INFORMAŢII PERSONALE

Kusko Cristian

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Sexul M | Data naşterii 26/11/1967 | Naţionalitatea Romana

EXPERIENŢA PROFESIONALĂ

2004 – present Institutul National de cercetare dezvoltare pentru microtechnologii-IMT Bucuresti Erou Iancu Nicolae 126A, Voluntari, Ilfov
Cercetator stiintific III (2004)
Cercetator stiintific I (2012)
Activitati de cercetare: simulare de component fotonice, metamateriale, structure plasmonice, investigatii component optoelectronice, optica difractiva, vortexuri optice, microscopie de camp optic apropiat.

2003 – 2004 Institutul de fizica si inginerie nucleara Horia Hulubei (IFIN-HH) Magurele, Asistent de cercetare.
Activitati de cercetare: simulari de fizica energiilor inalte

2002 – 2003 Northeastern University, Boston, Massachusetts 02115, USA, Department of Physics
Cercetator postdoctoral
Activitati de cercetare Metode numerice in fizica starii condensate
1995 – 2002 Northeastern University, Boston, Massachusetts 02115, USA, Department of Physics
Asistent de cercetare doctoral
Activitati de cercetare: supraconductivitate, metode numerice in fizica starii condensate

1993 – 1995 Institutul de fizica si inginerie nucleara Horia Hulubei (IFIN-HH) Magurele, Asistent de cercetare.
Activitati de cercetare: simulari de fizica energiilor inalte

EDUCAŢIE ŞI FORMARE

1995 – 2003 Northeastern University, Boston, Massachusetts 02115, USA, Department of Physics
Doctorat in Fizica (2003)

1986-1991 Facultatea de Fizica, Universitatea din Bucuresti, Licenta in Fizica Teoretica 1991

Competente

h-index=11; Autor si coautor a peste 60 de articole publicate in reviste cotate ISI (J. of Opt. Soc. Amer, J. of Optics Pure and Applied, J. Appl.Phys., Phys.Rev.B, Phys.Rev.Lett. etc.) si volume de conferinta indexate ISI. Principala sa expertiza consta in fizica starii condensate, metode numerice si de simulare in componente optice si fotonice, metamateriale si plasmonica, vortexuri optice si microscopie de baleiaj a campului optic apropiat.

Competenţe organizaţionale/manageriale

Membru in echipa a trei proiecte internationale

1. FP6 WAPITI, *WAPITI* - Waferbonding and Active Passive Integration Technology and Implementation
2. FP7 MIMOMEMS, E*uropean Centre of Excellence in Microwave, Millimetre Wave and Optical Devices, based on Micro-Electro-Mechanical Systems for Advanced Communication Systems and Sensors*"
3. FP7 FLEXPAET Flexible Patterning of Complex Micro Structures using Adaptive Embossing Technology, FlexPaet,

Coordonator sau responsabil de echipa pentru trei proiecete nationale PN II:

1. "Secured high volume free space optical communications based on computer generated holograms" (HOLCOMM) Director de proiect
2. Carbon quantum dots: exploring a new concept for next generation optoelectronic devices / (CQD-OPTO) Partener responsabil de echipa
3. Antireflective coatings for high power lasers in ultrashort pulses" (ARCOLAS) - Partener responsabil de echipa
4. Proiect DEVELOPING QUANTUM INFORMATION AND QUANTUM TECHNOLOGIES IN ROMANIA PCCDI UEFISCDI, project number PN-III-P1-1.2-PCCDI-2017-0338/79PCCDI/2018 (QUTECH-RO) Partener

Publicaţii selectate

Tudor-Alexandru Isdrailă, **Cristian Kusko** & Radu Ionicioiu Cyclic permutations for qudits in d dimensions Scientific Reports 9: 6337 (2019)

Rebeca Tudor, Mihai Kusko and **Cristian Kusko** „Generation of optical vortices in an integrated optical circuit", Journal of Optics, 19, 095801(2017)

C. Kusko, "*Self-Pulsation in a Nonlinear Plasmonic Ring Resonator* ", IEEE JOURNAL OF QUANTUM ELECTRONICS 49 1080 (2013).

R. Tudor, M. Mihailescu, **C. Kusko** et al. **"***Simultaneous and spatially separated detection of multiple orbital angular momentum states", Optics Communications* **368** 141, (2016).

M. Mihailescu, L. Preda, **C. Kusko**, "*Independent and combined information transfer from axicon and helical phase distributions"* , APPLIED OPTICS **53** 4691 (2014).

M. Kusko, **C. Kusko**, D. Cristea, "Method of determination of light-scatterer distribution in edge-lit backlight units using an analytical approach", Journal Of The Optical Society Of America A-Optics Image Science And Vision 27 2015 (2010).

M. Kusko, A. Kapsalis, **C. Kusko** et al. "Design of single-mode vertically coupled microring resonators*",* J. Of Optics A-Pure And Applied Optics 10 064012 (2008).

I. Mihalache , **C. Kusko**, et. al." Charge and energy transfer interplay in hybrid sensitized solar cells mediated by graphene quantum dots" Electrochimica Acta 153, 306 (2015)

A.C. Obreja **,** et.al**.** "Charge transport and memristive properties of graphene quantum dots embedded in poly(3-hexylthiophene) matrix" Appl. Phys. Letters 105, 083303 (2014).

I.Mihalache , et.al. "Charge storage and memory effect in graphene quantum dots – PEG600 hybrid nanocomposite", Organic Electronics 15, 216. (2014)

C. Aurisicchio, C., et.al., "CNTs in Optoelectronic Devices: New Structural and Photophysical Insights on Porphyrin-DWCNTs Hybrid Materials" Adv. Mat., 22, 3209, (2012).

Kusko, C; Markiewicz, RS; White-Scalapino-like stripes in a mean-field Hubbard model Physical Review B **65**, 041102 (2002)

Markiewicz, RS; **Kusko, C**; Phase separation models for cuprate stripe arrays Physical Review B **65,** 064520 (2002)

Markiewicz RS; Kusko C Flux phase as a dynamic Jahn-Teller phase: Berryonic matter in the cuprates Physical Review B , **66 , 024506 (2002)**

Kusko, C, et al, Anomalous microwave conductivity due to collective transport in the pseudogap state of cuprate superconductors Physical Review B **65**, 132501, (2002)

Kusko, C; Markiewicz, RS**;** Remnant Fermi surfaces in cuprates Physical Review Letters, **84**, 963, (2000)