-DEN-DEC) | Cadarache |
| <p>Research internship (Nuclear Fuel Simulation Laboratory) : Simulation of the effective thermal conductivity of packed beds of nuclear fuel fragments.
 Comparison and criticism of scientific literature analytical models. Development of a new methodology to solve and bound granular media thermal problems : numerical chaining of the Discrete Element Method to the Thermomechanical Fast Fourier Transforms methods. Publication of research work.</p> | | |
| 2015-2018 | ENSEM Eco Marathon (Association) | Nancy |
| <p>Conception of energy efficient prototype vehicles. (Head of association)
 Double participation to the Shell Eco Marathon international competition (London). CAO design (CATIA) of vehicle transmission mechanism. Milling, turning and 3D printing.</p> | | |
| 2015-2018 | Engineering & research projects | Atlanta/Nancy |
| <ul style="list-style-type: none"> - Thermal study of contact between materials : contact modelisation and FEM (FlexPDE). - Computer vision for reconstruction of 3D landscape pointclouds. - Aerodynamical study of aircraft wing profiles : windtunnel experimental measurements. - Regulation of a electro-mechanical conversion system. - Strains and vibrations of aluminum bicycle frames : FEM (Abaqus) | | |
| 2015 | ENGIE GREEN | Nancy |
| <p>Technical internship : Displacement of a bird detection system for windturbines.</p> | | |

Education

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|---|--|------------------|
| 2019-Present | Imperial College | London |
| <p>PhD: Nuclear research and training modules (equivalent to nuclear engineering MSc): nuclear materials, reactor operation and design, nuclear safety,...</p> | | |
| 2018-2019 | Georgia Institute of Technology | Atlanta |
| <p>Master of Science in Mechanical Engineering. (Minor in computer science)
 Courses: Linear Elasticity, Non-linear dynamic systems, Experimental methods, Structure-property relationships in materials, Computer vision...</p> | | |
| 2015-2018 | École Nat. Sup. d'Électricité et de Mécanique | Nancy |
| <p>Master of Science in energy engineering. Major in mechanical engineering for energy systems. Minors in dynamical systems and electromechanical energy conversion.
 Courses : Non-linear mechanics, Turbulences and transfer intensification, Thermals in transfers, Finite Element Method, Numerical Analysis, Probabilities and statistics...</p> | | |
| 2013-2015 | Lycée Thiers | Marseille |
| <p>Preparatory classes for national qualification exams in Maths & Physics.</p> | | |