

CONTENTS

List of participants	page	XI
J. W. CONNOR – Welcome address and introduction.....	»	XIX
INVITED PAPERS		
M. TOKAR, D. KALUPIN, D. REISER and B. UNTERBERG – Physics of edge and core interplay in radiative improved mode	»	3
PH. GHENDRIH, Y. SARAZIN, S. BENKADDA, P. BEYER, N. BIAN, C. FIGARELLA, G. FALCHETTO, X. GARBET and V. GRANDGIRARD – Avalanche transport in the edge plasma	»	17
J. W. CONNOR – Theories of density limits	»	31
D. GRASSO, M. OTTAVIANI and F. PORCELLI – Stabilization of drift-tearing modes ..	»	45
E. LAZZARO – Physics of driven reconnection in tokamak plasmas	»	59
R. PACCAGNELLA – Nonlinear magnetohydrodynamic simulations for the Reversed Field Pinch with active feedback	»	73
S. TOKUDA – Tokamak MHD stability: Newcomb equation and boundary layer equations.....	»	87
G. T. A. HUYSMANS, T. C. HENDER, N. C. HAWKES and X. LITAUDON – MHD stability of «current hole» plasmas.....	»	103
L. C. APPEL, M. HOLE, R. J. AKERS, S. D. PINCHES and the MAST team – Modelling of Alfvénic activity in the MAST tokamak.....	»	117
J. MANICKAM and S. KAYE – Theory and modeling challenges from the NSTX program	»	131
R. O. DENDY – Nonclassical transport in fusion and astrophysical plasma turbulence.....	»	145
F. JENKO, W. DORLAND, B. SCOTT and D. STRINZI – Simulation and theory of temperature gradient driven turbulence	»	157
S. J. ALLFREY, R. HATZKY, A. BOTTINO and L. VILLARD – Role of self-generated and externally applied radial electric fields in the development of ITG driven modes	»	171
V. I. ILGISONIS and YU. I. POZDNYAKOV – Transport barrier in a tokamak as a bifurcation of plasma equilibrium	»	183
R. SÁNCHEZ, J. R. MARTÍN-SOLÍS, B. ESPOSITO, F. POLI and L. PANACCIONE – Radial structure of the runaway electron diffusion coefficient in tokamaks	»	197
D. TSKHAKAYA, S. KUHN, V. PETRŽÍLKA, L. KRLÍN, P. PAVLO, J. STÖCKEL, F. ŽAČEK, V. FUCHS, M. GONICHE, J. GUNN and M. LONTANO – Particle-in-cell and fluid simulations of particle acceleration in front of lower-hybrid grills.....	»	209
T. JOHNSON, T. HELLSTEN, L.-G. ERIKSSON and M. LAXÅBACK – Numerical modelling of ICRH induced torques	»	223
V. S. CHAN, S. C. CHIU, T. K. MAU, Y. A. OMELCHENKO and Y. SENTOKU – Fast ion transport and plasma rotation in ion-cyclotron heated plasmas	»	235

CONTRIBUTED PAPERS

T. ABDALLA, T. SCHEP and E. WESTERHOF – Spectra of decaying turbulence in electron magnetohydrodynamics.....	page	249
P. ANGELINO, G. L. FALCHETTO, J. VACLAVIK and L. VILLARD – Ion and electron temperature ratio and magnetic shear effects on electromagnetic instabilities...	»	255
R. GANESH, J. VACLAVIK and L. VILLARD – Effect of parallel magnetic field fluctuations (finite beta) in linear gyro-kinetic stability analysis of drift waves..	»	261
A. NICOLAI, U. DAYBELGE and C. YARIM – Modelling of plasma rotation and radial electric fields in TEXTOR and ALCATOR accounting for neutral beam injection and recycling of the neutral gas.....	»	269
M. ROMANELLI, M. DE BENEDETTI, A. THYAGARAJA and P. J. KNIGHT – Simulation of turbulence in FTU plasmas.....	»	275
D. E. NEWMAN, R. SÁNCHEZ. B. PH. VAN MILLIGEN and B. A. CARRERAS – Analysis of quiet-time statistics of edge electrostatic fluxes measured in tokamaks and stellarators.....	»	281
J. P. GRAVES, O. SAUTER and N. N. GORELENKOV – The effects of anisotropy and plasma rotation on the stabilisation of the internal kink mode by NBI.....	»	291
AN. MARTYNOV and O. SAUTER – Shape and aspect ratio effects on the ideal internal kink mode.....	»	297
R. G. STORER and B. MCMILLAN – Resistive stability for stellarators.....	»	303
R. BILATO and M. BRAMBILLA – Hamiltonian description of fast wave current drive in the ion cyclotron frequency range.....	»	309
P. NIKKOLA, S. CODA, R. W. HARVEY and O. SAUTER – Simulation of hard X-ray spectra and current profile of TCV ECCD experiments.....	»	315
T. HELLSTEN and M. LAXÅBACK – Edge localised magnetosonic eigenmodes in the ion cyclotron frequency range.....	»	321
O. MAJ and M. BORNATICI – Geometrical optics propagation of eikonal wavelets and/or wave packets in weakly dissipative media with sources: A treatment based on the generalized Fourier integral representation.....	»	327
G. MANFREDI and C. M. ROACH – Generation and dynamics of zonal flows in Hasegawa-Mima turbulence.....	»	333
P. J. KNIGHT and A. THYAGARAJA – Physics of zonal flow jets via evolution of the advection-diffusion equation.....	»	339
J. P. GRAVES, R. O. DENDY, K. I. HOPCRAFT and E. JAKEMAN – The rôle of clustering effects in interpreting non-diffusive transport measurements in tokamaks.....	»	345
A. BOTTINO, R. HATZKY, S. J. ALLFREY, O. SAUTER and L. VILLARD – Global nonlinear gyrokinetic simulations of ITG modes using particles in tokamak geometry.....	»	351
E. R. SOLANO – Structural stability of the Grad-Shafranov equation: Transport barriers and fragile equilibria.....	»	357
P. MAGET, G. HUYSMANS, A. LAZAROS, M. OTTAVIANI, J.-F. ARTAUD, W. ZWINGMANN, F. CLAIRET, M. GONICHE, D. MAZON, P. MOREAU, A.-L. PECQUET, J.-L. SEGUI, L. COLAS, L.-G. ERIKSSON, G. GIRUZZI, F. NGUYEN and the TORE SUPRA team – Analysis of (3,2) magnetic islands triggered by monster sawtooth crashes on TORE SUPRA.....	»	363

F. NABAIS, D. BORBA, M. MANTSINEN, M. F. F. NAVE and S. SHARAPOV – Numerical analysis of the loss of sawtooth stabilisation by ICRH driven fast particles in low density discharges.....	page	369
A. CARDINALI and F. ZONCA – Asymptotic analysis of eigenmodes in a tokamak plasma.....	»	375
D. W. FAULCONER – Simplifying the description of linear mode conversion by asymptotic block diagonalization.....	»	381
S. SCHILLEBEECKX and D. W. FAULCONER – Asymptotic description of penetration of the textor dynamic ergodic divertor field.....	»	387
A. CARDINALI, C. CASTALDO, R. CESARIO and F. MEO – Modelling of ion Bernstein waves obtained by mode conversion of fast waves for local generation of plasma sheared flows.....	»	393
P. POPOVICH, W. A. COOPER and L. VILLARD – Full wave propagation code in 2D and 3D for a cold plasma.....	»	399
F. CALIFANO, M. LONTANO and C. MARCHETTO – Interaction of electrostatic waves with magnetized plasmas: The results of Vlasov-Maxwell simulations.....	»	405
M. LAXÅBACK, T. HELLSTEN and T. JOHNSON – Self-consistent RF modelling of beam and ICRF heated plasmas.....	»	411
A. J. WEBSTER and H. R. WILSON – Initial studies of flow shear on edge MHD stability.....	»	417