# PROFESSOR POSITION in CORIA Rouen IUT FRANCE

#### **EDUCATIONAL**

Job Educational Profile: Chemical Engineering – Process Safety

The recruited candidate will intervene within the training Bachelor University of Technology (B.U.T.) of Chemical Engineering Process Engineering (GCGP) whose program related to the speciality GCGP is composed of more than 50% of practical work and projects SAE.

The recruited candidate, having followed a training course in chemical engineering or having taught in the field of Chemical Engineering (Unit operations / Chemical reaction engineering / Liquid and gaseous effluent treatment), will be in charge of teaching (courses / tutorials / practical work) of fluid networks, unit operations, environmental engineering, health and safety, bioreactors which will be taught in the new B.U.T. offer

He or she will contribute to the technological evolution of the teaching service of the GCGP department within the framework of the new B.U.T. training offer by the creation of new practical work units and the follow-up of Learning and Evaluation Situations (SAE). He or she will take part in the management of the Technicum hall gathering the practical works given within the GCGP department.

He or she will be involved in the actions led within the pedagogical team by taking part in the management and the implementation of the B.U.T. in initial training and in alternating training. Actions within the framework of Lifelong Learning (LLL) may be carried out.

He or she will be involved in the department's pedagogical responsibilities and also in the department's outreach through high school forums, open days, etc.

## RESEARCH

The candidate should have a good background in energetics and fluid mechanics to focus his/her research on the numerical or experimental physical analysis of reactive media and complex transport phenomena for their multi-scale and multiphysics understanding and description.

The CORIA, UMR 6614 is a joint research unit of CNRS, INSA Rouen Normandie and the University of Rouen Normandie. Member of the LabEx EMC3, it is a laboratory recognized internationally for its research in complex reactive flows (combustion, plasma, turbulence, two-phase flows, supersonic flows) combining theoretical studies, modeling, high-fidelity numerical simulations, as well as experiments at different scales with a very marked specificity in the development and application of laser diagnostics. This diversity and thematic complementarity (laser metrology and high performance computing) is part of a research and innovation strategy related to the ecological transition, for the decarbonization of energy and aeronautical, terrestrial or aerospace propulsion. Its work is part of the strategic axis of optimization of energy and propulsion systems of CARNOT ESP "Energy and Propulsion Systems".

Anchored in a region where technological risk management is a major societal issue, CORIA has recognized expertise in fluid mechanics and fire to meet the European policy of prevention of major industrial risks (Seveso directive for Europe, "Risk" Law, risk prevention plans and ORSEC plans in France) and to enrich the project of "Experimental territory for the implementation of a digital

platform on multirisk" included in the strategy of sustainable development and social responsibility of the University of Rouen Normandy and the development of its multirisk observatory in the context of the emergence of an Institute of Transitions (T. URN).

The candidate's project will reinforce a transversal action set up between the 3 scientific departments (DER, TASC and DOL) of CORIA on the subject of industrial accidents, such as fire: characterization of the source, dispersion of smoke and effluents, impact (smoke abatement, physico-chemical properties). Through an approach developing the understanding and the simulation of the physical processes involved, the candidate will propose a project to answer this issue following one or the other of the orientations (fire or dispersion) by integrating the taking into account of the couplings between these phenomena or multi-scale approaches (turbulent dispersion of the micro to the meso scales).

The candidate will present his/her strategy to respond to large-scale research projects via national and/or European funding, and to develop partnerships with the socio-economic world. The professor will reinforce the activities of the Reactive Flow (DER) or Turbulence, Atomization, Sprays, Chaos (TASC) Departments, and will stimulate transversal actions with the two other departments of the laboratory (DER or TASC and DOL) and the multirisk observatory of the T.URN Institute.

## **CONTACTS**

#### **Educational**

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# Recherche

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