Contribution ID: **4** Type: **not specified**

# Design and exploitation of a vorticity probe for turbulence studies in fusion devices

*Tuesday 2 July 2019 17:15 (15 minutes)*

The goal of this work is to understand some turbulence mechanisms through the radial profile analysis of quantities related to *anomalous transport* on plasmas, with special focus on the measure of the *vorticity* at ISTTOK tokamak. The vorticity is a local measure of the velocity field circulation in the plasma fluid, which plays a key role in the transport of energy and particles. The signals acquired will also allow determining the radial poloidal phase velocity profile and the Reynolds stress profile, giving more insight into the plasma transport mechanisms.
The work involves the design of a Langmuir probe array and measurements of floating potentials and ion current saturation signals on different radial positions. These signals are acquired through 'AC' discharges on the plasma.

**Author:** Mr CARAMONA, Sergio

**Presenter:** Mr CARAMONA, Sergio