

PERSONAL INFORMATION

Radu Hristu



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Sex Male | Date of birth 20/06/1983 | Nationality Romanian

WORK EXPERIENCE

10/2017–Present

Lecturer

Physics Department, University Politehnica of Bucharest

10/2007–Present

Scientific researcher

Center for Microscopy-Microanalysis and Information Processing, University Politehnica of Bucharest (Romania)

02/2016–09/2017

Associate lecturer

Physics Department, University Politehnica of Bucharest

04/2014–12/2015

PostDoc

Physics Department, University Politehnica of Bucharest (Romania)

07/2005–07/2007

Layout designer

Catalyst Semiconductor Romania, Bucharest

EDUCATION AND TRAINING

09/2017

Bioimage Analysis Training School

Gothenburg (Sweden)

12/2012

Super Resolution Intensive Practical School

Italian Institute of Technology, Genoa (Italy)

09/2009

Summer School on Photonics

Fresnel Institute (France)

2007–2012

PhD in Electronics

University Politehnica of Bucharest (Romania)

Studies on photonic quantum ring semiconductor laser structures and on semiconductor materials and nanocrystals using laser scanning microscopy techniques

2002–2007

Electronics Engineer

Faculty of Electronics, Telecommunications and Information Technology, University Politehnica of Bucharest (Romania)

Optoelectronics

ADDITIONAL INFORMATION

Research interests

laser scanning microscopy, scanning probe microscopy, nonlinear optical microscopy, super-resolution microscopy, biophotonics, optics

Participation in national research projects

2018-2020 PN-III-P1-1.1-TE-2016-2147: Quantitative label-free second harmonic generation microscopy at the nanoscale (NANOSHG) – **project leader**

2018-2020 PN-III-P1-1.1-TE-2016-2147: Correlative optical imaging in the far-field and near-field regimes: technical developments and applications (CORIMAG) – **research team member**

2017-2018 PN-III-P2-2.1-PED-2016: An experimental machine intelligence framework for the automated differentiation of the healthy, dysplastic and malignant tissues based on multiphoton microscopy datasets (MICAND) – **research team member**

2017-2018 PN-III-P2-2.1-PED-2016: Quantitative nanoscopy for the characterization of biological tissues (Q-NANOBIOT) – **research team member**

2016-2017 Investigations on the function and micro-structure of the cellulase secretion system by high-resolution imaging techniques (CESESYS) – **research team member**

2015-2017 Correlation and integration of microscopy and nanoscopy data by advanced computer vision methods (MICRONANO) – **research team member**

2014-2015 (POSDRU 132397) Post-doctoral research fellowship: Integrated microscopy combining laser scanning and probe scanning techniques – **principal investigator**

2012-2016 Innovative method and system for the detection of drug traces by plasma-laser assisted mass spectroscopy (ISPLAMS) – **partner leader**

2012-2016 New methods and investigation protocols for the early diagnosis, efficient screening, prognostic and therapy of non-melanoma skin cancers based on existing and novel micro&nano optical tools (NANOLASCAN) – **research team member**

2009-2011 PNII-IDEI: Developments of new investigation techniques in scanning optical microscopy and their applications – **research team member**

2007-2010 PNII: Active-adaptive optic metrology research for nanosciences and nanotechnologies for adaptive digital holography (MAST) – **research team member**

2007-2010 PNII: Studies regarding interaction mechanisms between laser and radio-frequency radiation with superior aerodigestive tissues and the development of therapeutic protocols (LARFMED) – **research team member**

2007-2010 PNII: Studies of modifications introduced in zirconia, spinel and SiC by ionic implantation and thermal treatments by using IBA and other advanced techniques (CERNUCL) – **research team member**

2007-2010 PNII: Impact of environmental factors to the formation dynamics and structural behavior of temporary teeth (MEDSTOMA) – **research team member**

2005-2008 Interdisciplinary network for the synthesis and characterization of semiconductor and conductor nanostructures for photonic and optoelectronic devices and for biomedical applications (NANOCRYSTALNET) – **research team member**

Participation in international research projects

2018-2020 ERA-NET: Innovative technology for assessing the periodontal disease and new periodontitis treatment based on hyaluronic acid and melatonin (HAMELDENT) – **research team member**

2018-2019 Bilateral scientific cooperation Romania-China: Novel optical imaging approaches for the in-depth understanding of advanced nanostructured materials and their interaction with biological species (NANOMATBIOIMAGE) – **research team member**

2018-2019 Bilateral scientific cooperation Romania-China: A new strategy for maximizing the fuel cell catalysis by controlling/tuning the defects and interfaces of PtPb nanoplates using ion irradiation technique (MICROFUELL) – **research team member**

2012-2015 EU-CORDIS-FP7: Real time label free nanoscopy using infrared absorption (LANIR) – **research team member**

2011-2012 Bilateral scientific cooperation Romania-Slovakia: Development of the investigation method for inorganic thin films by using high resolution methods – **research team member**

2010-2011 Bilateral scientific cooperation Romania-Turkey: The influence of the surface properties of the nano-organic thin films on their gas sensing mechanisms investigated by using high resolution techniques (NAFIGA) – **research team member**

2008-2011 EU-CORDIS-FP7: Electrically modified biomaterials surface: from atoms to applications (BioElectricSurface) – **research team member**

Journal articles

2018

R. Hristu, L.G. Eftimie, S.G. Stanciu, D.E. Tranca, B. Paun, M. Sajin, G.A. Stanciu, *Quantitative second harmonic generation microscopy for the structural characterization of capsular collagen in thyroid neoplasms*, Biomedical Optics Express 9(8), 3923-3936 (2018).

D.E. Tranca, S.G. Stanciu, **R. Hristu**, B.M. Witgen, G.A. Stanciu, *Nanoscale mapping of refractive index by using scattering-type Scanning Near-Field Optical Microscopy*, Nanomedicine: Nanotechnology, Biology and Medicine, 14(1), 47-50 (2018).

L. Eftimie, **R. Hristu**, M. Dumitrescu, M. Costache, S.G. Stanciu, M. Sajin, G.A. Stanciu, *Modern methods to differentiate benign thyroid nodules from malignant ones*, Romanian Journal of Military Medicine, 121(1), 40-45 (2018).

2017

S.G. Stanciu, **R. Hristu**, F.J. Avila, J.M. Bueno, *A study on image quality in polarization resolved second harmonic generation microscopy*, Scientific Reports 7, 15476 (2017).

S.G. Stanciu, D.E. Tranca, **R. Hristu**, G.A. Stanciu, *Correlative imaging of biological tissues with apertureless scanning near-field optical microscopy and confocal laser scanning microscopy*, Biomedical Optics Express, 8(12), 5374-5383 (2017).

R. Hristu, S.G. Stanciu, D.E. Tranca, G.A. Stanciu, *Improved quantification of collagen anisotropy with polarization-resolved second harmonic generation microscopy*, Journal of Biophotonics, 10(9), 1171-1179 (2017).

R. Hristu, S.G. Stanciu, D.E. Tranca, E.K. Polychroniadis, G.A. Stanciu, *Identification of stacking faults in silicon carbide by polarization-resolved second harmonic generation microscopy*, Scientific Reports, 7, 4870 (2017).

S.L. Iconaru, G.A. Stanciu, **R. Hristu**, R.V. Ghita, *Properties of samarium doped hydroxyapatite thin films deposited by evaporation*, Romanian Reports in Physics, 69(4) (2017).

2016

S.G. Stanciu, D.E. Tranca, C. Ruggiero, G.A. Stanciu, A. Antipov, **R. Hristu**, L. Pastorino, *Combined far-field, near-field and topographic imaging of nano-engineered polyelectrolyte capsules*, Materials Letters, 183, 105-108 (2016).

S.G. Stanciu, D.E. Tranca, G.A. Stanciu, **R. Hristu**, J.M. Bueno, *Perspectives on combining nonlinear laser scanning microscopy and bag-of-features data classification strategies for automated disease diagnostics*, Optical and Quantum Electronics, 48(6), 1-13 (2016).

S.G. Stanciu, M. Costache, D.E. Tranca, **R. Hristu**, M. Popescu, G.A. Stanciu, *Towards imaging skin cancer by apertureless scanning near-field optical microscopy*, UPB Scientific Bulletin: Series A – Applied Mathematics and Physics, 78(2), 235-244 (2016).

I.-C. Dragoi, S.G. Stanciu, **R. Hristu**, H.G. Coanda, D.E. Tranca, M. Popescu, D. Coltuc, *Embedding complementary imaging data in laser scanning microscopy micrographs by reversible watermarking*, Biomedical Optics Express, 7, 1127-1137 (2016).

I.A. Kartsonakis, S.G. Stanciu, A. A. Matei, **R. Hristu**, A. Karantonis, C.A. Charitidis, *A comparative study of corrosion inhibitors on hot-dip galvanized steel*, Corrosion Science, 112, 289-307 (2016).

D.E. Tranca, E. Ortiga, G. Saavedra, M. Martínez-Corral, S. A. M. Tofail, S.G. Stanciu, **R. Hristu**, G. A. Stanciu, *Mapping electron beam injected trapped charge with scattering scanning near-field optical microscopy*, Optics Letters, 41, 1046-1049 (2016).

D.E. Tranca, S.G. Stanciu, **R. Hristu**, C. Stoichita, G.A. Stanciu, *Amplitude and phase reconstruction issues in scattering scanning near-field optical microscopy*, UPB Scientific Bulletin-Series A-Applied Mathematics and Physics, 78 (3), 253-262 (2016).

D.E. Tranca, S.G. Stanciu, **R. Hristu**, C. Stoichita, S.A.M. Tofail, G.A. Stanciu, *Nanoscale mapping of dielectric function by scattering scanning near-field optical microscopy*, Imaging and Microscopy, 18 (1), 40-42 (2016).

S.L. Iconaru, A.M. Prodan, C.S. Turculet, M. Beuran, R.V. Ghita, A. Costescu, A. Groza, M.C. Chifiriuc, P. Chapon, S. Gaiaschi, **R. Hristu**, G.A. Stanciu, R. Trusca, M. Ganciu, S.M. Raita, N. Vineticu, C.S. Ciobanu, *Enamel based composite layers deposited on titanium substrate with antifungal activity*, Journal of Spectroscopy, (2016).

2015

D.E. Tranca, S.G. Stanciu, **R. Hristu**, C. Stoichita, S.A.M. Tofail, G.A. Stanciu, *High-resolution quantitative determination of dielectric function by using scattering scanning near-field optical microscopy*, Scientific Reports, 5, 11876, (2015).

I.A. Kartsonakis, S.G. Stanciu, A. Matei, E.K. Karaxi, **R. Hristu**, A. Karantonis, C.A. Charitidis, *Evaluation of the protective ability of typical corrosion inhibitors for magnesium alloys towards the Mg ZK30 variant*, Corrosion Science, 100, 194-208, (2015).

R. Hristu, S.G. Stanciu, D.E. Tranca, G.A. Stanciu, *Electron beam influence on the carbon contamination of electron irradiated hydroxyapatite thin films*, Applied Surface Science 346, 342-347 (2015).

A.A. Matei, I. Pencea, S.G. Stanciu, **R. Hristu**, I. Antoniac, E. Ciovea, C.E. Sfat, G.A. Stanciu, *Structural characterization and adhesion appraisal of TiN and TiCN coatings deposited by CAE-PVD technique on a new carbide composite cutting tool*, Journal of Adhesion Science and Technology, 29(23), 2576-2589 (2015).

C.S. Ciobanu, A. Groza, S.L. Iconaru, C.L. Popa, P. Chapon, M.C. Chifiriuc, **R. Hristu**, G.A. Stanciu, C.C. Negri, R.V. Ghita, M. Ganciu, D. Predoi, *Antimicrobial activity evaluation on silver doped hydroxyapatite/polydimethylsiloxane composite layer*, BioMed Research International (2015).

2014

R. Hristu, D. E. Tranca, S. G. Stanciu, M. Gregor, T. Plecenik, M. Truchly, T. Roch, S. A. M. Tofail, G. A. Stanciu, *Surface charge and carbon contamination on an electron beam irradiated hydroxyapatite thin film investigated by photoluminescence and phase imaging in atomic force microscopy*. Microscopy and Microanalysis 20(2), 586-595 (2014).

R. Hristu, S. G. Stanciu, D. E. Tranca, A. Matei, G. A. Stanciu, *Nonlinear optical imaging of defects in cubic silicon carbide epilayers*. Scientific Reports 4, 5258 (2014).

D.E. Tranca, C. Stoichita, **R. Hristu**, S.G. Stanciu, G.A. Stanciu, *A study on the image contrast of pseudo-heterodyned scattering scanning near-field optical microscopy*, Optics Express 22, 1687-1696, (2014).

I. Capan, M. Erdogan, B. Güner, B. İlhan, S.G. Stanciu, **R. Hristu**, G.A. Stanciu, *Gas sensing properties of porphyrin thin films influenced by their surface morphologies*, Sensor Letters, 12(8), 1218-1227, (2014).

M. Bilcu, A.M. Grumezescu, A.E. Oprea, R.C. Popescu, G.D. Mogosanu, **R. Hristu**, G.A. Stanciu, D.E. Mihailescu, V. Lazar, E. Bezirtoglou, M.C. Chifiriuc, *Efficiency of Vanilla, Patchouli and Ylang Ylang Essential Oils Stabilized by Iron Oxide@C14 Nanostructures against Bacterial Adherence and Biofilms Formed by Staphylococcus aureus and Klebsiella pneumoniae Clinical Strains*, Molecules, 19, 17943-17956 (2014).

2013

M.C. Chifiriuc, A.M. Grumezescu, C. Saviuc, **R. Hristu**, V. Grumezescu, C. Bleotu, G. Stanciu, D.E. Mihailescu, E. Andronescu, V. Lazar, R. Radulescu, *Magnetic Nanoparticles for Controlling in vitro Fungal Biofilms*, Current Organic Chemistry 17(10), 1023-1028 (2013).

2012

R. Hristu, S.G. Stanciu, G.A. Stanciu, I. Capan, B. Güner, M. Erdogan, *Influence of atomic force microscopy acquisition parameters on thin film roughness analysis*, Microscopy Research and Technique 75(7), pp. 921-927 (2012).

R. Hristu, S.G. Stanciu, F.J. Kao, G.A. Stanciu, *Two-photon excited photoluminescence of photonic quantum ring laser structures*. Applied Physics B: Lasers and Optics 107(1), pp. 97-101 (2012).

R. Hristu, G.A. Stanciu, *Imaging of photonic quantum ring lasers by using optical beam induced current microscopy*, UPB Scientific Bulletin-Series A-Applied Mathematics and Physics 74(2), pp. 123-130 (2012).

İ. Capan, M. Erdoğan, G.A. Stanciu, S.G. Stanciu, **R. Hristu**, M. Göktepe, *The interaction between the gas sensing and surface morphology properties of LB thin films of porphyrins in terms of the adsorption kinetics*, Materials Chemistry and Physics, 136(2–3), 1130-1136 (2012).

A.M. Grumezescu, M.C. Chifiriuc, C. Saviuc, V. Grumezescu, **R. Hristu**, D.E. Mihaiescu, G.A. Stanciu, E. Andronesu, *Hybrid Nanomaterial for Stabilizing the Antibiofilm Activity of Eugenia carryophyllata Essential Oil*, IEEE Transactions on Nanobioscience 11(4), 360-365 (2012).

2011

S.G. Stanciu, **R. Hristu**, G.A. Stanciu, *Influence of confocal scanning laser microscopy specific acquisition parameters to the detection and matching of speeded-up robust features*, Ultramicroscopy, 111(5), 364-374 (2011).

S.G. Stanciu, **R. Hristu**, G.A. Stanciu, *Digital image inpainting and microscopy imaging*, Microscopy Research and Technique, 74 (11), 1049-1057 (2011).

R. Hristu, S.G. Stanciu, S.J. Wu, F.J. Kao, O. Kwon, G.A. Stanciu, *Optical beam induced current microscopy of photonic quantum ring lasers*, Applied Physics B: Lasers and Optics 103(3), pp. 653-657 (2011).

D. Cayci, S.G. Stanciu, I. Capan, M. Erdogan, B. Guner, **R. Hristu**, G.A. Stanciu, *The influence of the surface morphologies of Langmuir Blodgett (LB) thin films of porphyrins on their gas sensing properties*, Sensors and Actuators B: Chemical, 158 (1), 62-68 (2011).

A.M. Grumezescu, C. Saviuc, M.C. Chifiriuc, **R. Hristu**, D.E. Mihaiescu, P. Balaure, G. Stanciu, V. Lazar, *Inhibitory Activity of Fe₃O₄/Oleic Acid/Usnic Acid-Core/Shell/Extra-Shell Nanofluid on S. aureus Biofilm Development*, IEEE Transactions on Nanobioscience 10(4), 269-274 (2011).

C. Saviuc, A.M. Grumezescu, C.M. Chifiriuc, D.E. Mihaiescu, **R. Hristu**, G. Stanciu, E. Oprea, V. Radulescu, V. Lazar, *Hybrid Nanosystem for Stabilizing Essential Oils in Biomedical Applications*, Digest Journal of Nanomaterials and Biostructures 6(4), 1657-1666 (2011).

C. Saviuc, A.M. Grumezescu, M.C. Chifiriuc, C. Bleotu, G.A. Stanciu, **R. Hristu**, D. Mihaiescu, V. Lazar, *In vitro methods for the study of artificial fungal biofilms*, Biointerface Research in Applied Chemistry 1(1), 31-40 (2011).

A.M. Grumezescu, C. Saviuc, A. Holban, **R. Hristu**, C. Croitoru, G.A. Stanciu, C. Chifiriuc, D. Mihaiescu, P. Balaure, V. Lazar, *Magnetic chitosan for drug targeting and in vitro drug delivery response*, Biointerface Research in Applied Chemistry 1(5), 160-165 (2011).

2010

S.G. Stanciu, **R. Hristu**, R. Boriga, G.A. Stanciu, *On the suitability of SIFT technique to deal with image modifications specific to confocal scanning laser microscopy*, Microscopy and Microanalysis, 16 (5), 515-530 (2010).

N. Dutta, D. Mohanta, G.A. Ahmed, A. Choudhury, **R. Hristu**, S.G. Stanciu, G.A. Stanciu, *Two photon emission and nonlinear optical imaging of acetonitrile treated quasi-spherical nanoscale PbS systems*, IEEE Photonics Journal, 2(6), 1060-1068, (2010).

C. Saviuc, L. Dascalu, M.C. Chifiriuc, V. Radulescu, E. Oprea, M. Popa, **R. Hristu**, G. Stanciu, V. Lazar, *The inhibitory activity of pomelo essential oil on the bacterial biofilms development on soft contact lenses*, Roumanian Archives of Microbiology and Immunology, 69(3), 145-152 (2010).

M. Prodana, A. Meghea, G. Stanciu, **R. Hristu**, I. Demetrescu, *Aspects of correlation between the surface analysis and heavy metal content in temporary teeth from areas with various pollution levels of Romania*, International Journal of Environmental Science and Development, 1(1), 47 (2010).

Conference presentations

L. Eftimie, **R. Hristu**, M. Dumitrescu, M. Costache, S. Stanciu, M. Sajin, G. Stanciu, *Modern methods for the structural characterization of collagen in capsular invasion areas in papillary thyroid carcinoma*, European Congress of Pathology, Bilbao, Spain, 8-12 September, 2018.

R. Hristu, B. Paun, L. Eftimie, S.G. Stanciu, G. A. Stanciu, *Thyroid nodule capsules: structural characterization with texture analysis of second harmonic generation images*, Advanced Laser Technologies, Tarragona, Spain, 9-14 September, 2018.

S.G. Stanciu, **R. Hristu**, A. Dumitru, R.M. Buga, T. Totu, M. Popescu, M. Costache, *Towards automated tissue characterization using parallel bag-of-features experts dealing with two-photon excitation fluorescence and second harmonic generation microscopy datasets* (invited), 20th International Conference on Transparent Optical Networks (ICTON 2018), Bucharest, Romania, 1-5

July, 2018.

G.A. Stanciu, D.E. Tranca, **R. Hristu**, S.G. Stanciu, A. Holban, A. Toma, C. Stoichita, *A new technique in scanning near field optical microscopy used for investigations on the biological samples* (invited), 20th International Conference on Transparent Optical Networks (ICTON 2018), Buharest, Romania, 1-5 July, 2018.

R. Hristu, S.G. Stanciu, B. Paun, L. Eftimie, G.A. Stanciu, *Changes in the collagen structure of thyroid nodule capsules determined by polarization-resolved second harmonic generation microscopy* (invited), 20th International Conference on Transparent Optical Networks (ICTON 2018), Buharest, Romania, 1-5 July, 2018.

D.E. Tranca, C. Stoichita, **R. Hristu**, S.G. Stanciu, C.V. Sammut, G.A. Stanciu, *Nanoscale investigations of optical fiber by using scattering scanning near-field optical microscopy* (Invited), 20th International Conference on Transparent Optical Networks (ICTON 2018), Buharest, Romania, 1-5 July, 2018.

J.M. Bueno, **R. Hristu**, D. Párraga, F.J. Ávila, G.A. Stanciu, *Collagen remodeling in thyroid carcinoma analyzed with the Hough-transform and second harmonic microscopy*, Focus on Microscopy, Singapore, 25-28 March, 2018.

S.G. Stanciu, F.J. Avila, **R. Hristu**, J.M. Bueno, *A study on image quality in polarization-resolved second harmonic generation microscopy*, Focus on Microscopy, Bordeaux, France, 9-12 April, 2017.

L.G. Eftimie, **R. Hristu**, O.C. Voinea, M. Dumitrescu, G. Stanciu, M. Sajin, *Differential diagnosis between benign and malignant thyroid nodules using second harmonic generation microscopy*, European Congress of Pathology, Amsterdam, 2-6 September 2017.

A.S. Postolache, I. Dumitru, S.A. Varban, M. Sajin, G.A. Stanciu, S.G. Stanciu, **R. Hristu**, *Confocal laser-scanning microscopy and conventional light microscopy targeting morphological changes in colorectal lesions*, European Congress of Pathology, Amsterdam, 2-6 September 2017.

R. Hristu, S.G. Stanciu, D.E. Tranca, G.A. Stanciu, *Improved second harmonic generation anisotropy for collagen organization analysis in tissue samples*, Focus on Microscopy, Bordeaux, France, 9-12 April, 2017.

S. G. Stanciu, J. M. Bueno, D.E. Tranca, F.J. Ávila, **R. Hristu**, G. A. Stanciu, *Correlative investigations of biological specimens using label free far-field and near-field microscopy techniques*, European Conference on Lasers and Electro-Optics and the European Quantum Electronics Conference (2017 CLEO®/Europe-EQEC), Munich, Germany, 25-29 June, 2017.

G.A. Stanciu, C. Stoichita, D.E. Tranca, **R. Hristu**, S.G. Stanciu, *Investigation on the biological samples by using label free techniques in laser scanning microscopy* (invited), International Conference on Transparent Optical Networks, Girona, Spain, 2-6 July, 2017.

G.A. Stanciu, D.E. Tranca, **R. Hristu**, S.G. Stanciu, C. Stoichita, A. Toma, *Nonlinear optical effects used for investigations on biological samples at micro and nanoscale* (invited), International Conference on Transparent Optical Networks, Trento, Italy, 10-14 July, 2016.

S.G. Stanciu, **R. Hristu**, D.E. Tranca, G.A. Stanciu, *Bags-of-features for classification of laser scanning microscopy data* (invited), International Conference on Transparent Optical Networks, Budapest, Hungary, 5-9 July, 2015.

D.E. Tranca, S.G. Stanciu, C. Stoichita, **R. Hristu**, S.A.M. Tofail, G.A. Stanciu, *Investigations on image contrast in pseudo-heterodyne scattering scanning near-field optical microscopy*, Focus on Microscopy, Gottingen, Germany, March 29-April 1, 2015.

R. Hristu, S.G. Stanciu, D.E. Tranca & G.A. Stanciu, *Interrelationship between electron-beam-induced surface charge and carbon contamination on hydroxyapatite*, Focus on Microscopy, Gottingen, Germany, March 29-April 1, 2015.

C. Dragoi, S.G. Stanciu, D. Coltuc, D.E. Tranca, **R. Hristu**, G.A. Stanciu, *On packing laser scanning microscopy images by reversible watermarking: a case study*, 23rd IEEE European Signal Processing Conference (EUSIPCO 2015), Nice, France, 31st August-4th September, 2015.

R. Hristu, S.G. Stanciu, D.E. Tranca, S.A.M. Tofail, G. A. Stanciu, *Hydroxyapatite surface charge investigated by laser scanning microscopy and scattering-near field optical microscopy*, Focus on Microscopy, Sydney, Australia, 13-16 April 2014.

S.G. Stanciu, D.E. Tranca, L. Tarpani, G.A. Stanciu, **R. Hristu**, L. Latterini, *Investigations on organic fluorophore doped silica nanoparticles by apertureless scanning near-field optical microscopy* (invited), 16th International Conference on Transparent Optical Networks, Graz, Austria, 6-10 July 2014.

R. Hristu, S.A.M. Tofail, S.G. Stanciu, D.E. Tranca, G.A. Stanciu, *Hydroxyapatite surface charge investigated by scanning probe microscopy* (invited), 16th International Conference on Transparent

Optical Networks, Graz, Austria, 6-10 July 2014.

S.G. Stanciu, M. Popescu, **R. Hristu**, V. Enache, D.E. Tranca, G.A. Stanciu, *Investigations on skin cancers by nonlinear optical microscopy*, Focus on Microscopy, Maastricht, The Netherlands, 24-27 March 2013.

G.A. Stanciu, D.E. Tranca, **R. Hristu**, C. Stoichita, S.G. Stanciu, *Investigations at nanoscale by using fluorescence in apertureless scanning near field microscopy* (invited), International Conference on Transparent Optical Networks 2013, Cartagena, Spain, June 23- 27, 2013.

G.A. Stanciu, **R. Hristu**, S.G. Stanciu, D.E. Tranca, E.K. Polychroniadis, *Nonlinear effects in scanning laser microscopy used to investigate silicon carbide polytypes*, Focus on Microscopy, Singapore, 1-4 April, 2012.

S.G. Stanciu, D. Coltuc, **R. Hristu**, D. Tranca, G.A. Stanciu, *Enhancing local feature matching between CSLM images by histogram modeling*, Focus on Microscopy, Singapore, 1-4 April, 2012.

G.A. Stanciu, C. Stoichita, **R. Hristu**, S.G. Stanciu, D.E. Tranca, *Metalic samples investigated by using a scattering near field optical microscope* (invited), International Conference on Transparent Optical Networks, Coventry, England, 2-5 July 2012.

R. Hristu, S.G. Stanciu, D.E. Tranca, G.A. Stanciu, *Optical and morphological characterization of electron beam created surface potential microdomains on hydroxyapatite coatings*, Workshop on Super-resolution and Life Sciences, Brasov, Romania, 3-6 October 2012.

D.E. Tranca, **R. Hristu**, S. G. Stanciu, G.A. Stanciu, *Scattering near-field optical microscopy for gold nano-particles investigations*, Workshop on Super-resolution and Life Sciences, Brasov, Romania, 3-6 October 2012.

S.G. Stanciu, **R. Hristu**, G.A. Stanciu, *Completing missing or damaged regions in microscopy images by inpainting*, Focus on Microscopy, Konstanz, Germany, 17-20 April 2011.

R. Hristu, S.G. Stanciu, G.A. Stanciu, *Two photon excitation imaging used to investigate photonic quantum ring lasers*, Focus on Microscopy, Konstanz, Germany, 17-20 April 2011.

R. Hristu, S.G. Stanciu, G.A. Stanciu, E.K. Polychroniadis, *Investigations on SiC by using nonlinear effects in scanning laser microscopy* (invited), International Conference on Transparent Optical Networks, Stockholm, Sweden, 26-30 June 2011.

G.A. Stanciu, **R. Hristu**, S.G. Stanciu, O. Kwon, D.K. Kim, *Optical induced current technique used to investigate the photonic quantum ring laser* (invited), International Conference on Transparent Optical Networks, Munchen, Germany, 27 June- 1 July 2010.

G.A. Stanciu, **R. Hristu**, S.G. Stanciu, S.J. Wu, F.J. Kao, *Photonic-coral-mode quantum ring lasers investigated by laser beam induced current technique*, Focus on Microscopy, Shanghai, China, 29-31 March, 2010.

S.G. Stanciu, **R. Hristu**, R. Boriga, G.A. Stanciu, *A study on the performance of invariant feature detectors/descriptors in confocal microscopy*, Focus on Microscopy, Krakow, Poland, 5-8 April, 2009.

S.G. Stanciu, **R. Hristu**, R. Boriga, G.A. Stanciu, *Feature based recognition of photonic devices in images obtained by confocal scanning laser microscopy*, International Conference on Transparent Optical Networks, SMiguel, Portugal, 28 June - 2 July 2009.

S.G. Stanciu, D. Coltuc, **R. Hristu**, C. Stoichita, G.A. Stanciu, *Image fusion for photonic quantum ring laser structures investigated by confocal scanning laser microscopy* (Invited), 3 rd ICTON-MW, Angers, France, 2009.

C. Stoichita, **R. Hristu**, S.G. Stanciu, G. Stanciu, *Near field investigation based on a new apertureless near field optical microscope* (Invited), 3rd ICTON-MW, Angers, France 2009.

G.A. Stanciu, **R. Hristu**, S.G. Stanciu, *Photoluminescence and third harmonic generation in semiconductor quantum dots investigated by laser scanning microscopy*, Focus on Microscopy, Osaka-Awaji, Japan, 13-16 April, 2008.

G.A. Stanciu, S.G. Stanciu, **R. Hristu**, O. Kwon, D.K. Kim, *Investigation on photonic-coral-mode quantum ring lasers by laser scanning microscopy* (invited), International Conference on Transparent Optical Networks, Athens, Greece, 22-26 June 2008.

G.A. Stanciu, S.G. Stanciu, **R. Hristu**, D.K. Kim, O. Kwon, *Photonic-coral-mode quantum ring lasers investigated by laser scanning microscopy and near field microscopy* (invited), 2nd ICTON Mediterranean Winter, Marrakech, Morocco, 11-13 December, 2008.

S.G. Stanciu, **R. Hristu**, B. Savu, G.A. Stanciu, D. Mohanta, G.A. Ahmed, A.

Choudhury, *Investigation on CdS: Mn quantum dots using scanning laser microscopy* (invited), ICTON Mediterranean Winter Conference, Sousse, Tunisia, 6-8 December 2007.

- Awards**
- 2011-2017: 8 awards of the Romanian Executive Unit for Financing Higher Education, Research, Development and Innovation (UEFISCDI) for authorship of publications in 1st and 2nd quartile journals.
- 2018: Travel grant for the international conference Advanced Laser Technologies 2018, Tarragona, Spain.
- 2017: Travel grant for participation at NEUBIAS Bioimage Analysis Training School for Early Career Researchers, Gothenburg, Sweden.