

# JOINT VARENNA - LAUSANNE INTERNATIONAL WORKSHOP THEORY OF FUSION PLASMAS

Villa Monastero, Varenna, Italy

September 12 - 16, 2022

## Invited Speakers

Speaker	Association	Title
T. Adkins	Oxford, UK	Electromagnetic instabilities and plasma turbulence driven by electron-temperature gradient
A. Banon Navarro	IPP- Garching, Germany	GENE-3D/KNOSOS-Tango: A New Transport Model for Stellarators
E. Belli	GA, USA	Hydrogenic isotope mass scaling of multiscale turbulent transport in the H-mode pedestal
T. Body	IPP – Garching, Germany	In-depth validation of divertor turbulence simulations in TCV and ASDEX Upgrade
G. Bustos Ramirez	EPFL, Switzerland	Advanced modelling and existence conditions for edge harmonic oscillations
F. Casson	CCFE, UK	The challenge of integrated scenario design for the STEP reactor
A. J. Coelho	EPFL, Switzerland	Global fluid simulations of plasma turbulence in stellarators
D. Dickinson	York, UK	Microstability and transport in high beta spherical tokamaks
G. Dif-Pradalier	CEA, France	Transport in Fusion Plasmas: Is the Tail Wagging the Dog?
E. Gospodchikov	IAP RAS, Nizhny Novgorod, Russia	Electron-cyclotron heating and kinetic instabilities of a mirror confined plasma
Yi-Min Huang	PPPL, USA	Current singularities on rational surfaces including pressure effects
K. Imadera	Kyoto Univ., Japan	Full-f gyrokinetic simulation of plasma turbulence and transport barrier under ion/electron heating
R. Jorge	Lisbon, Portugal	The direct construction of an exceptionally quasi-isodynamic stellarator
Y. Li	CREATE and FRASCATI, Italy	Physics of Drift Alfvén Instabilities and Energetic Particles in Fusion Plasmas
R. J. J. Mackenbach	Eindhoven, Netherlands	Available energy and its relation to turbulent transport
E. Paul	PPPL, USA	Confinement in 3-dimensional magnetic fields: Loss mechanisms and optimization strategies
G. T. Roberg-Clark	IPP-Greifswald, Germany	Modeling the onset of toroidal ion temperature gradient modes in general toroidal geometry
E. Rodriguez	PPPL, USA	Space of quasisymmetric configurations: a topological view
P. Rodrigues	Lisbon, Portugal	Energetic particles and coupled Alfvén-acoustic eigenmodes in tokamaks: theoretical insight and modelling
M. Sato	NIFS, Japan	Kinetic-MHD hybrid simulations of MHD instabilities in toroidal plasmas with kinetic thermal ion effects
E. Serre	Aix-Marseille, France	Advanced modelling of cross-field turbulent transport for core and edge plasma
A. Tinguely	MIT, USA	Modeling of runaway electron suppression with a passive 3D coil in SPARC
S. Van Mulders	EPFL, Switzerland	Full-discharge simulation and optimization with the RAPTOR code, from TCV and AUG to ITER and DEMO
X. Wang	IPP-Garching, Germany	Nonlinear Dynamics of a nonadiabatic chirping-frequency Alfvén mode in Tokamak Plasmas