

Lista de lucrari

A. Teza de doctorat: "Masurarea numerica a parametrilor de putere si energetici ai laserelor" - UPB, 1998. A fost publicata ulterior - cartea 1 de la pct. B1, care a fost **prima** (si, pana in prezent, **singura**) din tara pe acest subiect.

B. Carti si capitole din carti

B1. CARTI TIPARITE CU ISBN

1. E. Smeu, "Radiometria digitala a radiatiei laser", Ed. Rhabon, Tg.-Jiu, ISBN: 973-85664-6-0, (2002), 256 pag. ;
2. N. Puscas, E. Smeu, "Transmisia informatiei prin metode optice – vol. 1", Ed. Cartea Universitara, Bucuresti, ISBN de titlu: 973-731-193-0, ISBN de volum: 973-731-194-9, (2004), 361 pag.;
3. N. Puscas, E. Smeu, "Transmisia informatiei prin metode optice – vol. 2", Ed. Cartea Universitara, Bucuresti, ISBN de titlu: 973-731-193-0, ISBN de volum: 973-731-195-7, (2004), 346 pag.;
4. M. Frunza, E. Smeu, R. Ispasoiu, N. N. Puscas, I. M. Popescu, G. I. Suruceanu, "Study of phase-matching effects for the internal second-harmonic generation in InGaAs quantum-well laser diodes emitting around 980 nm" - in *Recent Research Developments in Optics* (monografie), Research Signpost, Ed.: S. G. Pandalai, India, ISBN 81-7736-056-6, (2001), p. 133-138;
5. N. Puscas, E. Smeu, "Studiul parametrilor de emisie ai diodei laser" – in "Lucrari experimentale de optoelectronica, fizica si ingineria laserilor", coordonator: N. Puscas, Ed. Matrix Rom, Bucuresti, (2004), ISBN 973-685-748-4, pp. 41-50;
6. R. Ispasoiu, E. Smeu, "Dioda laser pentru telecomunicatii" – in "Lucrari experimentale de optoelectronica, fizica si ingineria laserilor", coordonator: N. Puscas, Ed. Matrix Rom, Bucuresti, (2004), ISBN 973-685-748-4, pp. 80-87.

B2. LUCRARI TIPARITE IN TIPOGRAFII LOCALE

1. R. Ispasoiu, E. Smeu, "Dioda laser pentru telecomunicatii" - in "Lucrari experimentale de optoelectronica", coordonatori: N. N. Puscas, P. E. Sterian, I. M. Popescu; Centrul de multiplicat cursuri UPB, Pentru uzul studentilor, Bucuresti, (1996), pp. 90-98;
2. N. Puscas, E. Smeu, A. Ducariu, "Transmisia optica a informatiei - Note de curs", Centrul de multiplicat cursuri UPB, Pentru uzul studentilor, Bucuresti, (1999), pp. 181-222.

C. Lucrari indexate ISI/BDI

C1. Publicate in reviste de specialitate

1. E. Smeu, R. G. Ispasoiu, G. I. Suruceanu, A. Z. Mereutza, "Compact-size electronic device for diode-lasers characteristic curve tracing", *Optical Engineering*, Vol. 35, No. 5, (1996), pp. 1353-1355;
2. R. G. Ispasoiu, N. N. Puscas, I. M. Popescu, V. P. Yakovlev, E. Smeu, A. Toma, "Measurement of enhanced radiant power of internal second harmonic generation in InGaAs/GaAs/AlGaAs strained SQW BH LD's, by an indirect method", *International Journal of Optoelectronics*, Vol. 11, No. 2, (1997), pp. 127 -131;
3. V. Popescu, A. Stepanescu, E. Smeu, M. Cristea, "Field dependence of electrical resistance noise in granular high- T_c superconductors", *Physics Letters A*, Vol. 259, (1999), pp. 499-501;

4. R. G. Ispasoiu, **E. Smeu**, N. N. Puscas, I. M. Popescu, G. I. Suruceanu, "Phase-mismatching effects in the internal second-harmonic generation in InGaAs quantum-well laser diodes", *Journal of Modern Optics*, Vol. 47, No. 7, (2000), pp. 1149-1154;
5. V.N. Chizhevsky, **E. Smeu**, G. Giacomelli, "Experimental Evidence of "Vibrational Resonance" in an Optical System", *Physical Review Letters*, Vol. 91, No. 22, (2003), pp. 220602-1...220602-4;
6. **E. Smeu**, "Accelerator / averager circuit controls the response time of thermopiles", *Journal of Optoelectronics and Advanced Materials*, Vol. 6, No. 4, pp. 1225 – 1231, December 2004;
7. H. Gnewuch, **E. Smeu**, D.A. Jackson, A. Gh. Podoleanu, "Long range extensometer for civil structure monitoring using fibre Bragg gratings", *Meas. Sci. Technol.*, Vol. 16, (2005), pp. 2205-2010;
8. Viacheslav N. Chizhevski, **Emil Smeu**, Giovanni Giacomelli, "Experimental evidence of Vibrational Resonance in VCSELs", *U.P.B. Sci. Bull., Series A*, Vol. 70, No. 4, (2008), pp.31-40.

C2. Publishate in Proc. ISI

1. R.G. Ispasoiu, N. Puscas, **E. Smeu**, C. E. Botez, V. P. Yakovlev, A. Z. Mereutza, G. I. Suruceanu, "Enhanced internal second harmonic generation in InGaAs/GaAs/AlGaAs strained SQW BH laser diodes", *Proceedings SPIE "Boulder Damage Symposium"*, Vol. 3244, (1998), pp. 660-666;
2. **E. Smeu**, N. Puscas, I. M. Popescu, Gr. Suruceanu, R. Ispasoiu, "Medium power stabilized laser diode", *Proceedings SPIE "ROMOPTO'97 – Fifth Conference on Optics"*, Vol. 3405, (1998), pp. 58-65;
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5. M. Frunza, **E. Smeu**, N. N. Puscas, I. M. Popescu, G. I. Suruceanu, "Analysis of phase-matching conditions for internal second-harmonic generation in InGaAs quantum-well laser diodes", *Proceedings SPIE "ROMOPTO'2000 - Sixth Conference on Optics"*, Vol. 4430, (2001), pp. 527-532;
6. M. Frunza, N. N. Puscas, **E. Smeu**, I. M. Popescu, G. I. Suruceanu, "Analysis of phase-matching for the internal second-harmonic generation in InGaAs quantum-well laser diodes emitting around 980nm", *Proceedings SPIE "ATOM 2002 - Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies"*, Vol. 5227, (2003), pp. 240-248, International Conference "ATOM 2002", Bucharest, 21-23 November 2002;
7. G. Vâlceanu, N. N. Puscas, A. Ducariu, **E. Smeu**, I. M. Popescu, "Modelling of optical amplification on dopant concentration in the bent Er^{3+} -doped LiNbO_3 waveguide of the Mach-Zehnder interferometer", *SPIE Vol. 5581*, p. 634-642, (2004);
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9. **E. Smeu**, H. Gnewuch, D.A. Jackson, A. Podoleanu, "Fibre Bragg gratings sensor for monitoring distance changes between structural elements inside a building",

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11. **E. Smeu**, "Determination of the speed / bandwidth for fast photodetectors using picosecond lasers", *Proceedings SPIE "INDLAS 2007: Industrial Laser Applications", Vol. 7007, (2008), International Conference "Industrial Applications of Lasers INDLAS 2007", Bran, May 23-25, 2007.*

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D. Lucrari publicate in reviste si volume de conferinte cu referenti (neindexate)

D1. Reviste

1. N. N. Puscas, **E. Smeu**, E. M. Rotaru, L. A. Puscas, A. Ducariu, C. Boaru, "Theoretical Analysis of the Spectral Gain of Single and Double Pass Er^{3+} -Doped LiNbO_3 Waveguide Amplifiers", *Scientific Bulletin "Politehnica" University of Bucharest, Series A: Applied Mathematics and Physics*, Vol. 56, No. 3 - 4, (1994), pp. 97 - 107;

2. R. G. Ispasoiu, N. N. Puscas, Ion M. Popescu, **E. Smeu**, V. P. Yakovlev, "Investigations of internal second harmonic generation in InGaAs/GaAs/AlGaAs diode lasers", *Romanian Reports in Physics*, Vol. 49, No. 8-9-10, (1997), pp. 723-728;

3. D. Pircalaboiu, N. N. Puscas, **E. Smeu**, I. M. Popescu, "On the refractive index profile determination from near field and effective refractive index measurements", *Romanian Journal of Physics*, Vol. 43, Nos. 1-2, supplement, (1998), pp. 473-480;

4. N. N. Puscas, A. Ducariu, **E. Smeu**, C. Bugaevschi, I. Dimulescu, "Noise Analysis of $\text{Er}^{+3}:\text{Ti}:\text{LiNbO}_3$ Curved Waveguide Amplifiers", *Scientific Bulletin "Politehnica" University of Bucharest, Series A: Applied Mathematics and Physics*, Vol. 60, No. 1 - 2, (1998), pp. 57-- 68;

5. R. G. Ispasoiu, **E. Smeu**, N. N. Puscas, A. Ducariu, "Spectral and Radiometric Characterization of InGaAs Quantum Well Laser Diodes Emitting Around 980 nm", *Scientific Bulletin "Politehnica" University of Bucharest, Series A: Applied Mathematics and Physics*, Vol. 60, No. 3-4, (1998), pp. 167-171;

6. **E. Smeu**, N. N. Puscas, R. G. Ispasoiu, A. Ducariu, I. M. Popescu, "Analysis of the blue-green second-harmonic signals in InGaAs quantum-well laser diodes", *Romanian Journal of Optoelectronics*, Vol. 8, Issue 1, (1998), pp. 1-7;

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2. V.P. Paun, **E. Smeu**, "Computer models for the correct operation of the optical systems using the Fourier transform of wavelets", *Proceedings of the 3rd International Colloquium "Mathematics in Engineering and Numerical Physics" MENP 3, Part II: Numerical Physics*, Bucharest, 7-9 Oct. 2004, p. 101-107;
3. **E. Smeu**, V.P. Paun, "Models for the Determination of the Speed for Fast Photodetectors", *Proceedings of the 3rd International Colloquium "Mathematics in Engineering and Numerical Physics" MENP 3, Part II: Numerical Physics*, Bucharest, 7-9 Oct. 2004, p. 108-111;
4. V.N. Chizhevsky, **E. Smeu**, G. Giacomelli, "Experiments on « Vibrational Resonance » in Semiconductor Lasers", *Proceedings of the 3rd International Colloquium "Mathematics in Engineering and Numerical Physics" MENP 3, Part II: Numerical Physics*, Bucharest, 7-9 Oct. 2004, p. 121-125;
5. **E. Smeu**, G. Nemes, I. E. Teodorescu, "Determinarea caracteristicilor fotodetectorilor semiconductoare pentru detectia si masurarea fasciculelor laser YAG:Nd" - in vol. colectiv al celui de-Al 2-lea Simpozion national de tehnica microundelor, Litografia IPB, (1981), pp. 360-371;
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9. **E. Smeu**, "Masuratori de neliniaritate a convertoarelor analog - digitale" - in "Lucrarile Conferintei anuale de semiconductoare CAS'86", (1986), pp. 411-413;
10. V. Draganescu, R. Alexandrescu, V. Craciun, I. Morjan, **E. Smeu**, V. Jianu, M. Popescu, "Influenta unor parametri tehnologici asupra unei reactii chimice induse cu laserul intr-un sistem de transport electromecanic" - in volumul "Progrese in fizica - a 8-a Sesiune anuala de comunicari a ICEFIZ - Galati, 1-11.10.1986", pp. 524-525;
11. **E. Smeu**, C. Axinte, "Wattmetru digital cu termopila pentru radiatia laser" - in volumul colectiv al Consfaturii nationale "Realizarissi perspective in domeniul laserilor si aplicatiile lor in economia nationala", Centrul National de Fizica Bucuresti, 20-21.10.1987, pp. 174-175;
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E. Brevete

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Contracte de cercetare

1. “Novel Optical Devices and Techniques for Seismic Activity Detection and Measurement” (OPTSDET), contract nr. EVG1-CT-2002-00062 cu Comisia Europeana, sub Framework V, 1 dec. 2002 – 28 feb. 2006 (**director proiect**)
2. “Cercetarea de sisteme laser pentru activitati de metrologie a radiatiei laser”, contract de cercetare al UPB cu ANSTI, 1994-1999 (**co-responsabil**)
3. “Experimente privind materiale supraconductoare cu temperatura critica ridicata”, bursa de cercetare MURST la Istituto Nazionale “Galileo Ferraris”, Torino, Italia, apr. – iunie 1997 (bursier)
4. “Novel optical devices and measurement techniques; technology transfer and training”, contract nr. ERBIC15CT960820 cu Comisia Europeana in cadrul programului INCO-COPERNICUS, 1997-1999
5. “Cercetari de optica si de inginerie optica pentru studierea de procese de interactie radiatie laser-substanta si pentru dezvoltarea uzinajului fonic”, grant al UPB cu Banca Mondiala, 1997-1998 si 2000-2001
6. “Sisteme laser cu semiconductoare si cu medii active corp solid pentru aplicatii medicale, industriale si speciale”, contract de cercetare al UPB cu ANSTI, 1996-1999
7. “Experimente de rezonanta stochastica pe diode laser VCSEL”, bursa de cercetare la Istituto Nazionale di Ottica Applicata, Florenta, Italia, ian. – sept. 2002 (bursier)
8. “Cercetari privind utilizarea fenomenului de polarizare a luminii pentru masurarea unor marimi electrice si neelectrice cu ajutorul senzorilor cu fibre optice”, contract nr. 40528/5.11.2003, nr. tema: 48, cod CNCSIS: 140, 2003-2004
9. “Metode de analiza in timp real a dimensiunilor traseelor procesate prin iradiere laser a materialelor semiconductoare si metalice in scopul utilizarii in micro si nanotehnologii”, contract CERES, 2003-2005
10. “Realizarea etaloanelor nationale prin metode spectro-radiometrice, in conformitate cu tendinta existenta in tarile avansate ale Uniunii Europene si cu recomandările Conventiei Metrului si BIPM”, subcontract CALIST, 2003-2005
11. “Cercetari pentru alinierea etaloanelor de referinta fizico-chimice dintr-un laborator de etalonare in curs de acreditare la performantele cerute de U. E.”, contract CALIST, 2003-2005
12. “Powermetru digital pentru laseri”, contract de cercetare de 10%/1988 al Sectiei Laseri-IFTAR, 1988 (**responsabil**)
13. “Radiometru pentru masurarea puterii laser in unda continua”, contract de cercetare de 10%/1987 al Sectiei Laseri-IFTAR, 1987 (**responsabil**)