

15. PUBLICATIONS

15.1. CENTRO DE FUSÃO NUCLEAR

15.1.1. Ph.D thesis

- “Edge density studies of ELMy H-modes in ASDEX Upgrade using reflectometry”
Isabel Nunes, June 2004
Universidade Técnica de Lisboa

15.1.2. Master thesis

- “Operação e controlo remoto do sistema de reflectometria do tokamak ASDEX Upgrade”
Sílvia Graça, November 2004
Universidade Técnica de Lisboa

15.1.3. Articles in scientific journals

- “Real-time motional Stark effect in JET”
Alves, D., A. Stephen, N. Hawkes, S. Dalley, A. Goodyear, R. Felton, E. Joffrin, H. Fernandes, EFDA-JET contributors
Fusion Engineering and Design, 71, 175, 2004
- “Li ceramic pebbles chemical compatibility with Eurofer samples in fusion relevant conditions”
Alves, L.C., E. Alves, M.R. da Silva, A. Paúl, A. La Barbera
Journal of Nuclear Materials B 329-33, 1295-1299, 2004.
- “JET divertor geometry and plasma shape effects on the L-H transition threshold”
Andrew, Y., N.C. Hawkes, M.G.O’Mullane, R. Sartori, M. de Baar, I Coffey, K. Guenther, I Jenkins, A. Korotkov, P. Lomas, G.F. Matthews, A. Matilal, R. Prentice, M. Stamp, J. Strachan, P. de Vries and JET-EFDA Contributors
Plasma Physics and Controlled Fusion, 46, (5), A87, 2004
- “Edge ion parameters at the L-H transition on JET”
Andrew, Y., N.C. Hawkes, M.G.O’ Mullane, R. Sartori, M.N.A. Beurskens, I. Coffey, E. Joffrin, A. Loarte, D.C. McDonald, R. Prentice, G. Saibene, W. Suttrop, K-D Zastrow and JET EFDA Contributors.
Plasma Physics and Controlled Fusion, 46, (2), 337, 2004
- “Density response to central electron heating: theoretical investigations and experimental observations in ASDEX Upgrade”
Angioni, C., A.G. Peeters, X. Garbet, A. Manini, F. Ryter and ASDEX Upgrade Team.
Nuclear Fusion, 44, (8), 827, 2004
- “Scintillator probe for lost alpha measurements in JET”
Baeumel, S., A. Werner, R. Semler, S. Mukherjee, D.S. Darrow, R. Ellis, F.E. Cecil, L. Pedrick, H. Altmann, V. Kiptily, J. Gafert, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3563, 2004
- “On the link between the q-profile and internal transport barriers”
Baranov, Yu F., X. Garbet, N.C. Hawkes, B. Alper, R. Barnsley, C.D. Challis, C. Giroud, E. Joffrin, M. Mantsinen, F. Orsitto, V. Parail, S.E. Sharapov and the JET-EFDA

contributors

Plasma Physics and Controlled Fusion, 46, (8), 1181, 2004

- “Design study for International Thermonuclear Experimental Reactor high resolution x-ray spectroscopy array”
Barnsley, R., M. O’Mullane, L.C. Ingesson, A. Malaquias.
Review of Scientific Instruments, 75, (10), 3743, 2004
- “A test-bench for the real-time project phase 2 of JET”
Batista, A.J.N., H. Fernandes, J. Sousa, C.A.F. Varandas, E. Joffrin, R. Felton, J. Farthing
Fusion Engineering and Design, 71, 83, 2004
- “Impurity penetration through the edge transport barrier”
Belo, P., V. Parail, G. Corrigan, D. Heading, W. Houlberg, P. Monier-Garbet, J. Ongena and the JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (8), 1299, 2004
- “Multipoint Thomson scattering diagnostic for the ETE tokamak”
Berni, L.A., M.P. Alonso, R.M. Oliveira.
Review of Scientific Instruments, 75, (10), 3884, 2004
- “Improvement of the T_e profile on Joint European Torus measured by electron cyclotron emission”
Blanchard, P., Elena de la Luna, C. Gowers, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3828, 2004
- “Two-dimensional full-wave code for reflectometry simulations in TJ-II”
Blanco, E., S. Heuraux, T. Estrada, J. Sánchez, L. Cupido.
Review of Scientific Instruments, 75, (10), 3822, 2004
- “High frequency MHD activity related to type I ELMs in ASDEX Upgrade”
Bolzonella, T., H. Zohm, M. Maraschek, E. Martines, S. Saarelma, S. Günter and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (5), A143, 2004
- “First MeV ion loss measurements using activation technique in reversed B experiments at JET”
Bonheure, G., S. Popovichev, L. Bertalot, A. Murari, S. Conroy, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3540, 2004
- “Destabilization of TAE modes using ICRH in ASDEX Upgrade”
Borba, D., G.D. Conway, S. Günter, G.T.A. Huysmans, S. Klose, M. Maraschek, A. Mück, I. Nunes, S.D. Pinches, F. Serra and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (5), 809, 2004
- “Recent H-mode density limit studies at JET”
Borras, K., A. Loarte, C.F. Maggi, V. Mertens, P. Monier,

- R. Monk, J. Ongena, J. Rapp, G. Saibene, R. Sartori, J. Schweinzer, J. Stober, W. Sutrop and EFDA-JET Workprogramme contributors
Nuclear Fusion, 44, (7), 752, 2004
- “On the interpretation of fluctuation and ExB turbulent transport measured by Langmuir probes in fusion plasmas”
Calderón, E., C. Hidalgo, M.A. Pedrosa and C. Silva.
Review of Scientific Instruments, 75, (10), 4293, 2004
 - “A high performance reconfigurable hardware platform for digital pulse processing”
Cardoso, J.M., J.B. Simoes, C.M.B.A. Correia, A. Combo, R. Pereira, J. Sousa, N. Cruz, P. Carvalho, C.A.F. Varandas,
IEEE Transactions on Nuclear Science, Vol. 51, issue 3, June 2004
 - “Real-time DSP-based shape determination and plasma position control in the ISTTOK tokamak”
Carvalho, B., H. Fernandes, C. Silva, D. Borba, C.A.F. Varandas
Fusion Engineering and Design, 71, 77, 2004
 - “Real-time digital signal processor-based system for MHD mode identification in ISTTOK”
Carvalho, B.B., H. Fernandes, J. Sousa and C.A.F. Varandas.
Review of Scientific Instruments, 75, (10), 4265, 2004
 - “Design of the new magnetic sensors for Joint European Torus”
Coccorese, V., R. Albanese, H. Altmann, S. Cramp, T. Edlington, K. Fullard, S. Gerasimov, S. Huntley, N. Lam, A. Loving, V. Riccardo, F. Sartori, C. Marren, E. McCarron, C. Sowden, J. Tidmarsh, F. Basso, A. Cenedese, G. Chitarin, F. DegliAgostini, L. Grando, D. Marcuzzi, S. Peruzzo, N. Pomaro, E.R. Solano and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 4311, 2004
 - “Bifurcation of generic metastable tearing modes interacting with resonant magnetic fields”
Coelho, R. and E. Lazzaro
Physics of Plasmas 11, 1440, 2004
 - “First tritium operation of ITER-prototype VUV spectroscopy on JET”
Coffey, I.H., R. Barnsley and JET EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3737, 2004
 - “A PCI transient recorder module for the JET magnetic proton recoil neutron spectrometer”
Combo, A., R. Pereira, J. Sousa, N. Cruz, P. Carvalho, C.A.F. Varandas, S. Conroy, J. Källne, M. Weiszflog
Fusion Engineering and Design, 71, 151, 2004
 - “Plasma rotation profile measurements using Doppler reflectometry”
Conway, G.D., J. Schirmer, S. Klänge, W. Sutrop, E. Holzhauser and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (6), 951, 2004
 - “A low-cost galvanic isolated fast PCI transient recorder with signal processing capabilities”
Correia, M., A.J.N. Batista, A. Combo, N. Cruz, P. Carvalho, C. Correia, J. Sousa, C.A.F. Varandas
Fusion Engineering and Design, 71, 159, 2004
 - “Calibration of the charge exchange recombination spectroscopy diagnostic for core poloidal rotation velocity measurements on JET”
Crombé, K., Y. Andrew, C. Giroud, N.C. Hawkes, A. Murari, M. Valisa, G. Van Oost, K.-D. Zastrow and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3452, 2004
 - “A large memory VME data acquisition system for the jet heterodyne radiometer upgrade”
Cruz, N., J. Sousa, R. Pereira, A. Combo, C.A.F. Varandas, M. Beldishevski, S. Dorling, B. Alper, contributors of the EFDA-JET work programme
Fusion Engineering and Design, 71, 167, 2004
 - “Frequency hopping millimeter wave reflectometer”
Cupido, L., J. Sánchez and T. Estrada.
Review of Scientific Instruments, 75, (10), 3865, 2004
 - “Methods for the mitigation of the chemical reactivity of beryllium in steam”
Druyts F, Alves EC, Wu CH
Journal of Nuclear Materials B 329-33, 1353-1356, 2004.
 - “Impurity transport in internal transport barrier discharges on JET”
Dux, R., C. Giroud, K.-D. Zastrow and the JET-EFDA contributors
Nuclear Fusion, 44, (2), 260, 2004
 - “Spurious oscillations affecting FIR polarimetry measurements”
Elbèze, D., C. Gil, R. Giannella, L. De Pasqual and JET-EFDA Contributors
Review of Scientific Instruments, 75, (10), 3405, 2004
 - “Neutron measurements on Joint European Torus using an NE213 scintillator with digital pulse shape discrimination”
Esposito, B., L. Bertalot, D. Marocco, M. Riva, Y. Kaschuck, S. Skopintsev, A. Zimbal, M. Reginatto, H. Schuhmacher, J.M. Adams, A. Murari, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3550, 2004
 - “Time-frequency analysis of non-stationary signals in fusion plasmas using the Choi-Williams distribution”
Figueiredo, A.C.A., M.F.F. Nave and EFDA-JET Contributors
Nuclear Fusion, 44, (10), L17, 2004
 - “Time-frequency analysis of nonstationary fusion plasma signals: A comparison between the Choi-Williams distribution and wavelets”
Figueiredo, A.C.A., M.F.F. Nave and EFDA-JET Contributors.
Review of Scientific Instruments, 75, (10), 4268, 2004

- “*Electron emissive electrode for the plasma biasing experiment on tokamak ISTTOK*”
Figueiredo, H., I.S. Nedzelskiy, C. Silva, C.A.F. Varandas, J.A.C. Cabral and R.M.O. Galvão.
Review of Scientific Instruments, 75, (10), 4240, 2004
- “*Boundary plasma energy transport in JET ELMy H-modes*”
Fundamenski, W., S. Sipilä and the JET-EFDA contributors
Nuclear Fusion, 44, (1), 20, 2004
- “*Physics of transport in tokamaks*”
Garbet, X., P. Mantica, C. Angioni, E. Asp, Y. Baranov, C. Bourdelle, R. Budny, F. Crisanti, G. Cordey, L. Garzotti, N. Kirneva, D. Hogeweij, T. Hoang, F. Imbeaux, E. Joffrin, X. Litaudon, A. Manini, D.C. McDonald, H. Nordman, V. Parail, A. Peeters, F. Ryter, C. Sozzi, M. Valovic, T. Tala, A. Thyagaraja, I. Voisekhovitch, J. Weiland, H. Weisen, A. Zabolotsky and the JET EFDA Contributors
Plasma Physics Controlled Fusion 46, (12B), B557, 2004
- “*Profile stiffness and global confinement*”
Garbet, X., P. Mantica, F. Ryter, G. Cordey, F. Imbeaux, C. Sozzi, A. Manini, E. Asp, V. Parail, R. Wolf and the JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (9), 1351, 2004
- “*Regime identification in ASDEX Upgrade*”
Giannone, L., A.C.C. Sips, O. Kardaun, F. Spreitler, W. Suttrop and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (5), 835, 2004
- “*Operation of a multiple cell array detector in plasma experiments with a heavy ion beam diagnostic*”
Gonçalves, B., A. Malaquias, I.S. Nedzelskiy, L. Pereira, C. Silva, C.A.F. Varandas, J.A.C. Cabral, S.M. Khrebtov, N.B. Dreval, L.I. Krupnik, C. Hidalgo and J. Depablos.
Review of Scientific Instruments, 75, (10), 3511, 2004
- “*Hybrid advanced scenarios: perspectives for ITER and new experiments with dominant RF heating*”
Gormezano, C., A. Becoulet, P. Buratti, L. Carraro, F. Crisanti, B. Esposito, G. Giruzzi, R. Guirlet, G.T. Hoang, E. Joffrin, X. Litaudon, T. Luce, V. Pericoli-Ridolfini, O. Sauter, A.C.C. Sips, A. Tuccillo and JET EFDA Contributors
Plasma Physics Controlled Fusion 46, (12B), B435, 2004
- “*Upgrade to the control system of the reflectometry diagnostic of ASDEX Upgrade*”
Graça, S., J. Santos, M.E. Manso and CFN Reflectometry Team.
Review of Scientific Instruments, 75, (10), 3852, 2004
- “*Approximate method to extract the pure Faraday and Cotton-Mouton effects from polarimetry measurements in a tokamak*”
Guenther, K. and JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (9), 1423, 2004
- “*The frequency interrupted regime of neoclassical tearing modes (FIR-NTMs): required plasma parameters and possibilities for its active control*”
Günter, S., M. Maraschek, M. De Baar, D.F. Howell, E. Poli, E. Strumberger, C. Tichmann and the ASDEX Upgrade Team
Nuclear Fusion, 44, (4), 524, 2004
- “*Upgrade of the X-mode reflectometry diagnostic for radial correlation measurements in the Joint European Torus*”
Hacquín, S., L. Meneses, L. Cupido, N. Cruz, L. Kokonchev, R. Prentice, C. Gowers.
Review of Scientific Instruments, 75, (10), 3834, 2004
- “*Comparison of $m=2, n=1$ neo-classical tearing mode limits in JET and DIII-D*”
Hender, T.C., D.F. Howell, R.J. Buttery, O. Sauter, F. Sartori, R.J. La Haye, A.W. Hyatt, C.C. Petty, JET-EFDA contributors and the DIII-D team
Nuclear Fusion, 44, (7), 788, 2004
- “*Power deposition outside the divertor in ASDEX Upgrade*”
Herrmann, A., T. Eich, V. Rohde, C.J. Fuchs and J. Neuhauser and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (6), 971, 2004
- “*Improved confinement regimes induced by limiter biasing in the TJ-II stellarator*”
Hidalgo, C., M.A. Pedrosa, N. Dreval, K.J. McCarthy, L. Eliseev, M.A. Ochando, T. Estrada, I. Pastor, E. Ascasíbar, E. Calderón, A. Cappa, A.A. Chmyga, A. Fernández, B. Gonçalves, J. Herranz, J.A. Jiménez, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L. Krupnik, A. López-Fraguas, A. López-Sánchez, A.V. Melnikov, F. Medina, B. van Milligen, C. Silva, F. Tabarés and D. Tafalla
Plasma Physics and Controlled Fusion, 46, (1), 287, 2004.
- “*A high throughput spectrometer system for helium ash detection on JET*”
Hillis, D.L., D.T. Fehling, R.E. Bell, D.W. Johnson, K.-D. Zastrow, A. Meigs, C. Negus, C. Giroud, M. Stamp, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3449, 2004
- “*ITER-relevant H-mode physics at ASDEX Upgrade*”
Horton, L.D., G.D. Conway, A.W. Degeling, T. Eich, A. Kallenbach, P.T. Lang, J.B. Lister, A. Loarte, Y.R. Martin, P.J. McCarthy, H. Meister, J. Neuhauser, J. Schirmer, A.C.C. Sips, W. Suttrop and the ASDEX Upgrade Team
Plasma Physics Controlled Fusion 46, (12B), B511, 2004
- “*Optimization of the lines of sight of the ITER x-ray crystal spectrometer diagnostic*”
Ingesson, L.C., R. Barnsley, A. Malaquias, M. O’Mullane.
Review of Scientific Instruments, 75, (10), 3696, 2004
- “*Arrangement of emissive and cold probes for fluctuation and Reynolds stress measurements*”
Ionita, C., P. Balan, R. Schrittwieser, H.F.C. Figueiredo, C. Silva, C.A.F. Varandas and R.M.O. Galvão.
Review of Scientific Instruments, 75, (10), 4331, 2004
- “*EDGE2D modeling of edge profiles obtained in JET diagnostic optimized configuration*”
Kallenbach, A., Y. Andrew, M. Beurskens, G. Corrigan, T.

- Eich, S. Jachmich, M. Kempenaars, A. Korotkov, A. Loarte, G. Matthews, P. Monier-Garbet, G. Saibene, J. Spence, W. Suttrop and JET-EFDA Contributors. *Plasma Physics and Controlled Fusion*, 46, (3), 431, 2004
- “*Comparison of multialkali and GaAs photocathode detectors for Joint European Torus edge light detection and ranging Thomson scattering profiles*”
Kempenaars, M., P. Nielsen, R. Pasqualotto, C. Gowers, M. Beurskens and JET-EFDA Contributors. *Review of Scientific Instruments*, 75, (10), 3894, 2004
 - “*Toroidal interferometer/polarimeter density measurement system on ITER*”
Kondoh, T., A.E. Costley, T. Sugie, Y. Kawano, A. Malaquias, C.I. Walker. *Review of Scientific Instruments*, 75, (10), 3420, 2004
 - “*Frequency control of type-I ELMs by magnetic triggering in ASDEX Upgrade*”
Lang, P.T., A.W. Degeling, J.B. Lister, Y.R. Martin, P.J. McCarthy, A.C.C. Sips, W. Suttrop, G.D. Conway, L. Fattorini, O. Gruber, L.D. Horton, A. Herrmann, M.E. Manso, M. Maraschek, V. Mertens, A. Mück, W. Schneider, C. Sihler, W. Treutterer, H. Zohm and ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (11), L31, 2004
 - “*ELM pace making and mitigation by pellet injection in ASDEX Upgrade*”
Lang, P.T., G.D. Conway, T. Eich, L. Fattorini, O. Gruber, S. Günter, L.D. Horton, S. Kalvin, A. Kallenbach, M. Kaufmann, G. Kocsis, A. Lorenz, M.E. Manso, M. Maraschek, V. Mertens, J. Neuhauser, I. Nunes, W. Suttrop, H. Urano and the ASDEX Upgrade Team. *Nuclear Fusion*, 44, (5), 665, 2004
 - “*Characterization of pedestal parameters and edge localized mode energy losses in the Joint European Torus and predictions for the International Thermonuclear Experimental Reactor*”
Loarte, A., G. Saibene, R. Sartori, T. Eich, A. Kallenbach, W. Suttrop, M. Kempenaars, M. Beurskens, M. de Baar, J. Lönnroth, P.J. Lomas, G. Matthews, W. Fundamenski, V. Parail, M. Becoulet, P. Monier-Garbet, E. de la Luna, B. Gonçalves, C. Silva, Y. Corre and Contributors to the EFDA-JET Workprogramme. *Physics of Plasmas*, 11, N° 5, 2668, 2004
 - “*Predictive modeling of ELMy H-modes with a new theory-motivated model for ELMs*”
Lönnroth, J-S, V. Parail, C. Figarella, X. Garbet, G. Corrigan, D. Heading and JET-EFDA Contributors
Plasma Physics and Controlled Fusion, 46, (5), A249, 2004
 - “*Predictive transport modeling and MHD stability analysis of mixed type I-II ELMy H-mode JET plasmas*”
Lönnroth, J-S, V. Parail, G. Huysmans, G. Saibene, H. Wilson, S. Sharapov, G. Corrigan, D. Heading, R. Sartori, M. Bécoulet and JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (5), 767, 2004
 - “*Predictive transport modeling of type I ELMy H-mode dynamics using a theory-motivated combined ballooning-peeling model*”
Lönnroth, J-S, V. Parail, A. Dnestrovskij, C. Figarella, X. Garbet, H. Wilson and the JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (8), 1197, 2004
 - “*Electron cyclotron emission radiometer upgrade on the Joint European Torus (JET) tokamak*”
Luna, E. de la, J. Sánchez, V. Tribaldos, G. Conway, W. Suttrop, J. Fessey, R. Prentice, C. Gowers, J.M. Chareau, and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 3831, 2004
 - “*Studies of burning plasma physics in the Joint European Torus*”
Mayoral, M.L., R. Buttery, T.T.C. Jones, V. Kiptily, S. Sharapov, M.J. Mantsinen, S. Coda, O. Sauter, L.G. Eriksson, F. Nguyen, D.N. Borba, A. Mück, S.D. Pinches, J.M. Noterdaeme and JET-EFDA Contributors
Physics of Plasmas, 11, N° 5, 2607, 2004
 - “*Active beam spectroscopy diagnostics for ITER: Present status*”
Malaquias, A., M. von Hellermann, S. Tugarinov, P. Lotte, N. Hawkes, M. Kuldkepp, E. Rachlew, A. Gorshkov, C. Walker, A. Costley and G. Vayakis
Review of Scientific Instruments, 75, (10), 3393, 2004
 - “*Experimental study of electron heat transport in ion heated H-modes in ASDEX Upgrade*”
Manini, A., F. Ryter, C. Angioni, A.G. Peeters, J. Stober, G. Tardini, M. Apostoliceanu, F. Leuterer, C.F. Maggi, D. Nishijima, A. Stäbler, W. Suttrop, D. Wagner and the ASDEX Upgrade Team
Plasma Physics and Controlled Fusion, 46, (11), 1723, 2004
 - “*Localized bulk electron heating with ICRF mode conversion in the JET tokamak*”
Mantsinen, M.J., M.-L. Mayoral, D. Van Eester, B. Alper, R. Barnsley, P. Beaumont, J. Bucalossi, I. Coffey, S. Conroy, M. de Baar, P. de Vries, K. Ereints, A. Figueiredo, A. Gondhalekar, C. Gowers, T. Hellsten, E. Joffrin, V. Kiptily, P.U. Lamalle, K. Lawson, A. Lysoivan, A. Lysoivan, J. Mailloux, P. Mantica, F. Meo, F. Milani, I. Monakhov, A. Murari, F. Nguyen, J.-M. Noterdaeme, J. Ongena, Yu. Petrov, E. Rachlew, V. Riccardo, E. Righi, F. Rimini, M. Stamp, A.A. Tuccillo, K.-D. Zastrow, M. Zerbini and the JET-EFDA contributors
Nuclear Fusion, 44, (1), 33, 2004
 - “*The beta scalling of energy confinement in ELMy H-modes in JET*”
McDonald, D.C., J.G. Corday, C.C. Petty, M. Beurskens, R. Budny, I. Coffey, M. de Baar, C. Giroud, E. Joffrin, P. Lomas, A. Meigs, J. Ongena, G. Saibene, R. Sartori, I. Voitsekhovitch and JET-EFDA contributors
Plasma Physics and Controlled Fusion, 46, (5), A215, 2004
 - “*ELMY H-modes in JET helium-4 plasmas*”
McDonald, D.C., J.G. Cordey, E. Righi, F. Ryter, G. Saibene, R. Sartori, B. Alper, M. Becoulet, J. Brzozowski, I

- Coffey, M. de Baar, P. de Vries, K. Erents, W. Fundamenski, C. Giroud, I Jenkins, A. Loarte, P.J. Lomas, G.P. Maddison, J. Mailloux, A. Murari, J. Ongena, J. Rapp, R.A. Pitts, M. Stamp, J. Strachan, W. Suttrop and JET-EFDA Contributors *Plasma Physics and Controlled Fusion*, 46, (3), 519, 2004
- “*Z_{eff} from spectroscopic bremsstrahlung measurements at ASDEX Upgrade and JET*”
Meister, H., R. Fischer, L.D. Horton, C.F. Maggi, D. Nishijima and ASDEX Upgrade Team, C. Giroud, K.-D. Zastrow, B. Zaniol and JET-EFDA Contributors.
Review of Scientific Instruments, 75, (10), 4097, 2004
 - “*Plasma potential measurements by the heavy ion beam probe diagnostic in fusion plasmas: biasing experiments in the TJ-II stellarator and T-10 tokamak*”
Melnikov, A.V., C. Hidalgo, A.A. Chmyga, N.B. Dreval, L.G. Eliseev, S.M. Khrebtov, A.D. Komarov, A.S. Kozachok, L.I. Krupnik, I. Pastor, M.A. Pedrosa, S.V. Perfilov, K. McCarthy, M.A. Ochando, G. Van Oost, C. Silva, B. Gonçalves, Yu. N. Dnestrovskij, S.E. Lysenko, M.V. Ufimtsev, and V.I. Tereshin
Fusion Science and Technology, 46, N° 2, 299, 2004
 - “*On the use of MHD mode analysis as a technique for determination of q-profiles in JET plasmas*”
Nave, M.F.F., D. Borba, R. Galvão, S. Hacquin, B. Alper, C. Challis, S. Gerasimov, N. Hawkes, J. Mailloux, S. Sharapov, C. Boswell, M. Brix, E. Joffrin, E. de la Luna, P. Smeulders and EFDA-JET Contributors.
Review of Scientific Instruments, 75, (10), 4274, 2004
 - “*Time-of-flight energy analyzer for the plasma potential measurements by a heavy ion beam diagnostic*”
Nedzelskiy, I.S., A. Malaquias, B. Gonçalves, C. Silva, C.A.F. Varandas, and J.A.C. Cabral.
Review of Scientific Instruments, 75, (10), 3514, 2004
 - “*Characterization of the density profile collapse of type I ELMs in ASDEX Upgrade with high temporal and spatial resolution reflectometry*”
Nunes, I., G.D. Conway, A. Loarte, M. Manso, F. Serra, W. Suttrop and the CFN and ASDEX Upgrade teams.
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 - “*Time-of-Flight Energy Analyzer for the Plasma Potential Measurements by a Heavy Ion Beam Diagnostic*”
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 - “*FM-CW Reflectometry Measurements of Plasma Position in ASDEX Upgrade ELMY-H Mode Regimes*”
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 - “*Fluctuations Measurements Using a 5-pin Triple Probe in the JET Boundary Plasma*”
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- 15.1.4. Papers in international conferences**
- **15th Topical Conference on High Temperature Plasma Diagnostics, 19-22 of April, 2004, San Diego, USA**
 - “*On the interpretation of fluctuations and ExB turbulent transport measured by Langmuir probes in fusion plasmas*”
Calderon, E., C. Hidalgo, C. Silva, M.A. Pedrosa
 - “*A Real-Time DSP-Based System for MHD Mode Identification in ISTTOK*”
Carvalho, B., H. Fernandes, J. Sousa and C.A.F. Varandas
 - “*Frequency Hopping MMW Reflectometer*”
Cupido, L., M. E. Manso, L. Meneses, J. Sánchez and F. Serra

- **16th International Conference on Plasma Surface Interactions in Controlled Fusion Devices, 24-28 of May, Portland, Maine, USA**
- “*Statistical Description of the Radial Structure of Turbulence in the JET Plasma Boundary Region*”
Gonçalves, B., C. Hidalgo, C. Silva, M.A. Pedrosa and K. Ereints
- “*Edge and Divertor Physics with Reversed Toroidal Field in JET*”
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- “*Determination of the Particle and Energy Fluxes in the JET far SOL during ELMs using the Reciprocating Probe Diagnostic*”
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- “*Comparison of Limiter and Emissive Electrode Bias on the Tokamak ISTTOK*”
Silva, C., I. Nedzelskiy, H. Figueiredo, R.M.O. Galvão, J.A.C. Cabral and C.A.F. Varandas
- **31st EPS on Plasma Physics, 28 June to 1 July, Imperial College, London**
- “*Coupling properties of Tore Supra’s ITER-like LH PAM launcher*”
Belo, J.H., Ph. Bibet
- “*Observation and Implication of MHD Modes for the Hybrid Scenario in JET*”
Belo, P., P. Buratti, R.J. Buttery, T.C. Hender, D.F. Howell, A. Isayama, E. Joffrin, M.F.F. Nave, G. Sips e os contributos do JET-EFDA
- “*Role of Impurity and Deuterium Fuelling in Evolution of Trace Tritium in JET ELMy H-mode: Transport Analysis and Predictive Modelling*”
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- “*Dual feedback controlled high performance Ar seeded ELMy H-Mode discharges in JET including trace tritium experiments*”
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- “*Trace-Tritium Measurement of Magnetic Island Effect on Particle Confinement*”
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- “*On the Momentum Re-distribution via Fluctuations in Fusion Plasmas*”
Hidalgo, C., B. Gonçalves, M.A. Pedrosa, C.Silva, O. Orozco, E. Calderón, G. Falchetto, X. Garbet and M. Hron
- “*Small Sawtooth Regimes in JET Plasmas*”
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- “*Tritium Fuelling of JET Plasmas with Internal Transport Barriers*”
Mailloux, J., C.D. Challis, K-D. Zastrow, J.M. Adams, B. Alper, Yu. Baranov, P. Belo, L. Bertalot, P. Beaumont, R. Buttery, S. Conroy , E. De La Luna, P. de Vries, C. Giroud, N.C. Hawkes, E. Joffrin, P.J. Lomas, D.C. McDonald, S.D. Pinches, S. Sharapov, I. Voitsekhovitch, and JET EFDA Contributors
- “*Study of the Density Pedestal Width in ASDEX Upgrade using Reflectometry*”
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- “*Tokamak turbulence computations on closed and open magnetic field lines*”
Ribeiro T., B. Scott, D. Coster and F. Serra
- “*Small ELM experiments in H-mode plasmas in JET*”
Saibene, G, P J Lomas, R Sartori, A Loarte, P R Thomas, V V Parail, J S Lonnroth, H R Koslowski, C P Perez, F G

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- “*pT fusion by RF-heated protons in JET trace tritium discharges*”
Santala, M. I. K., M. J. Mantsinen, Yu. Baranov, P. Beaumont, P. Belo, L. Bertalot, J. Brzozowski, M. Cecconello, S. Conroy, C. Gowers, M. deBaar, P. deVries, V. Kiptily, J.-M. Noterdaeme, S. Popovichev, A. Salmi, C. Schlatter, S. Sharapov, D. Testa, and JET EFDA collaborators
 - “*Transport Analysis of Trace Tritium Experiments on JET using TRANSP Code and Comparison with Theory-Based Transport Models*”
Voitsekhovitch, D.C. McDonald, K-D Zastrow, Yu Baranov, R. Budny, X. Garbet, D. McCune, J. Ongena, D. Stork, M. Adams, P. Belo, L. Bertalot, G. Bonheure, S. Conroy, J.G. Cordey, L. Garzotti, M von Hellermann, P. Mantica, V. Parail, S Popovichev, M Valovic and JET EFDA Contributors
 - “*RF Induced Impurity Transport in the Mode Conversion Regime in a H-D plasma at JET*”
Weysow, B., D. Pilipenko, I. Pavlenko, P. Dumortier, D. Van Eester, F. Nave, J. Brzozowski, R. Felton, L. Zabeo, G. Maddison, S. Hacquin, M. Mantsinen, and J.-M. Noterdaeme and contributors to the EFDA-JET Workprogramme
 - “*Tritium Transport Experiments on the JET Tokamak*”
Zastrow, K-D, J.M. Adams, Yu Baranov, P. Belo, L. Bertalot, J.H. Brzozowski, C.D. Challis, S. Conroy, M de Baar, P de Vries, P. Dumortier, J. Ferreira, L. Garzotti, T.C. Hender, E. Joffrin, V. Kiptily, J Mailloux, D.C. McDonald, R. Neu, M.O'Mullane, M.F.F. Nave, J. Ongena, S. Popovichev, M. Stamp, J. Stober, D Stork, I. Voitsekhovitch, M. Valovic, H. Weisen, A.D. Whiteford, A. Zabolotsky and JET EFDA Contributors
- **Theory of Fusion Plasmas Conference, Varenna, Italy, 30 August – 3 September 2004**
- “*Parity and topology of tearing mode perturbations in a cylindrical tokamak*”
Coelho, R. and E. Lazzaro
- **10th EU-US Transport Task Force Workshop, 6-9 September 2004, Villa Monastero-Varenna, Italy**
- “*Transition from TEM to ITG and consequences on transport properties in ASDEX Upgrade plasmas*”
Angioni, C., A. G. Peeters, F. Ryter, F. Jenko, G. D. Conway, T. Dannert, H. U. Fahrbach, L. Fattorini, M. Reich, W. Suttrop and the ASDEX Upgrade Team.
 - “*On the Energy Transfer Between Flows and Turbulence in the Plasma Boundary of Fusion Devices*”
Gonçalves, B., C. Hidalgo, E. Sánchez, C. Silva, M.A. Pedrosa, O. Orozco, E. Calderón, G. Falchetto, X. Garbet e M. Hron
- **23rd SOFT, 20-24 September 2004, Venice, Italy**
- “*Characterization and stability studies of titanium beryllides* Alves, E. L.C. Alves, N. Franco, R. da Silva, A. Paúl, J.B. Hegeman, F. Druyts
 - “*ITER-like pam launcher for TORE SUPRA'S LHCD system*”
Belo, J. H., Ph. Bibet, J. Achard, B. Beaumont, B. Bertrand, M. Chantant, Ph. Chappuis, L. Doceul, A. Durocher, L. Gargiulo, M. Missirlian, A. Saille, F. Samaille, E. Villedieu
 - “*Toward an LHCD system for ITER*”
Bibet, Ph., B. Beaumont, J. H. Belo, L. Delpach, A. Ekedahl, G. Granucci, F. Kazarian, X. Litaudon, J. Mailloux, F. Mirizzi, V. Pericoli, M. Prou, K. Rantamäki, A. Tuccillo,
 - “*New millimetre-wave access for JET reflectometry and ECE*”
Cupido, L., E. de la Luna, C. Antonucci, A. Guigon, F.J. van Amerongen, W.A. Bongers, A.J.H. Donné, M.F. Graswinckel, A. Bruschi, S. Cirant, A. Simonetto, C. Sozzi, D. Wagner, M.E. Manso, L. Meneses, F. Silva, P. Varela, N. Balshaw, J.M. Chareau, G. Conway, J. Fessey, S. Hanks, R. Pearce, V. Ricardo, D. Sands, D. Starky, T. Tisconia and JET-EFDA Contributors.
- **12th ICPP, 25-29 October 2004, Nice, France**
- “*On non-zero space average density perturbation effects in tokamak plasma reflectometer signals*”
Heuroux, S., R. Sabot, F. da Silva, A. Sirinelli, E. Blanco, F. Clairet, P. Hennequin, G. Leclert, L. Vermare
- **WorkShop on the Electric Fields, Structures and Relaxation in Edge Plasmas, 26-27 October 2004, Nice, France**
- “*Emissive Electrode Plasma Biasing Experiments on Tokamak ISTTOK*”
Figueiredo, H., C. Silva, I.S. Nedzelskiy, C.A.F. Varandas, J.A.C. Cabral e R.M.O. Galvão
 - “*Efficiency of plasma biasing by movable localized limiter in tokamak ISTTOK*”
Nedzelskiy, I.S., C. Silva, H. Figueiredo, C.F.A. Varandas e J.A.C. Cabral
- **20th IAEA Fusion Energy Conference, 1-6 November 2004, Vilamoura, Portugal**
- “*Cross-machine NTM physics studies and implications for ITER*”
Buttery, R. J., P. Belo, D. P. Brennan, S. Coda, L.-G. Eriksson, B. Gonçalves, J. P. Graves, S. Günter, C. Hegna, T. C. Hender, D. F. Howell, H. R. Koslowski, R. J. La Haye, M. Maraschek, M. L. Mayoral, M. F. F. Nave, O. Sauter, E. Westerhof, C. Windsor, the ASDEX Upgrade and DIII-D teams, and JET-EFDA contributors

- “*Mode Coupling Effects on the Triggering of Neoclassical Tearing Modes and Plasma Momentum Braking*”
Coelho, R., E. Lazzaro e P. Zanca
- “*On the Momentum Re-distribution Via Turbulence in Fusion Plasmas: Experiments in JET and TJ-II*”
Gonçalves, B., C. Hidalgo, M.A. Pedrosa, R. O. Orozco, C. Silva, E. Calderón, K. Ereñts, G. Falchetto, X. Garbet, M. Hron, G. Matthews e E. Sánchez
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Joffrin, E., A. C. C. Sips, A. Becoulet, R. Budny, P. Buratti, P. da Silva Aresta Belo, C. D. Challis, F. Crisanti, M. de Baar, P. de Vries, C. Gormezano, C. Giroud, O. Gruber, F. Imbeaux, A. Isayama, X. Litaudon, P. J. Lomas, Y. S. Na, S. D. Pinches, A. Staebler, T. Tala, A. Tuccillo, K.-D. Zastrow and JET-EFDA Contributors to the Work Programme.
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Lang, P.T., A. Kallenbach, J. Bucalossi, G. D. Conway, A. Degeling, R. Dux, T. Eich, L. Fattorini, O. Gruber, S. Günter, A. Hermann, L. D. Horton, S. Kalvin, G. Kocsis, J. Lister, M. E. Manso, M. Maraschek, Y. Martin, P. J. McCarthy, V. Mertens, R. Neu, J. Neuhauser, I. Nunes, T.Pütterich, W. Schneider, A. C. C. Sips, W. Suttrop, W. Treutterer, H. Zohm and the ASDEX Upgrade Team.
- “*Impurity-seeded ELMy H-modes in JET, with high density and sustainable heat load*”
Monier-Garbet, P., Ph. Andrew, P. Belo, G. Bonheure, Y. Corre, K. Crombe, P. Dumortier, T. Eich, R. Felton, J. Harling, J. Hogan, A. Huber, S. Jachmich, E. Joffrin, H.R. Koslowski, A. Kreter, G. Maddison, G.F. Matthews, A. Messiaen, M.F. Nave, J. Ongena, V. Parail, M.E. Puiatti, J. Rapp, R. Sartori, J. Stober, M.Z. Tokar, B. Unterberg, M. Valisa, I. Voitsekhovitch, M. von Hellermann, and JET-EFDA contributors.
- *Internal kink Mode Stability in the Presence of ICRH Driven Fast Ions Populations* (Oral presentation)
Nabais, F., D. Borba, M. Mantsinen, M. F. F. Nave, S. Sharapov e os contributos do JET-EFDA
- “*Density Profile Evolution during Dynamic Processes in ASDEX Upgrade*”
Nunes, I., J. Santos, F. Salzedas, M. Manso, F. Serra, G. D. Conway, L. D. Horton, J. Neuhauser, W. Suttrop e as equipas do CFN e do ASDEX Upgrade
- “*Study of Runaway Electron Generation Process During Major Disruptions in JET*”
Plyusnin, V.V., V. Riccardo, R. Jaspers, B. Alper, V.G. Kiptily, J. Mlynar, S. Popovichev, E. de La Luna, P. Helander, F. Andersson e os contributos JET EFDA
- “*Measurements of density profile and density fluctuations in Tore Supra with reflectometry*”
Sabot, R., F. Clairet, P. Hennequin, S. Heuraux, A. Sirenelli, L. Vermare, J.M. Chareau, J.C. Giacalone, C. Honoré, G. Leclert, D. Molina, J.L. Ségui, A. Truc, F. da Silva, M.E. Manso
- “*Dimensionless identity experiments in JT-60U and JET*”
Saibene, G., N. Oyama, Y. Andrew, J.G. Cordey, E. de la Luna, C. Giroud, K. Guenther, T. Hatae, Y. Kamada, MAH Kempenaars, A. Loarte, J. Lönnroth, D. McDonald, A. Meiggs, M.F.F. Nave, V. Parail, R. Sartori, J. Stober, T. Suzuki, M. Takechi, K. Toi
- “*Scaling study of ELMy H-mode global and pedestal confinement at high triangularity in JET*”
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- “*Experimental studies of instabilities and confinement of energetic particles on MAST and JET*” (Oral presentation)
Sharapov, S., B. Alper, F. Andersson, Y. Baranov, H. Berk, L. Bertalot, D. Borba, C. Boswell, R. Buttery, C. Challis, M. de Baar, P. de Vries, L.-G. Eriksson, A. Fasoli, R. Galvao, V. Goloborodko, N. Hawkes, P. Helander, V. Kiptily, G. Kramer, P. Lomas, J. Mailloux, M. Mantsinen, R. Martin, F. Nabais, F. Nave, R. Nazikian, J.-M. Noterdaeme, S. Pinches, T. Pinfold, S. Popovichev, P. Sandquist, D. Stork, D. Testa, A. Tuccillo, I. Voitsekhovitch, V. Yavorskij, N. Young, F. Zonca , and JET-EFDA contributors.
- “*Comparison of Limiter and Emissive Electrode Bias on the Tokamak ISTTOK*” (Oral presentation)
Silva, C., I. Nedzelskiy, H. Figueiredo, R.M.O. Galvão, B. Gonçalves, J.A.C. Cabral e C.A.F. Varandas
- “*Small ELM regimes with good confinement on JET and comparison to those on ASDEX Upgrade, Alcator C-mod, and JT-60U*”
Stober, J., P. Lomas, G. Saibene, Y. Andrew, P. Belo, G.D. Conway, L.D. Horton, M. Kempenaars, H.-R. Koslowski, A. Loarte, G.P. Maddison, M. Maraschek, D.C. McDonald, A.G. Meigs, P. Monier-Garbet, D.A. Mossessian, M.F.F. Nave, N. Oyama, V. Parail, Ch.P. Perez, F. Rimini, R. Sartori, A.C.C. Sips, P.R. Thomas, contributors to the EFDA-JET work programme, and the ASDEX Upgrade Team
- “*Overview of Transport, Fast Particle and Heating and Current Drive Physics using Tritium in JET plasmas*”
Stork, D., Yu. Baranov, P.Belo, L.Bertalot, D.Borba, J.H.Brzozowski, C.D.Challis, D.Ciric, S. Conroy, M.de Baar, P.de Vries, P Dumortier, L.Garzotti, N.C.Hawkes, T.C.Hender, E.Joffrin, T.T.C.Jones, V.Kiptily, P.Lamalle, J.Mailloux, M.Mantsinen, D.C.McDonald, M.F.F.Nave, R.Neu, M. O’Mullane, J.Ongena, R.J.Pearce, S.Popovichev, S.E.Sharapov, M.Stamp, J.Stober, E.Surrey, M.Valovic, I.Voitsekhovitch, H.Weisen, A.D.Whiteford, L.Worth, V.Yavorskij, K-D.Zastrow and JET EFDA contributors.

- “*Studies of the Quiescent H-mode regime in ASDEX Upgrade and JET*”
Suttrop, W., M. Maraschek, G. D. Conway, H.-U. Fahrbach, P. Gohil, G. Haas, S. Hacquin, L. D. Horton, T. Kurki-Suonio., C. J. Lasnier., A. W. Leonard, P. J. Lomas; G. F. Maddison, C. F. Maggi, H. Meister, A. Mück, M. F. Nave, R. Neu, I. Nunes, R. A. Pitts, Th. Pütterich, M. Reich, J. Schirmer, S. E. Sharapov, A. C. C. Sips, K.-D. Zastrow the ASDEX Upgrade Team and contributors to the EFDA-JET workprogramme
 - “*Anomalous particle and impurity transport in JET*”
Weisen, H., C. Angioni, A. Bortolon, C. Bourdelle, L. Carraro, I. Coffey, R. Dux, X. Garbet, L. Garzotti, C. Giroud, N. Hawkes, D. Kalupin, H. Leggate, P. Mantica, M. Mattioli, D. Mazon, D.C. McDonald, M.F.F. Nave, R. Neu, V. Parail, M.E. Puiatti, M. Tokar, M. Valisa, M. Valovic, J. Weiland, L. Zabeo, A. Zabolotsky, K.-D. Zastrow and contributors to the JET-EFDA work programme
 - “*Edge stability and performance of the ELM-free quiescent H-mode and the quiescent double barrier mode on DIII-D*”
West, W.P., K.H. Burrell, T.A. Casper, E.J. Doyle, P.B. Snyder, P. Gohil, L.L. Lao, C.J. Lasnier, A.W. Leonard, M.F.F. Nave, T.H. Osborne, D.M. Thomas, G. Wang and L. Zeng.
 - **Annual Conference Japanese Society of Plasma Physics and Nuclear Fusion, November 23-26, Shizoka, Japan, 2004**
 - “*Microwave reflectometry of turbulence wavenumber spectra in tokamaks*”
Bruskin, L. G., A. Mase, M. E. Manso, F. Serra, A. Silva, L. Fattorini, G. D. Conway and the ASDEX Upgrade Team.
 - **APS - 46th Annual Meeting of the Division of Plasma Physics, Savannah, Georgia, USA**
 - *Model of $n=0$ energetic particle induced oscillations in JET*
Berk, H.L., S. Sharapov, M.F.F. Nave, S. D. Pinches and C. Boswell
 - “*Poloidal rotation velocity studies on JET*”
Crombé, K., Y. Andrew, M. Brix, C. Giroud, N.C. Hawkes, A. Murari, M.F.F. Nave, J. Ongena, V. Parail, G. Van Oost, K.-D. Zastrow and contributors to the EFDA-JET work programme
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 - “*European LHCD antennae test and development*”
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Fernandes, H., J. Fortunato, J. Pereira
 - “*E-escola – um portal de ciências básicas*”
Fernandes, H., P.A. Santos
 - “*Soluções para transmissão de vídeo no ELAB*”
Fernandes, H., A. Neto, J. Pereira, P. Carvalho
 - **Escola de Educação em Física, SPF, Porto, 2004**
 - “*ELAB virtual – experiências cooperativas de física na internet*”
Fernandes, H., A. Neto, S.R.M. Pino
 - “*Experiência de Thomson remota – uma implementação no ELAB*”
Fernandes, H., A. Neto, I. Carvalho
- ## 15.2. CENTRO DE FÍSICA DOS PLASMAS
- ### 15.2.1. Ph.D thesis
- “*LIDARLAB: lidar bi-comprimento-de-onda e multi-direccional para detecção remota de aerossóis*”
José A. Rodrigues, 2004
Universidade Técnica de Lisboa
 - “*Quantum theory of photon acceleration and quantum effects in non-stationary optical media*”
Ariel Guerreiro, 2004
Universidade Técnica de Lisboa
- ### 15.2.2. Master thesis
- “*Caracterização da fase spectral de impulsos laser ultracurtos*”
João Wemans, 2004
Universidade Técnica de Lisboa
 - “*Estudo de um plasma de grandes dimensões produzido por ondas de superfície*”
Alexandre Alves Martins, 2004
Universidade Técnica de Lisboa
- ### 15.2.3. Articles in scientific journals
- “*Fluid description of the energy absorption in microwave discharges: a new perspective*”
Alves, L.L.
Eur. Phys. J. Appl. Phys. 26 (DOI 10.1051), 195-201, 2004.
 - “*Neutrino plasma coupling in dense astrophysical plasmas*”
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- “Excited Species in a Large-Scale N₂-O₂ Microwave Plasma Source”
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- “A Large-Volume N₂-Ar Microwave Plasma Source Based on Surface Waves”
Ferreira, C.M., E. Tatarova, J. Henriques and F.M. Dias
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- “Effect of a large-amplitude circularly polarized wave on linear beam-plasma electromagnetic instabilities”
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Gomberoff, L., J. Hoyos, A.L. Brinca and R. Ferrer,
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- “Self-Consistent Modeling of DC and Microwave Nitrogen Discharges and Their Afterglows”
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 - “Molecular Dissociation in N_2-H_2 Microwave Discharge”
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- 15.2.4. Papers in international conferences**
- **31th IEEE, ICOPS, Baltimore, Maryland, USA, 2004**
 - “Wave driven Ar- N_2-O_2 discharges as sources of active species”
J. Henriques, E. Tatarova, C. M. Ferreira and A. Ricard
 - **XVth International Conference on Gas Discharges and their Applications, Toulouse, France, 2004**
 - “Experimental investigation of a large-scale microwave plasma source in N_2-O_2 and N_2-Ar ”
Dias, F. M., E. Tatarova and C. M. Ferreira
 - **31st EPS Plasma Physics, London, June 2004**
 - “Photon acceleration by counter-propagating relativistic mirrors”
Dias, J.M., N.C. Lopes, L. O. Silva, D. A. Jaroszynski, J. T. Mendonça
 - “Relativistic mirrors for THz radiation sources induced by ionization fronts”
Dias, J. M., N. C. Lopes, L. O. Silva, D. A. Jaroszynski, J. T. Mendonça
 - “Photon acceleration of X-rays in a waveguide”
Fajardo, M., T. Mendonça, J.M. Dias
 - “On the role of the electromagnetic counter-streaming instability in GBRs”
Fiore, M., R. A. Fonseca, L. O. Silva, C. Ren, M. A. Tzoufras, W. B. Mori,
 - “Electron beams for fast ignition”
Fonseca, R. A., J. R. Davies, L. O. Silva,
 - “Large scale hybrid simulations of interacting plasmas in space”
Gargaté, L., R. Bingham, R. A. Fonseca, L. O. Silva, J. T. Mendonça, P.K.Shukla
 - “A laser triggered plasma channel for GeV plasma accelerators”
Lopes, N.C., G. Figueira, J. M. Dias, J. Vieira, R. A. Fonseca, L. O. Silva, J. T. Mendonça

- “Collisionless shocks driven by ultra-intense lasers”
Marti, M., J. R. Davies, R. A. Fonseca, L. O. Silva, J. Fahlen, M. A. Tzoufras, C. Ren, F. S. Tsung, W. B. Mori
- “Tunneling ionization in OSIRIS”
Martins, S. F., R. A. Fonseca, L. O. Silva, S. Deng, T. Katsouleas, F. Tsung, W. B. Mori,
- “A self-consistent study for the laser-induced coulomb explosion of large deuterium clusters”
Peano, F., R. A. Fonseca, M. Marti, S. Martins, L. O. Silva,
- “Wigner description of laser driven instabilities at arbitrary intensities”
Santos, J. P., L. O. Silva, R. Bingham
- “Taming ultra intense fields in plasmas for particle acceleration”
Silva, L. O.
- “A quasi-particle approach to the modulational instability of broadband drift mode turbulence coupled to zonal flows”
Trines, R.M.G.M., R. L. Bingham, L. O. Silva, J. T. Mendonça, P. K. Shukla, W. B. Mori,
- “A photon-in-cell code for laser wakefield accelerators”
Trines, R. M. G. M., R. L. Bingham, L. O. Silva, J. T. Mendonça, P. K. Shukla, W. B. Mori, R. A.Cairns, A. Reitsma,
- “Blowout regime for laser wakefield in plasma channels”
Vieira, J. F., R. A. Fonseca, L. O. Silva, F. Tsung, W. B. Mori,
- **ICTP: Workshop on Theoretical Plasma Physics, 5-16 July, Trieste, Italy, 2004**
 - “Laser heated plasma fronts for thrust generation”
Resendes, D.P. G. Sorasio, S. Mota, J.T. Mendonça, P.K. Shukla
 - “Instability and threshold of ULF waves triggered by positive cloud to ground lightning”
Sorasio, G.
- **22nd SPIG (Summer School and International Symposium on the Physics of Ionized Gases), Serbia and Montenegro, August, 2004**
 - Self-consistent modeling of DC and microwave nitrogen discharges and their afterglows
Guerra, V., P. A. Sá e J. Loureiro
- **XV International Symposium on Gas Flow and Chemical Lasers & High Power Laser Conference, Prague, Aug-Sep 2004**
 - “Bandwidth increase by controlled angular dispersion of signal beam in optical parametric amplification”
Cardoso, L., G. Figueira, N. Lopes, J. Wemans, J. T. Mendonça
- “Performance and characterization of a 2.8 TW Ti:sapphire-Nd:glass chirped pulse amplification laser system”
Figueira, G., N. Lopes, L. Cardoso, J. Wemans, J. M. Dias, M. Fajardo, C. Leitão, J. T. Mendonça
- “Characterisation and optimisation of a multiterawatt CPA laser system using SPIDER”
Wemans, J., G. Figueira, N. Lopes, L. Cardoso
- **ESCAMPIG 17 (17th European Conference on Atomic & Molecular Physics of Ionized Gases), Constanta, Romania, September, 2004**
 - “Theoretical investigation of the dependence of the probability of atomic surface recombination with the wall temperature”
Guerra, V.
 - “Self-consistent modeling of nitrogen discharges: influence of the cross sections for transitions between vibrational levels”
Guerra, V., A. A. Mihajlov, J. Loureiro and Z. Lj. Petrovi
 - “Time-afterglow of an N₂-O₂ microwave discharge used for plasma sterilization”
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 - “Remote visualization for large data sets from plasma simulations”
Abreu, P. T., R. A. Fonseca, M. Marti, L. O. Silva
 - “Relativistic mirrors for THz radiation”
Dias, J. M., N. C. Lopes, L. O. Silva, J. T. Mendonça, D. A. Jaroszynski
 - “Baryon loading and the Weibel instability in GRBs”
Fiore, M., R. A. Fonseca, L. O. Silva, C. Ren, M. Tzoufras, W. B. Mori
 - “Electron Beams for Fast Ignition”
Fonseca, R. A., J. R. Davies, L. O. Silva
 - “Tunneling ionization and Wigner transform diagnostics in OSIRIS”
Fonseca, A., L. O. Silva, S. Deng, T. Katsouleas, F. Tsung, W. B. Mori,

- *“dHybrid: a three dimensional hybrid code for large scale simulations of interacting plasmas in space”*
Gargat , L., R. Bingham, R. A. Fonseca, L. O. Silva
- *“Collisionless shocks and the role of collisions”*
Marti, M., J. R. Davies, R. A. Fonseca, L. O. Silva, J. Fahlen, M. Tzoufras, C. Ren, W. B. Mori
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Martins, S., R. A. Fonseca, L. O. Silva, S. Deng, T. Katsouleas, F. Tsung, W. B. Mori
- *“Towards the theory of nonlinear Weibel turbulence”*
Medvedev, M., L. O. Silva
- *“Electron acceleration from total reflection in ultra intense laser pulses”*
Mendonça, J. T., L. O. Silva, R. Bingham
- *“Particle-in-cell simulation of LWFA using 50 fs pulses in guided and unguided plasmas”*
Mori, W. B., F. S. Tsung, M. Tzoufras, C. Joshi, R. A. Fonseca, L. O. Silva
- *“Shock shells in the Coulomb explosions of very large cluster”*
Peano, F., R. A. Fonseca, L. O. Silva,
- *“Laser driven instabilities at arbitrary intensities and broadband effects using the Wigner-Moyal formalism”*
Santos, J., L. O. Silva, R. Bingham
- *“ULF waves triggered by cloud to ground lightning above mesoscale convective systems”*
Sorasio, G.
- *“Photon-in-cell code for laser wakefield accelerators”*
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- **The European Material Conference, E-MRS Spring Meeting, Strasbourg, France, 2004**
- *“Capacitively coupled hydrogen discharges: modeling vs. experiment”* (Invited paper)
Marques, L., J. Jolly, G. Gousset and L.L. Alves
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Lopes, N. C.
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- *“Standard problems in advanced acceleration”*
Fonseca, R.
- **International Meeting on Quantum Information Science - Foundations of Quantum Information, Camerino (Italy)**
- *“Particle statistics in quantum information processing”*
Y. Omar
- **Workshop on Quantum Entanglement in Physical and Information Sciences, Pisa (Italy)**
- *“Quantum walk on a line with two particles”*
Y. Omar, N. Paunkovic, L. Sheridan, S. Bose
- **1st Workshop of ELAN, 4-6 May, Frascati (Italy)**
- *“Theory, simulations and experiments on second-generation plasma based accelerators at GoLP-IST”*
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