

JOINT VARENNA – LAUSANNE INTERNATIONAL
WORKSHOP ON

“THEORY OF FUSION PLASMAS”

Villa Monastero, Varenna, Italy
August 30 – September 3, 2010

PROGRAMME AND ABSTRACTS

JOINT VARENNA – LAUSANNE INTERNATIONAL WORKSHOP

ON

“THEORY OF FUSION PLASMAS”

Organised by

Centre de Recherches en Physique des Plasmas
Association Euratom – Confédération Suisse
Ecole Polytechnique Fédérale de Lausanne

“Piero Caldirola”

International Centre for the Promotion of Science and International School of Plasma
Physics

Instituto di Fisica del Plasma del CNR, Milano

Scientific Committee:

D. Borba (Lisbon, Portugal)
M. Bornatici (Pavia, Italy)
V.S. Chan (San Diego, USA)
X. Garbet (Cadarache, France) **Chairman**
L. Garcia (Madrid, Spain)
P. Helander (Garching, Germany)
T. Hellsten (Stockholm, Sweden)
T. Hender (Culham, United Kingdom)
Y. Kishimoto (Naka, Japan)
M. Lontano (Milano, Italy)
S. Medvedev (Moscow, Russian Federation)
V.P. Pastukhov (Moscow, Russian Federation)
P. Pavlo (Prague, Czech Republic)
A. Peeters (Warwick, United Kingdom)
T. Sato (Nagoya, Japan)
O. Sauter (Lausanne, Switzerland) **Scientific Secretary**
T.J. Schep (Nieuwegein, The Netherlands)
A. Sen (Bhat, IPR, India)
W.M. Tang (Princeton, USA)
J.W. Van Dam (Austin, USA)
F. Zonca (Frascati, Italy)

PROGRAMME

FOR THE

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Sunday, August 29, 2010



15.00 – 19.00 Registration in Villa Monastero

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Monday, August 30, 2010

	<u>Chairman</u>	T. Hellsen
<u>09:00</u>	<u>Welcome</u>	X. Garbet
09:10	I-1 E. Lazzaro	Magnetic Reconnection Controlled by External Current Drive
09:55	I-2 A. Reiman	3D Equilibria with Stochastic Regions Supporting Finite Pressure Gradients
<u>10:40</u>	<u>Coffee break</u>	
11:10	I-3 P. Xanthopoulos	Gyrokinetic Simulations of Turbulence in Stellarators: the Effect of 3D Shaping on Transport
11:55	I-4 I. Ishizaki	MHD Simulation on Pellet Plasmoid in LHD Plasmas
<u>12:40</u>	<u>Group photo</u>	
	<u>Chairman</u>	L. Garcia
15:45	I-6 W. A. Hornsby	Multi-Scale Dynamics in Fusion Plasmas: on the Coupling Between Micro Turbulence and Meso Scale Magnetic Structures
<u>16:30</u>	<u>Coffee break</u>	
17:00	I-7 P. Beyer	Turbulence Simulations of Transport Barrier Relaxations in Presence of Resonant Magnetic Perturbations at the Tokamak Edge
<u>17:45</u>	<u>End</u>	
19:30	Pre-dinner Welcome party - Hotel Royal Victoria	

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Tuesday, August 31, 2010

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	<u>Chairman</u>	P. Helander
09:45	I-9 M. Albergante	Numerical Modelling of the Electromagnetic Turbulent Transport of Energetic Ions in Burning Plasmas
<u>10:30</u>	<u>Coffee break</u>	
10:50	I-10 B. Dudson	Nonlinear MHD Modelling of ELMs and Their Control
11:35	I-11 S. Pamela	Simulations of JET-Like ELMs with JOREK
<u>12:20</u>	I-12 C. Hegna	Plasma Rotation in Nearly Symmetric Toroidal Confinement Devices
<u>13:05</u>	<u>Lunch</u>	
15:00	Poster Session	P-1 – P-20 in Villa Monastero
<u>16:00</u>	<u>Coffee break</u>	
18:00	End	

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Wednesday, September 1, 2010

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	<u>Chairman</u>	F. Zonca
09:45	I-14 L. Garcia	Topological Characterization of Flow Structures in Plasma Turbulence
10:30	<u>Coffee break</u>	
10:50	I-15 T. Goerler	Nonlocal Effects in Gyrokinetic Turbulence Simulations Using GENE
11:35	I-16 Y. Lin	Investigation of Magnetic Reconnection Using Gyrokinetic Electron and Fully Kinetic Ion Particle Simulation Model
12:20	I-17 P. Catto	Kinetic Effects in the Pedestal of a Tokamak
13:05	<u>Lunch</u>	
16:15	Departure for the excursion to visit Piona Cistercian Abbey (departure from Varenna main square, excursion and dinner included in registration fee). Dinner at the Restaurant “La Conca Azzurra” in Colico Olgiasca on a nice promontory.	

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Thursday, September 2, 2010



	<u>Chairman</u>	V. Pastukhov
10:00	I-19 S. Satake	Calculation of Neoclassical Toroidal Viscosity in Tokamaks with Broken Toroidal Symmetry
10:45	<u>Coffee break</u>	
11:15	I-20 M. Barnes	Momentum Transport and Turbulence Suppression in Fusion Plasmas
12:00	I-21 F.J. Casson	Gyrokinetic Turbulence in the Presence of Strong Rotation
12:45	<u>Lunch</u>	
15:00	Poster Session	P-21 – P-38 in Villa Monastero
16:00	<u>Coffee break</u>	
18:00	End	
21:30	Concert for Baroque Flute and Harpsichord in Villa Monastero	

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Friday, September 3, 2010



	<u>Chairman</u>	X. Garbet
09:45	I-23 V. P. Petrzilka	Theory of Fast Particle Generation in Front of LH Grills
10:30	<u>Coffee break</u>	
11:00	I-24 M. Jucker	Integrated Modeling for Ion Cyclotron Resonant Heating in Toroidal Systems
11:45	I-25 V. P. Pastukhov	Effective Fluid Model of Turbulent Dynamics and Transport in Tokamak Core Plasmas
12:30	Closing session	
12:45	End	

Monday, August 30, 2010

Tuesday, August 31, 2010

Wednesday, September 1, 2010

Thursday, September 2, 2010

Friday, September 3, 2010