

Europass

Curriculum Vitae

Personal information

First name(s) / Surname(s)	**Stefan G. Stanciu**
Address	Splaiul Independentei 313, 060042 Bucharest (Romania)
E-mail(s)	sgstanciu@gmail.com ; stefan.g.stanciu@upb.org
Homepage	http://sgstanciu.cmmip.ro
Nationality	Romanian
Date of birth	30/01/1983
Gender	Male

Research interests laser scanning microscopy, scanning probe microscopy, photonics, biophotonics, optics, biomedical engineering, nanoscopy, image acquisition, image processing, computer vision, image fusion, image understanding, algorithm development and optimization, sample preparation, image metrology, applied physics, cellular and molecular biology, advanced materials.

WORK EXPERIENCE

Year(s)	2015 →(ongoing)
Occupation or position held	Director/Coordinator for research grants funded under national and EU competitions
Name and address of employer	Center for Microscopy-Microanalysis and Information Processing, University Politehnica Bucharest
Year(s)	2012 →(ongoing)
Occupation or position held	Scientific Researcher
Name and address of employer	Center for Microscopy-Microanalysis and Information Processing, University Politehnica Bucharest
Year(s)	2013
Occupation or position held	SCIEX Research Fellow
Name of employer	Light Microscopy and Screening Center, Swiss Federal Institute of Technology (ETH Zurich)
Year(s)	2007 – 2011
Occupation or position held	Research Assistant
Name of employer	Center for Microscopy-Microanalysis and Information Processing, University

	Politehnica Bucharest
Year(s)	2003 – 2007
Occupation or position held	Undergraduate Research Intern
Name of employer	Center for Microscopy-Microanalysis and Information Processing, University Politehnica Bucharest
Year(s)	2005 – 2006
Occupation or position held	IT Consultant
Name and address of employer	WING Computer Group

EDUCATION AND TRAINING

Dates	1998-2002
Name and type of organisation providing education and training	"Spiru Haret" National College (High-School)
Specialization	Informatics
Title gained	Assistant Analyst Programmer
Dates	2002 – 2007
Title of qualification awarded	Diplomate Engineer
Domain, Specialization	Applied electronics, Information Engineering
Name and type of organisation providing education and training	Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest.
Dates	2007 – 2011
Title of qualification awarded	PhD in Electronics and Telecommunications
Title of thesis	Image Processing and Computer Vision Techniques for Enhancing the Visualization of Confocal Scanning Laser Microscopy (CSLM) Data
Defense committee:	Prof. Alberto Diaspro (Italian Institute of Technology), Prof. Genaro Saavedra (University of Valencia), Prof. Paul Schiopu (University Politehnica of Bucharest)
Name and type of organisation providing education and training	Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest.

OTHER ACADEMIC DEGREES

Dates	2022
Title of qualification awarded	Habilitation in Physics
Title of thesis	Advances in Medicine, Biology and Materials Science using Methods based on Non-conventional Microscopy Techniques
Defense committee:	Prof. Zeev Zalevsky (Bar-Ilan University), Prof. Giuseppe Chiricco (University of Milano-Bicocca University), Prof. Cristina Stan (University Politehnica of Bucharest)
Name and type of organisation	Doctoral School of Applied Sciences, University Politehnica of Bucharest

PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS

Program/Project **budget provided for projects implemented as project director/coordinator*	**Duration**
HORIZON-HLTH-2023-TOOL-05-05 Id. 101137466: Real-time biomarker detection systems for rapid medical decision-making in cancer and cardiac diseases (REALCARE) **Team member/Task Manager**	2023-2028
RO-NO-2019-0601: Understanding Membrane Dynamics and their Implications for Cancer with Correlative Optical Nanoscopy and Artificial Intelligence (MEDYCONAI) –**Project Coordinator** (*in collaboration with Partner Leader Prof. Harald A . Stenmark, Oslo University Hospital*) **Total project value: 1,633,450 EUR**	2021-2023
PN-III-P1-1.1-TE-2019-1339: Augmenting Micro- and Nanoscale Optical Imaging Techniques with Generative Adversarial Networks (OPTIGAN) –**Project Director** **Total project value: 89,289 EUR**	2021-2022
PN-III-P2-2.1-PED-2019-1666: Method for fast and precise diagnostic of gastric cancers based on non-linear optical microscopy and Deep Learning (GASTRODEEEP) –**Project Coordinator** (*in collaboration with Partner Leader Prof. Mariana Costache, Carol Davila University of Medicine and Pharmacy*) **Total project value: 124,041 EUR**	2020-2022
PN-III-P2-2.1-PED-2019-2386: Development of a nanoscale read/write platform for photonic crystals and waveguides for computations optics (INTEGRAOPTIC), **Research Team Member**	2020-2022
PN-III-P1-1.1-TE-2019-1756: Integration of pixel-wise and whole image classification of second harmonic generation microscopy datasets for thyroid pathology (SHGTHYPATH),	2020-2022

Research Team Member	
Project funded by H2020 ATTRACT's competition for breakthrough technology concepts: Higher-harmonic Generation Microscopy Beyond the Diffraction Barrier based on Re-scan Strategies for Optical Data Acquisition (HARMOPLUS) –**Project Coordinator** (*in collaboration with Partner Leader Prof. Erik Manders, Confocal.nl*) **Total project value: 100,000 EUR**	2019-2020
Project funded by H2020 ATTRACT's competition for breakthrough technology concepts: A novel approach for near-field optical microscopy based on tip-enhanced fluorescence via plasmon resonance energy transfer (TEFPLASNOM) –**Project Coordinator** (*in collaboration with Partner Leader Prof. Loredana Latterini, University of Perugia*) **Total project value: 100,000 EUR**	2019-2020
Project funded by the Bureau of International Co-operation of the Chinese Academy of Sciences: Biological Near - field fluorescence microscopic imaging system with functional nanomaterials **-Partner Team Leader** (*in collaboration with Principal Investigator Assoc. Prof. Fang Yang, Ningbo Institute of Material Technology & Engineering*)	2020-2021
PN-III-P1-1.1-TE-2016-2147: Correlative optical imaging in the far-field and near-field regimes: technical developments and applications (CORIMAG), **Project Director** **Total project value: 96,700 EUR**	2018-2020
PN-III-P1-1.1-TE-2016-2147: Label-free quantitative microscopy based on second harmonic generation at nanoscale (NANO-SHG), **Research Team member**	2018-2020
PN-III-P3-3.1-PM-RO-CN-2018-0177: Novel Optical Imaging Approaches for the In-depth Understanding of Advanced Nanostructured Materials and their Interaction with Biological Species (NANOMATBIOIMAGE), **Project Director** (*in collaboration with Co- Principal Investigator Dr. Fang Yang, Ningbo Institute of Material Technology &. Engineering, China*) **Total project value: 10,917 EUR**	2018-2019
CN: Guangxi Scientific Research And Technology Development Plan: Exploiting the application of single molecule imaging technology in researches of enzyme engineering, **Partner Team Leader** (in collaboration with *Prof. Shaomin Yan, Project Director on behalf of Guangxi Academy of Sciences in Nanning, China*)	2017-2020
PN-III-P2-2.1-PED-2016: An experimental machine intelligence framework for the automated differentiation of healthy, dysplastic and malignant tissues based on multiphoton microscopy datasets (MICAND) **Project Coordinator** *(in collaboration with Prof. Mariana Costache, Partner Leader on behalf of "Carol Davila" University of Medicine and Pharmacy in Bucharest)* **Total project value: 131,171 EUR**	2017-2018
PN-III-P2-2.1-PED-2016: QUANTITATIVE NANOSCOPY FOR THE CHARACTERIZATION OF BIOLOGICAL TISSUES (Q-NANOBIOT). **Research team member**	2017-2018

PN-III-P2-2.1-PED-2016: HOLOGRAPHIC ELEMENTS FABRICATED BY MEANS OF TWO PHOTON POLYMERIZATION FOR A DEMONSTRATIVE OPTICAL COMMUNICATIONS MODULE. **Research team member**	2017-2018
FRAMEWORK FOR BILATERAL SCIENTIFIC COOPERATION ROMANIA – CHINA: INVESTIGATIONS ON THE FUNCTION AND MICRO-STRUCTURE OF THE CELLULASE SECRETION SYSTEM BY HIGH-RESOLUTION IMAGING TECHNIQUES (CESESYS) **Project Director** (in collaboration with Co-Principal Investigator Dr. Guang Wu from Guangxi Academy of Sciences in Nanning) **Total project value: 11,170 EUR**	2016-2017
PN-II-RU-TE-2014-4-1803: CORRELATION AND INTEGRATION OF MICROSCOPY AND NANOSCOPY DATA BY ADVANCED COMPUTER VISION METHODS (MICRONANO), **-Project Director** **Total project value: 123,425 EUR**	2015-2017
POSDRU/159/1.5/S/137390/ POST-DOCTORAL RESEARCH FELLOWSHIP: COMPUTER VISION TECHNIQUES FOR AUTOMATED ANALYSIS AND CORRELATION OF SCANNING LASER AND SCANNING PROBE MICROSCOPY DATA (COVIAC), -PRINCIPAL INVESTIGATOR, **(Excellence Award)**	2014-2015
CH-SCIEX/ POST-DOCTORAL RESEARCH FELLOWSHIP: REGISTRATION AND FUSION OF HIGH RESOLUTION IMAGING DATA (IMPLEMENTED AT ETH ZURICH), **-PRINCIPAL INVESTIGATOR** **Total project value: 32,495 EUR**	2013
PN-II-PT-PCCA/ NEW METHODS AND INVESTIGATIONS PROTOCOLS FOR THE EARLY DIAGNOSIS, EFFICIENT SCREENING, PROGNOSTIC AND THERAPY OF NON-MELANOMA SKIN CANCERS BASED ON EXISTING AND NOVEL MICRO & NANO OPTICAL TOOLS, **- Research team member**	2012-2016
EU-CORDIS-FP7/ REAL TIME LABEL FREE NANOSCOPY USING INFRA RED ABSORBTION (LANIR). **Research team member**	2012-2015
PN-II-PT-PCCA/ INNOVATIVE METHOD AND SYSTEM FOR THE DETECTION OF DRUG EVIDENCE BY PLASMA-LASER ASSISTED MASS SPECTROSCOPY. **Research team member**	2012-2016
EU-CORDIS-FP7/ ELECTRICALLY MODIFIED BIOMATERIALS SURFACE: FROM ATOMS TO APPLICATIONS, GRANT AGREEMENT *(BIOELECTRICSURFACE).* **Research team member**	2008-2011
BILATERAL SCIENTIFIC COOPERATION PROJECT: ROMANIA-SLOVAKIA. **Research team member**	2011-2012
BILATERAL SCIENTIFIC COOPERATION PROJECT: ROMANIA-TURKEY. **Research team member**	2010-2011
BILATERAL SCIENTIFIC COOPERATION PROJECT: ROMANIA-INDIA. **Research team member**	2007-2009

RO-PNII-IDEI/ DEVELOPMENTS OF NEW INVESTIGATION TECHNIQUES IN SCANNING OPTICAL MICROSCOPY AND THEIR APPLICATIONS. **Research team member**	2009-2011
PNII/ STUDIES REGARDING INTERACTION MECHANISMS BETWEEN LASER AND RADIOFREQUENCY RADIATION WITH SUPERIOR AERODIGESTIVE TISSUES AND THE DEVELOPMENT OF THERAPEUTICAL PROTOCOLS. **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. **Research team member**	2007-2010
PNII/ IMPACT OF ENVIRONMENTAL FACTORS TO THE FORMATION DYNAMICS AND STRUCTURAL BEHAVIOR OF TEMPORARY TEETH. **Research team member**	2007-2010
RO-CEEX/ ADVANCED TECHNOLOGIES REGARDING MANUFACTURING POSIBILITIES OF SUBMICRONIC ELEMENTS BY LITOGRAPHIC METHODS (SUBLITO). **Research team member**	2006-2008
RO-CERES/ EXPERIMENTAL MODEL OF EARLY DIAGNOSIS OF ARTWORK DAMAGE BY LIF. **Research team member**	2004-2006
RO-RELANSIN/ INTEGRATED SECURITY SISTEM FOR DIFFERENT MILITARY OBJECTIVES. **Research team member**	2004-2006

PARTICIPATION IN EU COST ACTIONS

CA15124 A NEW NETWORK OF EUROPEAN BIOIMAGE ANALYSTS TO ADVANCE LIFE SCIENCE IMAGING (NEUBIAS) – **MANAGEMENT COMMITTEE MEMBER; ITC Conference Grants Coordinator**	2016-2020
CA16124 BRILLOUIN LIGHT SCATTERING MICROSPECTROSCOPY FOR BIOLOGICAL AND BIOMEDICAL RESEARCH AND APPLICATIONS (BIOBRILLOUIN)" – **MANAGEMENT COMMITTEE MEMBER**	2017-2021
CA19118 - High-performance Carbon-based composites with Smart properties for Advanced Sensing Applications (EsSENce) **- MANAGEMENT COMMITTEE MEMBER; STSM Programme Coordinator, Grant Awarding Coordinator, Workgroup 6 (Characterization) Co-Leader**	2020-2024

EDITORIAL APPOINTMENTS:

- Senior Editor, IEEE Photonics, IEEE (2021-ongoing)
- Associate Editor, Frontiers in Photonics, Frontiers (2021-ongoing)
- Topic Editor: Materials, MDPI (2020-ongoing)

- Review Editor: 'Nanobiotechnology' section of Frontiers in Bioengineering and Biotechnology (2015-ongoing)
- Guest Associate Editor at Materials (Special Issue: "Artificial Intelligence for Advanced Materials Research"), 2020 -
- Guest Associate editor at the Biomedical Physics Section of Frontiers in Physics and Frontiers in Physiology (Research Topic: "Advances in Label Free Tissue Imaging with Laser Scanning Microscopy Techniques"), 2019-2020
- Guest Associate Editor at the Nanoscience Section of Frontiers in Chemistry (Research Topic: "Recent Trends in Optical and Mechanical Characterization of Nanomaterials"), 2019-2020
- Guest Associate Editor at Scanning (Special Issue: "Novel Scanning Characterization Approaches for the Accurate Understanding and Successful Treatment of Oral and Maxillofacial Pathologies"), 2019-2020

REVIEWED MANUSCRIPTS FOR:

Biomedical Optics Express, Optics Letters, Journal of Biophotonics, Scientific Reports, Measurement, Data in Brief, Artificial Intelligence in Medicine, OSA Continuum, Computer Methods and Programs in Biomedicine, IEEE Transactions on Systems, Man and Cybernetics: Systems, Sensors, Electronics, Microscopy Research and Technique, Review of Scientific Instruments, IET Computer Vision, IET Image Processing, Frontiers in Molecular Biosciences, Frontiers in Chemistry, Frontiers in Cellular Neuroscience, Frontiers in Bioengineering and Biotechnology Frontiers in Physics, PlosOne, Optik, Materials Letters, Journal of Gastroenterology and Hepatology, ACS Photonics, ACS Sensors, IEEE Photonics, Advanced Materials, Small Methods, Microbiology Spectrum

AWARDS:

- Presentation Award of the *The Spanish-Portuguese Meeting for Advanced Optical Microscopy, Bilbao*, Spain, 5-7 October, 2016: Multimodal Imaging of nanostructured materials and biological samples in the far-field and near-field Regimes, S.G. Stanciu, D.E. Tranca, C. Stoichita, R. Hristu, L. Pastorino, J.M. Bueno, C. Ruggiero, A. Antipov, G.A. Stanciu.
- Best Poster Presenter Award of the EuroNanoForum EuroNanoForum 2015, Riga, Latvia, 10-12th of June, 2015: Combined Multimodal Imaging at Micro- and Nanoscale Using Complementary Constrast Mechanisms, S.G. Stanciu, C. Stoichita, R. Hristu, D.E. Tranca and G.A. Stanciu
- European Social Fund Project POSDRU/159/1.5/S/137390/: Award for exceeding the fellowship's objectives (conference presentations), Award for exceeding the fellowship's objectives (journal publications), Excellence Award (highest cumulated publication impact factor in the postdoc target group),
- >20 PRECISI Awards of the Romanian *Executive Agency* for Higher Education, Research, Development and Innovation Funding (UEFISCDI) for authorship of publications in top-tier journals (1st and 2nd quartile journals)

INVOLVEMENT IN ORGANIZATION/SUPPORT OF INTERNATIONAL CONFERENCES:

- Member of the Organizing Committee for the 2012 Workshop on Super-resolution and Life Sciences, 3-6 October 2012, Brasov, Romania
- Member of the Organizing Committee for the 2018 International Conference on Transparent Optical Networks, 1-5 July 2018, Bucharest, Romania
- Inclusiveness Target Countries Conference Grant Coordinator for the CA15124 NEUBIAS Cost Action (2018-2020).
- Co-Chair of Session 3.8 – Special Technical Session – Nanostructured devices and smart materials for biophotonics applications, IEEE MELECON 2022, The 21st IEEE Mediterranean Electrotechnical Conference Palermo, Italy, 14-16 June 2022
- Member of the Organizing Committee for the 2023 International Conference on Transparent Optical Networks, 2-6 July 2023, Bucharest, Romania

PUBLICATIONS AND CONFERENCE PARTICIPATIONS

PUBLICATIONS IN WEB-OF-SCIENCE (WOS) AND/OR SCOPUS INDEXED JOURNALS

(main author role is highlighted by **bold underline** font)

2024

1. Kusnetz, B., Belhassen, J., Tranca, D. E., **Stanciu, S. G.,** Anton, S. R., Zalevsky, Z., Stanciu, G.A. & Karsenty, A. (2024). Generic arrays of surface-positioned and shallow-buried gold multi-shapes as reference samples to benchmark near-field microscopes. Part 1: Applications in s-SNOM depth imaging. *Results in Physics*, 107318.

2023

2. Roadmap on Label-Free Super-Resolution Imaging, V. N. Astratov, Y. B. Sahel, Y. C. Eldar, L. Huang, A. Ozcan, N. Zheludev, J. Zhao, Z. Burns, Z. Liu, E. Narimanov, N. Goswami, G. Popescu, E. Pfitzner, P. Kukura, Y.-T. Hsiao, C.-Lung Hsieh, B. Abbey, A. Diaspro, A. LeGratiet, P. Bianchini, N. T. Shaked, B. Simon, N. Verrier, M. Debailleul, O. Haeberlé, S. Wang, M. Liu, Y. Bai, J.-X. Cheng, B. S. Kariman, K. Fujita, M. Sinvani, Z. Zalevsky, X. Li, G.-J. Huang, S.-W. Chu, O. Tzang, D. Hershkovitz, O. Cheshnovsky, M. J. Huttunen, **S. G. Stanciu**, V. N. Smolyaninova, I. I. Smolyaninov, U. Leonhardt, S. Sahebdivan, Z. Wang, B., Luk'yanchuk, L. Wu, A.V. Maslov, B. Jin, C. R. Simovski, S. Perrin, P. Montgomery, and S. Lecler, 2023, *Laser & Photonics Reviews*, 17 (12), 2200029, DOI: 10.1002/lpor.202200029 **(article featured on the front cover)**

3. Investigations on the topography and micro-mechanical properties of polyvinyl alcohol thin-film composites reinforced with hardwood biocarbon particles, M. Zouari, **S.G. Stanciu**, J. Jakes, L. Marrot, E. Fiorentis, G.A. Stanciu, D. B. DeVallance, 2023, *Journal of Materials Research and Technology*, 27 (6), 5533-5540

4. Anton, S. R., Tranca, D. E., Stanciu, S. G., Hristu, R., Banica, C. K., Vasile, E. Hu, Z., Fu, E., & Stanciu, G. A. (2023). Characterization of Nanoporous Copper Using Scanning Probe Techniques. *Coatings*, *13*(11), 1908.

5. DeepGT: Deep learning-based quantification of nanosized bioparticles in bright-field micrographs of Gires-Tournois biosensor, J. Kang, Y.J. Yoo, J.-H. Park, J. H. Ko, S. Kim, **S.G. Stanciu**, H.A. Stenmark, J. Lee, A. Al Mahmud, H.-G. Jeon, Y.M. Song, *Nano Today*, 52, 101968 (2023)

6. **Stanciu, S. G.**, König, K., Song, Y. M., Wolf, L., Charitidis, C. A., Bianchini, P., & Goetz, M. (2023). Toward next-generation endoscopes integrating biomimetic video systems, nonlinear optical microscopy, and deep learning. *Biophysics Reviews*, *4*(2) (2023)

7. Fighting bacterial pathogens with carbon nanotubes: focused review of recent progress, Asaftei, M., Lucidi, M., Cirtoaje, C., Holban, A. M., Charitidis, C. A., Yang, F. Wu. A,., Stanciu, G.A., Saglam, O., Lazar, V., Visca, P., **Stanciu, S.G.**, *RSC advances*, *13*(29), 19682-19694 (2023).

8. Automated Detection of Corneal Edema with Deep Learning-assisted Second Harmonic Generation Microscopy, Anton, S.R., Martínez-Ojeda, R.M., Hristu, R., Stanciu, G.A., Toma, A., Banica, C.K., Fernández, E.J., Huttunen, M.J., Bueno, J.M. and **Stanciu, S.G.**, 2023.. *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 29 (6), p.7201010

9. Nanoscale local modification of PMMA refractive index by tip-enhanced femtosecond pulsed laser irradiation, Tranca, D.E., **Stanciu, S.G.**, Hristu, R., Ionescu, A.M. and Stanciu, G.A., 2023.. *Applied Surface Science*, vol. 623, p.157014.

10. Magneto-mechanical Therapeutic Effects and associated Cell Death Pathways of magnetic nanocomposites with distinct geometries, Yao, C., Yang, F., Zhang, J., Yao, J., Cao, Y., Peng, H., **Stanciu, S.G.**, Charitidis, C.A. and Wu, A., 2023.. *Acta Biomaterialia*, vol. 161, pp. 238-249

11. Structural and Mechanical Properties of CrN Thin Films Deposited on Si Substrate by Using Magnetron Techniques, Tranca, D.E., Sobetkii, A., Hristu, R., Anton, S.R., Vasile, E., **Stanciu, S.G.**, Banica, C.K., Fiorentis, E., Constantinescu, D. and Stanciu, G.A., 2023. *Coatings*, *13*(2), p.219.

12. Toward augmenting tip-enhanced nanoscopy with optically resolved scanning probe tips, Belhassen, J., Glass, S., Teblum, E., Stanciu, G.A., Tranca, D.E., Zalevsky, Z., **Stanciu, S.G.** and Karsenty, A., 2023. *Advanced Photonics Nexus*, *2*(2), p.026002.

2022

13. Super-resolution re-scan second harmonic generation microscopy, **Stanciu, S.G.,** Hristu, R., Stanciu, G.A., Tranca, D.E., Eftimie, L., Dumitru, A., Costache, M., Stenmark, H.A., Manders, H., Cherian, A. Tark-Dame, M., Manders, E.M.M., 2022. *PNAS - Proceedings of the National Academy of Sciences*, *119*(47), p.e2214662119.

14. "Double-punch" strategy against triple-negative breast cancer via a synergistic therapy of magneto-mechanical force enhancing NIR-II hypothermal ablation., Du, H., Yang, F., Yao, C., Lv, W., Peng,

H., **Stanciu, S.G**., Stenmark, H.A., Song, Y.M., Jiang, B. and Wu, A., 2022. *Biomaterials*, *291*, p.121868.

15. Multifunctional Modulation of High-Performance ZnxFe3− xO4 Nanoparticles by Precisely Tuning the Zinc Doping Content., Du, H., Yang, F., Yao, C., Zhong, Z., Jiang, P., **Stanciu, S.G.**, Peng, H., Hu, J., Jiang, B., Li, Z. and Lv, W., 2022. *Small*, *18*(42), p.2201669.

16. Gires-Tournois immunoassay platform for label-free bright-field imaging and facile quantification of bioparticles, Y.J. Yoo, J.H. Ko, G.J. Lee, J. Kang, M. S. Kim, **S.G. Stanciu**, H.H. Jeong, D.H. Kim, Y.M. Song, *Advanced Materials*, 34 (21), 2110003 (2022) **(article featured on the front cover page)**

17. Eftimie, L.G., Glogojeanu, R.R., Tejaswee, A., Gheorghita, P., **Stanciu, S.G.**, Chirila, A., Stanciu, G.A., Paul, A. and Hristu, R., 2022. Differential diagnosis of thyroid nodule capsules using random forest guided selection of image features. *Scientific Reports*, *12*(1), pp.1-13.

18. Hristu, R., **Stanciu, S.G.,** Dumitru, A., Eftimie, L.G., Paun, B., Tranca, D.E., Gheorghita, P., Costache, M. and Stanciu, G.A., 2022. PSHG-TISS: A collection of polarization-resolved second harmonic generation microscopy images of fixed tissues. *Scientific Data*, *9*(1), pp.1-12.

19. Scattering-type Scanning Near-Field Optical Microscopy of Polymer-Coated Gold Nanoparticles. **S.G. Stanciu**, D.E. Tranca, G. Zampini, R. Hristu, G.A. Stanciu, X. Chen, M. Liu, H.A. Stenmark, L. Latterini. *ACS Omega*, 7, 11, pp. 11353-11362, (2022).

20. F. Yang, J. Yao, F. Zheng, H. Peng, S. Jiang, C. Yao, H. Du, B. Jiang, **S.G. Stanciu**, A. Wu. Guarding food safety with conventional and up-conversion near-infrared fluorescent sensors. *Journal of Advanced Research*, 41 (November 2022) 129-144 (2022)

21. R. Hristu, L.G. Eftimie, **S.G. Stanciu**, R.R. Glogojeanu, P. Gheorghita, G.A. Stanciu. Assessment of Extramammary Paget Disease by Two-Photon Microscopy. *Frontiers in Medicine*, 9, (2022).

22. X. Chen, Z. Yao, Z. Sun, **S.G. Stanciu**, D. N. Basov, R. Hillenbrand, M. Liu. "Rapid simulations of hyperspectral near-field images of three-dimensional heterogeneous surfaces–part II." *Optics Express* 30 (7), (2022).

2021

23. Hybrid Machine Learning for Scanning Near-field Optical Spectroscopy, X. Chen, Z. Yao, S. Xu, A.S. McLeod, S.N.G. Corder, Y. Zhao, M. Tsuneto, H.A. Bechtel, M.C. Martin, G. L. Carr, M.M. Fogler, **S.G. Stanciu**, D.N. Basov, M. Liu, *ACS Photonics*, 8(10), 2987–2996 (2021)

24. Rapid Simulations of Hyperspectral Near-field Images of Three-dimensional Heterogeneous Surfaces, X. Chen, Z. Yao, **S.G. Stanciu,** D. N. Basov, R. Hillenbrand, M. Liu, *Optics Express***,** 29(24), 39648-39668 (2021)

25. The influence of hematoxylin and eosin staining on the quantitative analysis of second harmonic generation imaging of fixed tissue sections, Biomedical Optics Express, R. Hristu, **S.G.Stanciu**, B. Paun, I. Floroiu, A. Dumitru, M. Costache, G.A. Stanciu, *Biomedical Optics Express*, 12, 5829-5843 (2021)

26. Characterization of Acinetobacter baumannii filamentous cells by Re-scan confocal microscopy and complementary fluorometric approaches, M.Lucidi, R. Hristu, L. Nichele, G.A. Stanciu, P. Visca,

C.K.Banica, G. Cincotti**, S.G. Stanciu**, *IEEE Journal of Selected Topics in Quantum Electronics*, 27(5), 6801207 (2021)

2020

27. Magnetically switchable mechano-chemotherapy for enhancing the death of tumour cells by overcoming drug-resistance, C. Yao, F. Yang, L. Sun, Y. Ma, **S.G. Stanciu**, Z. Li, C. Liu, O. U. Akakuru, L. Xu, N. Hampp, Huanming Lu, A. Wu, *Nano Today,* 35, 100967 (2020)
28. Large-Area Virus Coated Ultra-Thin Colorimetric Sensors with a Highly Lossy Resonant Promoter for Enhanced Chromaticity, Y.J. Yoo, W-G. Kim, J.H. Ko, Y.J. Kim, Y. Lee, J.-M. Lee, **S.G. Stanciu**, J-W. Oh, Y.M. Song, *Advanced Science,* 7(18), 2000978, *(2020)* **(article featured on the inside cover)**
29. Multiphoton microscopy of the dermoepidermal junction and automated identification of dysplastic tissues with deep learning, M.J. Huttunen, R. Hristu, A. Dumitru, I. Floroiu, M. Costache, **S.G. Stanciu**, *Biomedical Optics Express* **11**, 186-199 (2020)
30. HISTOBREAST, A Collection of Brightfield Microscopy Images of Haematoxylin – Eosin Stained Breast Tissue, R.M. Buga, T. Totu, A. Dumitru, M. Costache, I. Floroiu, N. Sladoje, **S.G. Stanciu**, *Scientific Data*, 7, 169 *(2020)*
31. Characterization of Nanostructured Materials by Locally Determining their Complex Permittivity with scattering-type Scanning Near Field Optical Microscopy, **S.G. Stanciu**, D.E. Tranca, L. Pastorino, S. Boi, Y.M. Song, Y.J. Yoo, S. Ishii, R. Hristu, F. Yang, G. Busetti, G.A. Stanciu, *ACS Applied Nano Materials*, 3, 2, 1250-1262 (2020)
32. Multiphoton Microscopy of Oral Tissues: Review, R.M Martínez-Ojeda, M.D Pérez-Cárceles, L.C Ardelean, **S.G. Stanciu**, J.M Bueno, *Frontiers in Physics, 8, 128 (2020)*
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34. SSNOMBACTER: A collection of scattering-type Scanning Near-Field Optical Microscopy and Atomic Force Microscopy images of bacterial cells, M. Lucidi, D.E. Tranca; L. Nichele; D. Unay; G.A. Stanciu; P. Visca; A. M. Holban; R. Hristu; G. Cincotti; **S.G. Stanciu**, *GigaScience*, 9(11), 1-12 (2020)
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Microscopy
Nanoscopy
image processing
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