



# 17th European Fusion Theory Conference

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## **On equilibrium, stability and dynamics of ITER-like plasmas**

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Research results of the local Plasma Physics group and external collaborators on ITER pertinent Physics will be presented. The presentation will consist of three parts. The first one will concern the construction of equilibria with sheared flow of arbitrary direction, in connection with transitions to advanced confinement modes in tokamaks, as solutions of a generalized Grad-Shafranov equation and the extension of the HELENA equilibrium code for flows parallel to the magnetic field. In the second part the linear stability of equilibria with parallel flows will be examined and potential methods of stabilization of the resistive wall mode will be discussed. Finally, the third part will refer to the development of a multifluid code describing the dynamics of a burning plasma with first applications to JET and ITER-like plasmas.