

Publications in scientific journals:

- Gruber O., Arslanbekov R., Atanasiu C.V., et al.**, "Overview of ASDEX Upgrade results", Nuclear Fusion, **41** (2001), 1369.
- Sips A.C.C., Arslanbekov R., Atanasiu C.V., et al.**, "Steady state advanced scenarios at ASDEX Upgrade", Plasma Physics and Controlled Fusion, **44** (2002) B69-B83.
- Vlad M., Spineanu F., Misguich J.H., Balescu R.**, "Electrostatic turbulence with finite parallel correlation length and radial diffusion", Nuclear Fusion 42 (2002), 157-164.
- Spineanu F., Vlad M.**, "Coherent structures in a turbulent environment", preprint xxx.lanl.gov/physics/0102040, Physical Review E 65 (2002) 026406, 1-15.
- Spineanu F., Vlad M.**, "Soliton modulation of the turbulence envelope and plasma rotation", xxx.lanl.gov/physics/0204050, Physical Review Letters (2002) 185001, 1-4.
- Misguich J.H., Reuss J.-D., Constantinescu D., Steinbrecher G., Vlad M., Spineanu F., Weyssow B., Balescu R.**, "Noble Cantor sets acting as partial internal transport barriers in fusion plasmas", Plasma Physics and Controlled Fusion 44 (2002) L29-L35.
- Vlad M., Spineanu F., Misguich J.H., Balescu R.**, "Reply to 'Comment on Diffusion in biased turbulence", Physical Review E 66 (2002) 038302.
- Spineanu F., Vlad M.**, "Fluctuation of the ambipolarity equilibrium in magnetic perturbations", Physics of Plasmas, (2002), in print.
- Spineanu F., Vlad M.**, "Self-duality of the relaxation states in fluids and plasmas", (submitted to Physical Review E, 2002).
- Vlad M., Spineanu F., Misguich J.H., Balescu R.**, "Magnetic line trapping and effective transport in stochastic magnetic fields", xxx.ladl.gov/physics/0207021, Physical Review E (2002) in print.
- Spineanu F., Vlad M., Reuss J.-D.**, "Effects of the shear fluctuations on the plasma stability and transport", Annals of the University of Craiova, Physics 6 (2002) .
- Vlad M., Spineanu F., Misguich J.H.**, "Simplified models for turbulent diffusion: a test of the decorrelation trajectory method", Annals of the University of Craiova, Physics 6 (2002).
- Pometescu N. and Weyssow B.**, "Parallel and poloidal fluxes in a turbulent non-ohmic plasmas: an ICRH case" –, Physics of Plasmas, Vol.10, No.4 (2003), 1048-1059.
- Pometescu N.**, "About the definition of the Ponderomotive Force", Physics AUC, 12(part I), (2002), 88.
- Steinbrecher G., Weyssow B.**, "Generalized Randomly Amplified Linear System Driven by Gaussian Noise. Extreme Heavy Tail and Algebraic Correlation Decay in Plasma Turbulence", To appear in Phys. Rev. Letter, March 2003.
- Misguich J. H., Reuss J. D., Constantinescu D., Steinbrecher G., Vlad M., Spineanu F., Weyssow B., Balescu R.**, "Noble internal transport barriers and radial subdiffusion of toroidal magnetic field lines", Annales de Physique (FR), 28, (6), (2003), 1.
- Petrisor I. and Negrea M.**, "On the stochastic magnetic field lines diffusion", Physics AUC, - (part II), (2002), 18
- Petrisor I. and Negrea M.**, "On the collisional particle diffusion in a sheared magnetic field ", Physics AUC, 12 (part II), (2002), 1.

Constantinescu D., Reuss J-D., Misguich J. H "Study of break-up of a closed magnetic surface in tokamak", Physics AUC, 12 (part I), (2002), 78.

Stancalie V., Rachlew E., "Study of opacity effect on emission line at EXTRAP T2R RFP", Physica Scripta 66, (2002), 444.

Reimer P., Hult M., Plompen A.J.M., Johnston P.N., Qaim S.M., and Avrigeanu V., "Measurement of the $^{nat\text{PP}}\text{Mo}(n,x)$ $^{94\text{PP}}\text{Nb}$ cross section using ultra low-level γ -ray spectrometry at HADES", Nucl. Phys. A705, (2002), 265.

Avrigeanu M., Anagnostatos G.S., Antonov A.N. and Avrigeanu V., "Elastic Scattering as a Test of Density Distributions in ^6He and ^8He ", Int. J. Modern Phys. E 11, (2002), 249.

Plompen A.J.M., Smith D.L., Reimer P., Qaim S.M., Semkova V., Cserpak F.,

Avrigeanu V. and Sudar S., "Recent neutron activation cross section measurements", J. Nucl. Sci. Technol. Suppl. 2 (2002) 192.

Plompen A.J.M., Reimer P., Avrigeanu V. and Qaim S.M., "Vanadium cross section measurements by the activation technique and evaluations from threshold to 20 MeV", J. Nucl. Sci. Technol. Suppl. 2, (2002), 283.

Avrigeanu V., Glodariu T., Plompen A.J.M. and Weigmann H., "On consistent description of nuclear level densities", J. Nucl. Sci. Technol. Suppl. 2, (2002), 746.

Avrigeanu M., Anagnostatos G.S., Antonov A.N. and Avrigeanu V., "Density Effects on the Elastic Scattering of $^{6\text{PP}}\text{He}$ and $^{8\text{PP}}\text{He}$ ", J. Nucl. Sci. Technol. Suppl. 2, (2002), 595.

Avrigeanu M., Avrigeanu V. and Plompen A.J.M., "Preequilibrium-Emission Surface Effects in Activation Reactions", J. Nucl. Sci. Technol. Suppl. 2, (2002), 803.

Plompen A.J.M., Smith D.L., Reimer P., Qaim S.M., Semkova V., Cserpak F.,

Avrigeanu V. and Sudar S., ND2001 and J. Nucl. Sci. Technol. (in press).

Contributions to conferences and workshops:

Spineanu F., Vlad M., Misguich J.H., Balescu R., "Soliton modulation of the turbulence envelope and spontaneous plasma spin-up", IAEA Technical Committee Meeting on Theory of Plasma Instabilities, Kloster Seeon, Germany, 9-12 April 2002, oral presentation.

Balescu R., Vlad M., Spineanu F., Misguich J.H., "Anomalous transport in plasmas", Proc. Workshop "Complexity: microscopic and macroscopic aspects" to celebrate the 85th birthday of Ilya Prigogine, Fondation Les Treilles, Toutour (France) 8-14 July 2002. I. Antoniou, A. Goldbeter, R. Lefever, Editors.

Vlad M., Spineanu F., Misguich J.H., Balescu R., "Transport in disordered media: anew statistical method", International Conference on Theoretical Physics, Paris, UNESCO, 22-27 July 2002.

Spineanu F., Vlad M., "Asymptotic relaxation and self-duality in fluids and plasmas", International Conference on Theoretical Physics, Paris, UNESCO, 22-27 July 2002.

Misguich J.H., Reuss J.-D., Constantinescu D., Steinbrecher G., Vlad M., Spineanu F., Weyssow B., Balescu R., "Noble Cantor sets acting as partial internal transport barriers in fusion plasmas", International Conference on Theoretical Physics, Paris, UNESCO, 22-27 July 2002.

Vlad M., Spineanu F., "Trajectory structures and transport in stochastic fields", Research Trends in Physics, "Anomalous transport and complexity in classical and quantum systems", La Jolla, California, 7-9 October 2002, invited talk.

Vlad M., Spineanu F., Misguich J.H., Balescu R., "Nonlinear diffusion regimes in stochastic magnetic fields", 19th IAEA Fusion Energy Conference, Lyon, 14-19 October 2002.

Steinbrecher G., "Winding number and safety factor in the chaotic domain", International Working Session of the B.F.R.Fusion Group, Craiova, September, 2002.

Steinbrecher G., Weyssow B., "Continuos Time Randomly Amplified Linear Dynamical System Driven by Colored Multiplicative Noise", International Working Session of the B.F.R.Fusion Group, Craiova, September, 2002.

Sporea D. G. and Florean A., "Investigations on the Degradation of Visible Lasers Diodes under Gamma-Ray Irradiation", 22nd Symposium on Fusion Technology, Helsinki, September, 2002.

Sporea D. G. and Florean A., "Gamma-Ray Radiation Induced Changes in Near-IR Operating Semiconductor Laser Diodes", Radiation Effects on Components and Systems Conference, Padova, September, 2002.

Sporea D. G. and Florean A., Oproiu C. and Constantinescu B., "Evaluation of Visible and Near-IR Lasers Diodes subjected to Electron and Gamma-Ray Irradiation", International Semiconductor conference, Sinaia, October, 2002.

Sporea D. G. and Florean A. and Gherendi M., "Heterojunction Laser Diodes Subjected to Ionizing Radiation", Advanced Topics in Optoelectronics Micro & Nanotechnologies International Conference, Bucharest, November, 2002.

Sporea D. G. and Sporea R. A., "Integrated Software Package for Laser Diodes Characterization", Advanced Topics in Optoelectronics Micro & Nanotechnologies International Conference, Bucharest, November, 2002.

Avrigeanu M., Avrigeanu V., and Glodariu T., "Report on EAF related tools", in Proc. of Workshop on Activation Data – EAF 2003, Prague, June, 2002.

Plompen A.J.M., Avrigeanu V., Borcea C., Olah L. and Semkova V., "Measurements of neutron-induced reaction cross sections for ^{58}Ni , $^{63}\text{PP}_{\text{Cu}}$ and $^{59}\text{PP}_{\text{Co}}$ from threshold to 20 MeV", in Proc. of Reactor Physics Topical Meeting (PHYSOR 2002), Seoul, Korea, October, 2002, (in press).

Avrigeanu M., Avrigeanu V., and Glodariu T., "Nuclear level density effects on activation cross-section calculation", in Proc. of Fast Neutron Physics Int. Workshop, Dresden, September, 2002.

Avrigeanu V., Avrigeanu M. and Glodariu T., in "Fast-neutron reaction analysis for fusion low-activation materials", Report EFF-Doc-835 at EFF/EAF Fusion Nuclear Data and Neutronics Meeting, NEA Data Bank, Paris, December, 2002.

Avrigeanu M., W. von Oertzen, Plompen A.J.M. and Avrigeanu V., "Optical model potentials for α -particles scattering around the Coulomb barrier on $A \sim 100$ nuclei", in Proc. of Workshop of the OECD-NEA WPEC Subgroup 19 on Activation Cross Sections, January, 2003. EC/JRC/IRMM, Geel, Belgium.; (submitted to be published in Nucl. Phys. A).

* * * The Model Code Meeting, May 21-22, 2002, EC/JRC/IRMM, Geel, Belgium.

Avrigeanu M., Avrigeanu V., and Glodariu T., Workshop on Activation Data – EAF 2003, Prague, June 24-26, 2002.

Avrigeanu V., Avrigeanu M. and Glodariu T., Fast Neutron Physics Int. Workshop, Dresden, Sept. 5-7, 2002.

Negrea M., Petrisor I. and Balescu R., International Working Session of the B.F.R.Fusion Group, Craiova, September, 2002.

Negrea M., Petrisor I. and Balescu R., International Working Session of the B.F.R.Fusion Group, Craiova, September, 2002.

Tiseanu I., Sauerwein C., Simon M., Misawa M., “*High-Resolution X-ray Tomography for Nuclear Applications and Research*”, Annual Meeting of Nuclear Technology, Stuttgart, Germany, May, 2002.