



17th European Fusion Theory Conference
9 - 12 October 2017, Athens - Greece

List of presentations



The conference is organized by



Invited lectures

Tutorial lectures

I.1

Anne White (Massachusetts Institute of Technology, United States)

[Comparing turbulence measurements with simulations: an experimental, multi-machine tutorial on validation of nonlinear gyrokinetic transport models](#)

I.2

Francesco Pegoraro (Università di Pisa, Italy)

[Stability criteria of MHD plasmas and their underlying Hamiltonian structure](#)

I.3

Fulvio Zonca (ENEA Centro Ricerche Frascati, Italy)

[Physics of energetic particles and Alfvén waves](#)

I.4

Felix Parra (University of Oxford, United Kingdom)

[Neoclassical and turbulent transport in stellarators](#)

Topical lectures

I.5

Aleksey Mishchenko (Max Planck Institut für Plasmaphysik, Germany)

[Pullback approach for gyrokinetic electromagnetic simulations](#)

I.6

Thomas Pütterich (Max Planck Institut für Plasmaphysik, Germany)

[Impurities in a reactor](#)

I.7

Caterina Riconda (Université Pierre et Marie Curie, France)

[Relativistic electron acceleration in laser plasma interaction](#)

I.8

George Wilkie (Chalmers University of Technology, Sweden)

[First-principles modelling of fast ion transport by microturbulence](#)

I.9

George Throumoulopoulos (University of Ioannina, Greece)

[On equilibrium, stability and dynamics of ITER-like plasmas](#)

I.10

Christopher Ham (Culham Centre for Fusion Energy, United Kingdom)

[Theory of nonlinear ballooning modes](#)

I.11

Alessandro Zocco (Max Planck Institut für Plasmaphysik, Germany)

[Geometric stabilization of the electrostatic ITG driven instability](#)

I.12

Xin Wang (Max Planck Institut für Plasmaphysik, Germany)

[Nonlinear dynamics of EP-driven Alfvénic fluctuations in fusion plasmas](#)

I.13

Taina Kurki – Suonio (Aalto University, Finland)

[Clearing the road for high-fidelity fast ion simulations in full 3D](#)

I.14

Yevgen Kazakov (ERM/KMS Brussels, Belgium)

[Recent advances in fast ion generation and plasma heating with IC waves](#)

I.15

Arturo Alonso (CIEMAT Madrid, Spain)

[Zonal flow relaxation in stellarators](#)

I.16

Alessandro Geraldini (University of Oxford, United Kingdom)

[Kinetic solution of a collisionless magnetic presheath](#)

I.17

Rogério Jorge (École Polytechnique Fédérale de Lausanne, Switzerland)

[An analytical model for SOL plasma dynamics at arbitrary collisionality](#)

Oral presentations

O.1

Heinz Isliker (Aristotle University of Thessaloniki, Greece)

[Fractional transport in strongly turbulent plasmas](#)

O.2

Maurizio Ottaviani (Institut de Recherche sur la Fusion Magnétique, France)

[Fast secondary reconnection and the sawtooth crash](#)

O.3

Emiliano Fable (Max Planck Institut für Plasmaphysik, Germany)

[Integrated modelling of reactor scenarios and impact of core-SOL coupling on plasma performance](#)

O.4

Carrie – Fiona Beadle (École Polytechnique Fédérale de Lausanne, Switzerland)

[Simulations of SOL turbulence in a double-null magnetic configuration](#)

O.5

Vinodh – Kumar Bandaru (Max Planck Institut für Plasmaphysik, Germany)

[Implementation of a model for the non-linear interaction between runaway electrons and background plasma](#)

O.6

Noe Ohana (École Polytechnique Fédérale de Lausanne, Switzerland)

[The Particle-in-Fourier \(PIF\) Approach applied to gyrokinetic simulations](#)

O.7

Francesco Palermo (Max Planck Institut für Plasmaphysik, Germany)

[Damping and propagation of geodesic acoustic modes in gyrokinetic simulations](#)

O.8

Zhixin Lu (Max Planck Institut für Plasmaphysik, Germany)

[Local and global analysis of symmetry breaking for ITG and BAE modes](#)

O.9

Marcus Held (University of Innsbruck, Austria)

[Zonal flow generation by nonlinear polarization and high relative fluctuation amplitudes](#)

O.10

Calin-Vlad Atanasiu (Institute for Laser, Plasma and Radiation Physics, Romania)

[Modelling of wall currents excited by plasma wall-touching kink and vertical modes during a tokamak plasma disruption with application to ITER](#)

Poster presentations

Session 1 (10/10/17, 15.00 – 17.00)

P1.1

Ian Abel (Chalmers University of Technology, Sweden)

[Kinetic modelling of the edge of fusion plasmas](#)

P1.2

Elnaz Safi (University of Helsinki, Finland)

[Plasma impurity co-bombardment effects on sputtering of Beryllium and Tungsten](#)

P1.3

Daniela Grasso (Polytecnico di Torino, Italy)

[ECCD magnetic island suppression as converse of a forced reconnection problem](#)

P1.4

Ajay Jayalekshmi – Chandrarajan (École Polytechnique Fédérale de Lausanne, Switzerland)

[How non-adiabatic passing electron dynamics and density of mode rational surfaces affect turbulent transport in magnetic fusion plasmas](#)

P1.5

Dick Hogeweij (Dutch Institute for Fundamental Energy Research, Netherlands)

[Separating the effects of heating and current drive on NTM evolution in TCV](#)

P1.6

Dimitris Kaltsas (University of Ioannina, Greece)

[Hamiltonian construction of translationally symmetric extended MHD with equilibrium applications](#)

P1.7

Jason Parisi (University of Oxford, United Kingdom)

[Extending critical balance to ITG turbulence with flow shear in fusion plasmas](#)

P1.8

Tünde Fülöp (Chalmers University of Technology, Sweden)

[Runaway dynamics in disruptions: sliding and screening](#)

P1.9

Samuel Lanthaler (École Polytechnique Fédérale de Lausanne, Switzerland)

[Linear kinetic-MHD stability of internal modes in toroidally rotating plasmas](#)

P1.10

Ivan Calvo (CIEMAT Madrid, Spain)

[Tangential magnetic drift, tangential electric field and their impact on stellarator radial neoclassical transport](#)

P1.11

Pierre Manas (Max Planck Institut für Plasmaphysik, Germany)

[Energy confinement in He and D plasmas: on the role of central electron heating](#)

P1.12

Aristeides Papadopoulos (National Technical University of Athens, Greece)

[Propagation of radio frequency waves through spatially modulated interfaces in the plasma edge in tokamaks](#)

P1.13

Alessandro Cardinali (ENEA Centro Ricerche Frascati, Italy)

[Semi-analytical inspection of the quasi-linear absorption of RF in presence of alpha-particles in tokamak reactor](#)

P1.14

Andreas Kleiner (École Polytechnique Fédérale de Lausanne, Switzerland)

[Ideal saturated 3D external kink structures in quiescent H mode plasmas](#)

P1.15

Achilleas Evangelias (University of Ioannina, Greece)

[Analytic anisotropic-pressure equilibria with incompressible flow in helically symmetric geometry](#)

P1.16

Emmanuel Lanti (École Polytechnique Fédérale de Lausanne, Switzerland)

[An improved hybrid electron model for global gyrokinetic simulations using the ORB5 PIC code](#)

P1.17

Yanick Sarazin (Institut de Recherche sur la Fusion Magnétique, France)

[Multi-scale issues in fusion plasmas: synergy between turbulence and neoclassical transports](#)

P1.18

Michail – Savvas Anastopoulos – Tzanis (University of York, United Kingdom)

[3D perturbative ideal MHD stability in tokamak plasmas](#)

P1.19

Herve Guillard (Institut National de Recherche en Informatique et en Automatique, France)

[Grid generation for fusion applications](#)

P1.20

Virgil Baran (Institute for Laser, Plasma and Radiation Physics, Romania)

[Evolving the ion temperature gradient driven turbulence with test modes](#)

P1.21

Spyridon Aleiferis (Foundation of Research and Technology Hellas, Greece)

[On the gradB and ExB drifts of alphas in burning plasmas](#)

P1.22

Dario Borgogno (Polytecnico di Torino, Italy)

[Test-electron analysis of magnetic reconnection topology](#)

Session 2 (11/10/17, 15.00 – 17.00)

P2.1

Pavlos Xanthopoulos (Max Planck Institut für Plasmaphysik, Germany)

[Gyrokinetic simulation of micro-turbulence in stellarators](#)

P2.2

Daniele Brunetti (Istituto Fisica del Plasma, Italy)

[Analytic characterisation of infernal type instabilities in tokamak as with large edge pressure gradients](#)

P2.3

Allah Rakha (Barcelona Supercomputing Center, Spain)

[Modelling of Alfvén modes properties in TJ-II plasmas](#)

P2.4

Stefan Buller (Chalmers University of Technology, Sweden)

[Ion composition effects on neoclassical transport in density pedestals](#)

P2.5

Loukas Vlahos (Aristotle University of Thessaloniki, Greece)

[On the limits of the quasilinear evolution of ions interacting with Alfvén waves in a magnetised plasma](#)

P2.6

Ksenia Aleynikova (Max Planck Institut für Plasmaphysik, Germany)

[Quantitative study of kinetic ballooning mode theory in magnetically confined toroidal plasmas](#)

P2.7

Fotis Bairaktaris (National Technical University of Athens, Greece)

[Advanced homogenization approach for a plasma dielectric mixture: Case of a turbulent tokamak](#)

P2.8

Hugo de Blank (Dutch Institute for Fundamental Energy Research, Netherlands)

[Electromagnetically consistent model of complete reconnection](#)

P2.9

Iulian - Gabriel Miron (Institute for Laser, Plasma and Radiation Physics, Romania)

[Modelling the effect of resonant magnetic perturbations on neoclassical tearing modes](#)

P2.10

Alessandro Biancalani (Max Planck Institut für Plasmaphysik, Germany)

[Nonlinear gyrokinetic investigation of energetic particle-driven geodesic acoustic modes](#)

P2.11

Eduard Reiter (University of Innsbruck, Austria)

[Full-F gyrofluid modelling of blob-impurity interaction in the tokamak SOL](#)

P2.12

Laurent Villard (École Polytechnique Fédérale de Lausanne, Switzerland)

[Global features of gyrokinetic simulations with sources](#)

P2.13

Fabien Widmer (Institut de Recherche sur la Fusion Magnétique, France)

[Neoclassical island control with stiff temperature model](#)

P2.14

Nathan Howard (Massachusetts Institute of Technology, United States)

[Multi-scale gyrokinetic simulation of L and H-mode plasma conditions in the Alcator C-Mod tokamak](#)

P2.15

Michael Hardman (University of Oxford, United Kingdom)

[Modelling coupled ion and electron scale turbulence in magnetic confinement fusion plasmas](#)

P2.16

Spyridon - Iason Valvis (National Technical University of Athens, Greece)

[Scattering of radio frequency waves by cylindrical blobs in the plasma edge in tokamaks](#)

P2.17

Konsta Särkimäki (Aalto University, Finland)

[Mechanics of ELM control coil induced alpha particle transport](#)

P2.18

Stefan Mijin (Imperial College London, United Kingdom)

[A fully implicit kinetic code for parallel electron transport in the SOL](#)

P2.19

Peter Donnel (Institut de Recherche sur la Fusion Magnétique, France)

[A multi-species collision operator for gyrokinetic codes](#)

P2.20

Klaus Hallatschek (Max Planck Institut für Plasmaphysik, Germany)

[Study of collisional effects on GAMs and zonal flows](#)

P2.21

Paulo Rodrigues (Instituto Superior Technico Lisboa, Portugal)

[Local, up-down asymmetrically shaped, analytical tokamak-equilibrium model](#)

P2.22

Chris Dritselis (University of Thessaly, Greece)

[Numerical modeling of dust transport in a tokamak plasma](#)