

EPSRC supported EngD Project: Characterisation of multiphase formulated and complex fluids using process tomography

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Tax free bursary of £18,800 p.a. plus fees

Industrial Tomography Systems Ltd (ITS), is an SME which specialises in the manufacture and application of innovative electrically-based process tomography instrumentation into the process industries. As the technology is becoming applied by early adopters, there is a need for a fundamental understanding of how measurements relate to quality attributes of key processes, mostly involving liquid fluids and mixtures in pipelines and reactor systems in the mineral, nuclear, food and pharmaceutical sectors. The company operates globally with customers and process applications in more than 20 countries

Key applications involve the understanding

- Maxwell equations for electrical properties of the measured mixtures
- Rheology since there is a desire to relate measurements to industrial flow properties for audit, product quality and process control purposes.

Flowing solids in a wide range of process sectors, including foods, personal care products, hydraulic conveying of minerals and speciality chemicals. The student will have the opportunity to work in a small company atmosphere which provides for high levels of responsibility and self-management; whilst at the same time engaging with blue chip process companies who are already making use of process tomography through a major multi-disciplinary project involving Unilever, Johnson Matthey, ITS and the Universities of Birmingham and Manchester.

To be eligible for EPSRC funding candidates must have at least a 2(1) in an Engineering or Scientific discipline or a 2(2) plus MSc. Applications from EU students who have studied in the UK are welcome as well as those from candidates with three years relevant industrial experience. Please email your c.v to r.w.greenwood@bham.ac.uk. For more details on the Engineering Doctorate scheme please visit www.eng.bham.ac.uk/chemical/pg/engd.