

COUPLED PROBLEMS ASSOCIATED WITH LIQUID JETS

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ABSTRACT

This special session will be dedicated to the multiscale, multiphysics, and multiphase modelling of liquid jets as they appear in a multitude of technological applications, from cooling large steel ingots on tens of meters scale to microfluidic applications associated with sample delivery systems in synchrotrons and X-ray Free Electron Lasers. Liquid jets can include droplets of mixing or non-mixing fluids, gas bubbles, or solid particles. They can form simple shapes like falling water films to complex structures generated by swirling nozzles under the assistance of focusing gas or external electromagnetic and ultrasound fields. They can be laminar or turbulent and designed to stay focused or atomised. The aim of this session is to bring together experts in this field and to present their state-of-the-art research in the understanding and computational modelling of the associated coupled problems.

REFERENCES

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