

Bruno Golosio, PhD

Associate professor of Applied Physics
 Head of the Postgraduate School of Medical Physics
https://www.unica.it/unica/en/crs_140_54.page

Department of Physics, University of Cagliari
 Cittadella universitaria, 09042 Monserrato (CA) Italy.
 email: golosio@unica.it

Current position, fellowships and qualifications

- Associate professor of Applied Physics at the University of Cagliari, Italy, since 2016
- Head of the Postgraduate School of Medical Physics of the University of Cagliari, since 2017
- Research Fellow of the Italian Institute for Nuclear Physics, since 2005.
- Member of the Italian Association of Medical Physics (AIFM)
- National academic qualification as full professor of Applied Physics at university level from the MIUR (Ministry of Education, University and Research) of Italy, 2018

Education

- PhD in Physics, University of Cagliari (Italy), 2004
- Laurea in Physics, final mark 110/110, University of Pisa (Italy), 1998

Research interests

- Computational neuroscience, spiking neural networks, artificial neural networks
- Computational methods in medical physics and biophysics
- Machine learning in medical imaging
- Monte Carlo simulation methods

Biosketch

Bruno Golosio is associate professor of Applied Physics at the University of Cagliari and Research Fellow of the Italian Institute for Nuclear Physics. Since October 2017 he is Head of the Postgraduate School of Medical Physics of the University of Cagliari. He obtained the national academic qualification as full professor of Applied Physics at university level from the MIUR (Ministry of Education, University and Research) of Italy in 2018. He teaches “Analysis and simulation of physical systems” and “Medical Physics” for the Master Degree Course in Physics, and “Physics of Diagnostic Imaging” for the Postgraduate School of Medical Physics and for the Bachelor Degree Course in Radiology and Radiotherapy. His main research interests are computational neuroscience, neural networks, computational methods for medical physics and biophysics, machine learning in medical imaging, Monte Carlo simulation methods. Over the last twenty years, he participated in several research projects, with increasing level of responsibility. Currently, he is principal investigator of the project icei-hbp-2020-0007 for MPI-GPU simulation of spiking neural network models in the Interactive Computing E-Infrastructure for the Human Brain Project (ICEI-HBP) and coordinator of the research unit of Cagliari of the WaveScaleS (Wave Scaling Experiments and Simulations) experiment of the Human Brain Project, focused on large-scale simulations of brain activity based on spiking neural networks and on the study of brain wave propagation in wake and sleep states. He also participates in the project “Brain-Scale Simulations” of the Juelich Supercomputing Center, and on the AIM (Artificial Intelligence in Medicine) project founded by the Italian Institute for Nuclear Physics (INFN). In the past, he was unit leader of several projects funded by the INFN, and participated in projects for experiments at the European Synchrotron Radiation Facility (France), at the GSI laboratories in Darmstadt (Germany), at Brookhaven National Laboratory (US), and at the Elettra synchrotron (Italy). He also has a long experience in scientific software development in several programming languages, including C/C++, Python, CUDA, and in high performance computing (HPC) on computer clusters and GPUs. He is the first author of numerous software for the simulation, reconstruction and processing of biomedical data and is active in coordinating the groups that develop and maintain these software. In particular, he coordinates the development of NEST GPU (<https://nest-gpu.readthedocs.io/en/latest>), the parallel implementation for GPU devices of the NEST simulator (<https://www.nest-simulator.org>), one of the spiking-neural-network simulators most used by the international neuroscientific community. He is the first author of a popular cognitive neural model of language development, called ANNABELL (Artificial Neural Network with Adaptive Behavior Exploited for Language Learning, <https://github.com/golosio/annabell/wiki>) and of the open source software XPMC (<https://github.com/golosio/xpmc/wiki>) for Monte Carlo simulation of x-ray imaging, spectroscopy and dosimetry experiments, and co-author of the open source software library XRAYLIB (<https://github.com/tschoonj/xraylib/wiki>), one of the most popular libraries of X-ray parameters and functions. The trace of his research work is documented on more than 120 research papers.

Bibliometric indicators

- H-index: 26, n. publications: 123, n. citations: 2282 (source: Scopus, www.scopus.com, 15/11/2022)

Project coordination

- Project icei-hbp-2020-0007 for MPI-GPU simulation of spiking neural network models in the Interactive Computing E-Infrastructure for the Human Brain Project (ICEI-HBP), from 01/10/2020 to 31/01/2023, 28 months, **principal investigator**.
- WaveScales project (Wave Scaling Experiments and Simulations), focused on large-scale simulations of brain activity based on spiking neural networks and on the study of brain wave propagation in wake and sleep states (Human Brain Project Work Package 2: Networks underlying brain cognition and consciousness), participant since January 2020, **Cagliari research unit coordinator since October 2022**.
- SR3T (synchrotron radiation rotational radiotherapy) project, supported by the Italian Institute for Nuclear Physics (2018-2020), 36 months, **Cagliari-Sassari research unit coordinator**.
- SYRMA-3D project, supported by the Italian Institute for Nuclear Physics (2016-2019), 36 months, **Cagliari-Sassari research unit coordinator**.
- SYRMA-CT project, supported by the Italian Institute for Nuclear Physics (2014-2016), 36 months, **Cagliari-Sassari research unit coordinator**.
- Project "Investigation of reconstruction algorithms for low-dose breast x-ray phase-contrast tomography" at the Elettra synchrotron facility in Italy, project n. 20140391 and n. 20145096, approved by the international scientific committee of Elettra(2014-2015) **project coordinator**
- CYBERSAR project, supported by the Programma Operativo Nazionale (PON) avviso 1575, aimed at the creation of an infrastructure for high-performance computing in the south of Italy (2008-2012), GRID node CYBERSAR-PORTOCONTE, 60 months, **GRID node installation and administration contract supervisor**
- CYBERSAR project,, task A12.5: Implementation of a framework and development of software for biomedical image analysis on distributed databases (2006-2009) 39 months, **task A12.5 coordinator, two-years research contract supervisor**
- DREAMS (Direct Reactions with Exotic ions And Multifragmentation Studies) project, supported by the Italian Institute for Nuclear Physics (2012), 12 months, **Cagliari-Sassari research unit coordinator**
- FIRST (Fragmentation of Ions Relevant for Space and Therapy) project, at the GSI laboratories, Darmstadt, Germany, international project approved by the GSI committee G-PAC (2011), 24 months, **Cagliari-Sassari research unit coordinator**
- FRAG project, supported by the Italian Institute for Nuclear Physics (2011), 12 months, **Cagliari-Sassari research unit coordinator**
- "Feasibility study of a system for angiography and angio-CT using K-edge filters" project supported by the Fondazione Banco di Sardegna, 2010-2011, 12 months, **project coordinator**
- MAGIC-V (Medical Application on a Grid Infrastructure Connection) project, supported by the Italian Institute for Nuclear Physics (2007-2008), 24 months, **Cagliari-Sassari research unit coordinator**
- MI-713 project: "Helical X-ray fluorescence tomography for the determination of the 3D internal elemental distribution in the micron-scale" at the ESRF (European Synchrotron Radiation Facility) Grenoble, France, project approved by the ESRF Scientific Committee (2003) **project coordinator**

Participation in other research projects

- AIM (Artificial Intelligence in Medicine) project, supported by the Italian Institute for Nuclear Physics, since January 2020.
- SL-BEATS2 (SPARC LAB BEAM line from Thomson Source) project, supported by the Italian Institute for Nuclear Physics (2013), 12 months.
- Project "Angiography and angio-CT using K-edge filters", L.R.7/8/2007, "Promozione della Ricerca Scientifica e dell'Innovazione tecnologica in Sardegna", 2012-2014.
- SL-BEATS2 (SPARC LAB BEAM line from Thomson Source) project, supported by the Italian Institute for Nuclear Physics (2013), 12 months.
- DREAMS (Direct Reactions with Exotic ions And Multifragmentation Studies) project, supported by the Italian Institute for Nuclear Physics (2013), 12 months.
- BEATS2 (BEAM line from Thomson Source) project, supported by the Italian Institute for Nuclear Physics (2011-2012), 12 months.

- AE45 project - Advanced imaging and ultra-fast material probing with inverse Compton scattering, at the Brookhaven National Laboratory -USA (2009-2011), 36 months.
- BEATS (BEAm line from Thomson Source) project, supported by the Italian Institute for Nuclear Physics (2008-2010), 36 months.
- EXCALIBUR (EXposure effeCts At Low-doses of Ionizing-radiation in Biological cultURes) project, supported by the Italian Institute for Nuclear Physics (2009), 12 months.
- PRIN project – Study and development of computational-physical systems for distributed analysis of biomedical images, supported by the Ministry of Education, Universities and Research (2006-2007), 24 months.
- MAMBO2 (MAMmographic Monochromatic Beam Outlook) project, supported by the Italian Institute for Nuclear Physics (2007), 12 months.
- MAMBO (MAMmographic Monochromatic Beam Outlook) project, supported by the Italian Institute for Nuclear Physics (2006), 12 months.
- MAGIC-5 (Medical Application on a Grid Infrastructure Connection) project, supported by the Italian Institute for Nuclear Physics (2006), 12 months.
- NATO project grant nr. EST-CLG-979530, supported by NATO Science Programme, Collaborative Linkage Grant (2003), 12 months.

Referee - participation in editorial committees

- Guest editor of the research topic “Language Representation and Learning in Cognitive and Artificial Intelligence Systems”, participating journals *Frontiers in Robotics and AI*, *Frontiers in Computational Neuroscience*, *Frontiers in Neuroinformatics*, 2020
- Associate editor for the journal *Medical Physics*, 12/2011-07/2012
- Referee for several journals: *Scientific Reports*, *Applied Physics Letters*, *Physics in Medicine and Biology*, *Medical Physics*, *IEEE Transactions on Nuclear Science*, *International Journal of Computer Assisted Radiology and Surgery*, *Computer Methods and Programs in Biomedicine*, *Spectrochimica Acta B*, *Journal of X-Ray Science and Technology*, *Computer Physics Communications*

Software development

- First author of the library NEST GPU for fast simulation of large-scale networks of spiking neurons, <https://github.com/golosio/NeuralGPU/wiki>
- First author of the open source software ANNABELL (Artificial Neural Network with Adaptive Behavior Exploited for Language Learning), <https://github.com/golosio/annabell/wiki>
- He contributed to the development of the NEST simulator, one of the most popular simulators of spiking neural networks, <http://www.nest-simulator.org/>
- First author of the open source software XPMC (X-Ray Monte Carlo), <https://github.com/golosio/xpmc/wiki>
- Coauthor of the open source software library XRAYLIB, one of the most popular libraries of X-ray parameters and functions, <https://github.com/tschoonj/xraylib/wiki>
- Coauthor of the software Triangulate, distributed through Computer Physics Communications Program Library, <http://www.cpc.cs.qub.ac.uk/>
- First author of software for X-ray absorption, fluorescence and scattering tomography reconstruction

Fellowships

- Research Fellow of the Italian Institute for Nuclear Physics, since 2005.
- Doctoral Research Fellow of the Italian Institute for Nuclear Physics, 2002-2004.

Thesis and research contract supervision

- Supervisor of a PhD candidate for the Physics PhD Program at the University of Cagliari, since 2020
- Supervisor of the research activity of students of the Medical Physics Postgraduate School, since 2017
- Tutor for the graduation thesis of Physics students, since 2017
- Co-tutor for the Postgraduate School for Secondary Education Teacher Training, University of Sassari, 2009.
- Scientific supervisor of a two-year research contract in the Cybersar project, OR 12, 2007- 2008
- Scientific supervisor of a Post-Doc collaboration contract in the Cybersar project, 9 months, for the installation and administration of the GRID node, 2008

Participation to scientific and organizing committees

- Member of the program committee of SOMET 2022, "The 21th International Conference on Intelligent Software Methodologies, Tools, and Techniques", Sept. 20-22, 2022, Kitakyushu, Japan
- Member of the program committee of SOMET 2021, "The 20th International Conference on Intelligent Software Methodologies, Tools, and Techniques", Sept. 21-23, 2021, held online due to the Covid-19 pandemic.
- Member of the programme committee of the session on High Performance Computing for Neuroscience at PDP2020, 28th Euromicro Int. Conf. On Parallel, Distributed and Network-based Processing, Västerås (Sweden) 2020
- Member of the program committee of SOMET 2020, "The 19th International Conference on Intelligent Software Methodologies, Tools, and Techniques", Sept. 22-24, 2020, Kitakyushu, Japan.
- Member of the programme committee of the session on High Performance Computing for Neuroscience at PDP2019, 27th Euromicro Int. Conf. On Parallel, Distributed and Network-based Processing, Pavia (Italy) 2019
- Member of the scientific committee for the workshop "Monte Carlo simulation tools for X-ray imaging and fluorescence", European Synchrotron Radiation Facility, Grenoble, France, 2014.
- Member of the organizing committee of the National Seminar on Software for Nuclear, Sub-nuclear and applied Physics, Alghero, Italy, 2004-2011
- Member of the organizing committee of the conference "Compton Sources for X/gamma Rays: Physics and Applications", Alghero, Italy, 2008.

Invited talks

- 2022 – Invited speaker at the BASSES (Brain Activity across Scales and Species) workshop, Rome, Italy: "Simulation of large-scale spiking network models on GPU systems: recent advances"
- 2017 - Invited seminar at the Institute of Neuroscience and Medicine, Research Center Jülich, Germany: "A GPU library for simulation of large-scale networks of biological neurons"
- 2015 - Invited seminar at the Centre for Robotics and Neural Systems, University of Plymouth: "A neural model of the working memory"
- 2004 - Invited speaker at the European Conference on X-Ray Spectrometry EXRS, Alghero, Italy.
- 2004 – Invited speaker at the XC Congress of the Italian National Physics Society, Brescia, Italy

Talks at international conferences

- 2020 – talk at the NEST Conference 2020, talk title "Toward a possible integration of NeuronGPU in NEST". Due to the COVID-19 restrictions, the conference was held online.
- 2015 - talk at the Annual International Conference on Biologically Inspired Cognitive Architectures, Lyon, France
- 2011 – talk at the IEEE Nuclear Science Symposium, Medical Imaging Conference, Valencia, Spain.
- 2008 – talk at the Workshop "Compton Sources for X/gamma Rays: Physics and Applications", Alghero, Italy.
- 2003 – talk at the ASNT (American Society for Nondestructive Testing) Spring Conference and 12th Annual Research Symposium, Orlando, Florida.

University teaching

- "Analysis and simulation of physical systems" lectures for the Master Degree Course in Physics, 48 hours per year, University of Cagliari, since 2019
- "Medical Physics" lectures for the Master Degree Course in Physics, 48 hours per year, University of Cagliari, since 2019
- "Physics of Diagnostic Imaging" lectures for the Postgraduate School of Medical Physics, 16 hours per year, University of Cagliari, since 2017
- "Physics of Diagnostic Imaging" lectures for the Bachelor Degree Course in Radiology and Radiotherapy Techniques, 32 hours per year, University of Cagliari, since 2017
- "Applied Physics" lectures for the Bachelor Degree Course in Physics, 48 hours per year, University of Cagliari, 2017-2019
- "Physics" lectures for the Bachelor Degree Course in Physical Education, 32 hours per year, University of Cagliari, 2017-2019
- "Physics" lectures for the Bachelor Degree Course in Biotechnologies, 48 hours per year, University of Sassari, 2014-2016.

- “Physics” lectures for the Bachelor Degree Course in Natural and Environmental Sciences, 48 hours per year, University of Sassari, 2015-2016.
- “Physics” lectures for the Bachelor Degree Course in Chemistry, 80 hours per year, University of Sassari, 2005-2013.
- “Physics” lectures at the Agronomy Faculty, 48 hours per year, University of Sassari, 2003-2012 and 2014-2016.
- “Foundations of Nuclear and Radiation Physics” lectures at the Nuclear Medicine Postgraduate School, University of Sassari, 2006-2015.
- “Dosimetry, Theory and Instrumentation” lectures at the Nuclear Medicine Postgraduate School, University of Sassari, 2006-2011.
- “Methods for Data and Images Acquisition and Elaboration” lectures at the Nuclear Medicine Postgraduate School, University of Sassari, 2006-2011.
- “Physics Complements” lectures at the Postgraduate School for Secondary Education Teacher Training , University of Sassari, 2007-2009.
- “Physics Laboratory” lessons for the Bachelor Degree Course in Chemistry, University of Sassari, 2006.
- “Physical Techniques in the Work of Art” lectures for the Bachelor Degree Course in Cultural Heritage, 48 hours per year, University of Sassari, 2004.
- “Environmental Physics” lectures for the Bachelor Degree Course in Natural Sciences, 48 hours per year, University of Sassari, 2004.

Teaching in scientific software seminars

- Teacher of the course “Introduction to object-oriented programming applied to computational physics” for Physics students, held at Department of Physics of the University of Cagliari, 2019
- Hands-on presentation of the software XRMC at the workshop "Monte Carlo simulation tools for X-ray imaging and fluorescence", European Synchrotron Radiation Facility, Grenoble, France, 2014.
- Teacher of the course "Object Oriented Programming" in the National Seminar on Software for Nuclear, Sub-nuclear and applied Physics, Alghero, Italy, 2011.
- Teacher of the course "Programming in the Linux environment" in the National Seminar on Software for Nuclear, Sub-nuclear and applied Physics, Alghero, Italy, 2009-2010.

List of Publications

Publications in peer-reviewed international journals: 89

Book chapters: 2

Conference Proceedings: 31

Publications in peer-reviewed international journals

- [1] Tiddia G, **Golosio B**, Fanti V, Paolucci PS (2022). Simulations of working memory spiking networks driven by short-term plasticity. **Frontiers in integrative neuroscience**, vol. 16, art. no. 972055, doi: 10.3389/fnint.2022.972055
- [2] Tiddia G, **Golosio B**, Albers J, Senk J, Simula F, Pronold J, Fanti V, Pastorelli E, Paolucci PS, van Albada SJ (2022) Fast Simulation of a Multi-Area Spiking Network Model of Macaque Cortex on an MPI-GPU Cluster. **Frontiers In Neuroinformatics**, vol. 16, art. no. 883333, doi: 10.3389/fninf.2022.883333
- [3] Mettievier G, Sarno A, Lai Y, **Golosio B**, Fanti V, Italiano ME, Jia X, Russo P (2022) Virtual Clinical Trials in 2D and 3D X-ray Breast Imaging and Dosimetry: Comparison of CPU-Based and GPU-Based Monte Carlo Codes, **Cancers**, vol. 14 (4), art. no. 1027, doi: 10.3390/cancers14041027
- [4] Donato S, Brombal L, Arana Peña LM, Arfelli F, Contillo A, Delogu P, Di Lillo F, Di Trapani V, Fanti V, Longo R, Oliva P, Rigon L, Stori L, Tromba G, **Golosio B** (2022) Optimization of a customized simultaneous algebraic reconstruction technique algorithm for phase-contrast breast computed tomography, **Physics in Medicine and Biology**, vol. 67(9), art. no. 095012, doi: 10.1088/1361-6560/ac65d4
- [5] **Golosio B**, De Luca C, Capone C, Pastorelli E, Stegel G, Tiddia G, de Bonis G, Paolucci PS (2021) Thalamo-cortical spiking model of incremental learning combining perception, context and NREM-sleep, **PLoS Computational Biology**, vol. 17(6), art. no. e1009045, doi: 10.1371/journal.pcbi.1009045

- [6] **Golosio B**, Tiddia G, De Luca C, Pastorelli E, Simula F, Paolucci PS (2021) Fast Simulations of Highly-Connected Spiking Cortical Models Using GPUs, **Frontiers in Computational Neuroscience**, vol. 15, art. no. 627620, doi: 10.3389/fncom.2021.627620
- [7] Giorgi I, **Golosio B**, Esposito M, Cangelosi A, Masala GL (2021) Modelling Multiple Language Learning in a Developmental Cognitive Architecture, **IEEE Transactions on Cognitive and Developmental Systems**, vol. 13, p. 922-933, doi: 10.1109/TCDS.2020.3033963
- [8] Hoff G, Streck EE, Lai A, Fanti V, **Golosio B**, Nascimento CD, Souza EG (2021) Using Geant4 Monte Carlo toolkit to evaluate a low power X-ray tube generator configuration, **Applied Radiation and Isotopes** 168, art. no. 109487, doi: 10.1016/j.apradiso.2020.109487
- [9] Esposito M, Masala GL, **Golosio B**, Cangelosi A (2020) Editorial of Research Topic "Language Representation and Learning in Cognitive and Artificial Intelligence Systems", **Frontiers in Robotics and AI** doi: 10.3389/frobt.2020.00069
- [10] Oliva P, Di Trapani V, Arfelli F, Brombal L, Donato S, **Golosio B**, Longo R, Mettievier G, Rigon L, Taibi A, Tromba G, Zanconati F, Delogu P (2020) Experimental optimization of the energy for breast-CT with synchrotron radiation, **Scientific Reports** 10 (1), art. no. 17430, doi: 10.1038/s41598-020-74607-7
- [11] Mettievier G, Masi M, Arfelli F, Brombal L, Delogu P, Di Lillo F, Donato S, Fedon C, **Golosio B**, Oliva P, Rigon L, Sarno A, Taibi A, Russo P (2020) Radiochromic film dosimetry in synchrotron radiation breast computed tomography: A phantom study, **Journal of Synchrotron Radiation** 27, pp. 762-771, doi: 10.1107/S1600577520001745
- [12] Capone C, Pastorelli E, **Golosio B**, Paolucci PS (2019) Sleep-like slow oscillations improve visual classification through synaptic homeostasis and memory association in a thalamo-cortical model. **Scientific Reports** vol. 9(1), art. n. 8990, ISSN: 20452322, doi: 10.1038/s41598-019-45525-0
- [13] Piai A, Contillo A, Arfelli F, Bonazza D, Brombal L, Cova, MA, Delogu P, Di Trapani V, Donato S, **Golosio B**, Mettievier G, Oliva P, Rigon L, Taibi A, Tonutti M, Tromba G, Zanconati F, Longo R (2019) Quantitative characterization of breast tissues with dedicated CT imaging. **Physics in Medicine and Biology** vol. 64(15), art. n. 155011, ISSN: 00319155, doi: 10.1088/1361-6560/ab2c29
- [14] Brombal L, **Golosio B**, Arfelli F, Bonazza D, Contillo A, Delogu P, Donato S, Mettievier G, Oliva P, Rigon L, Taibi A, Tromba G, Zanconati F, Longo R (2019) Monochromatic breast computed tomography with synchrotron radiation: Phase-contrast and phase-retrieved image comparison and full-volume reconstruction. **Journal of Medical Imaging** vol. 6(3), art. n. 031402, ISSN: 23294302, doi: 10.1117/1.JMI.6.3.031402
- [15] Longo R, Arfelli F, Bonazza D, Bottigli U, Brombal L, Contillo A, Cova MA, Delogu P, Di Lillo F, Di Trapani V, Donato S, Dreossi D, Fanti V, Fedon C, **Golosio B**, Mettievier G, Oliva P, Pacilè S, Sarno A, Rigon L, Russo P, Taibi A, Tonutti M, Zanconati F, Tromba G (2019) Advancements towards the implementation of clinical phase-contrast breast computed tomography at Elettra. **Journal of Synchrotron Radiation** vol. 26(1) pp. 1343-1353, ISSN: 09090495, doi: 10.1107/S1600577519005502
- [16] Masala G, Casu F, **Golosio B**, Grosso E (2018) 2D recurrent neural networks: a high-performance tool for robust visual tracking in dynamic scenes. **Neural Computing and Applications** vol. 29(7), pp. 329-341, ISSN: 09410643, doi: 10.1007/s00521-017-3235-x
- [17] Jorgji J, **Golosio B**, Cangelosi A, Masala G (2018) ANNABELL, a cognitive system able to learn different languages. **Frontiers in Artificial Intelligence and Applications** vol. 303, pp. 992-1003, ISSN: 09226389, doi: 10.3233/978-1-61499-900-3-992
- [18] Brombal L, Donato S, Dreossi D, Arfelli F, Bonazza D, Contillo A, Delogu P, Di Trapani V, **Golosio B**, Mettievier G, Oliva P, Rigon L, Taibi A, Longo R (2018) Phase-contrast breast CT: The effect of propagation distance. **Physics in Medicine and Biology** vol. 63(24), art. n. 24NT03, ISSN: 00319155, doi: 10.1088/1361-6560/aaf2e1
- [19] Brombal L, Donato S, Brun F, Delogu P, Fanti V, Oliva P, Rigon L, Di Trapani V, Longo R, **Golosio B** (2018) Large-area single-photon-counting CdTe detector for synchrotron radiation computed tomography: a dedicated pre-processing procedure. **Journal of Synchrotron Radiation** vol. 25(4), pp. 1068-1077, ISSN: 09090495, doi: 10.1107/S1600577518006197
- [20] Delogu P, Brombal L, Trapani VD, Donato S, Bottigli U, Dreossi D, **Golosio B**, Oliva P, Rigon L, Longo R (2017) Optimization of the equalization procedure for a single-photon counting CdTe detector used for CT. **Journal of Instrumentation** vol. 12 (11), art. n. C11014, ISSN: 17480221, doi: 10.1088/1748-0221/12/11/C11014
- [21] Delogu P, **Golosio B**, Fedon C, Arfelli F, Bellazzini R, Brez A, Brun F, Lillo FD, Dreossi D, Mettievier G, Minuti M, Oliva P, Pichera M, Rigon L, Russo P, Sarno A, Spandre G, Tromba G, Longo R (2017) Imaging

- study of a phase-sensitive breast-CT system in continuous acquisition mode. **Journal of Instrumentation** vol. 12 (1), art. n. C01016, ISSN: 17480221, doi: 10.1088/1748-0221/12/01/C01016
- [22] Sarno A, **Golosio B**, Russo P, Arfelli F, Bellazzini R, Brez A, Brun F, Delogu P, Di Lillo F, Dreossi D, Fedon C, Longo R, Mettivier G, Oliva P, Rigon L, Spandre G, Tromba G (2017) A Framework for Iterative Reconstruction in Phase-Contrast Computed Tomography Dedicated to the Breast **IEEE Transactions on Radiation and Plasma Medical Sciences** vol. 1(6), art. no. 8026123, pp. 505-510, doi:10.1109/TRPMS.2017.2749059
- [23] Longo R, Arfelli F, Bellazzini R, Bottigli U, Brez A, Brun F, Brunetti A, Delogu P, Di Lillo F, Dreossi D, Fanti V, Fedon C, **Golosio B**, Lanconelli N, Mettivier G, Minuti M, Oliva P, Pinchera M, Rigon L, Russo P, Sarno A, Spandre G, Tromba G, Zanconati F, (2016) Towards breast tomography with synchrotron radiation at Elettra: first images. **Physics in Medicine and Biology**, vol 61(4), p. 1634-1649, ISSN: 0031-9155, doi: 10.1088/0031-9155/61/4/1634
- [24] Toppi M, Abou-Haidar Z, Agodi C, Alvarez MAG, Aumann T, Balestra F, Battistoni G, Bocci A, Böhlen TT, Boudard A, Brunetti A, Carpinelli M, Cirio R, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, De Napoli M, Durante M, Fernández-García JP, Finck C, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kummali AH, Kurz N, Labalme M, Leifels Y, Le Fèvre A, Leray S, Marchetto F, Monaco V, Morone MC, Nicolosi D, Oliva P, Paoloni A, Piersanti L, Pleskac R, Randazzo N, Rescigno R, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Salvador S, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Tropea S, Vanstalle M, Younis H, and Patera V (2016) Measurement of fragmentation cross sections of ¹²C ions on a thin gold target with the FIRST apparatus, **Physical Review C**, vol. 93, doi: 10.1103/PhysRevC.93.064601
- [25] Vaccarezza C, Alesini D, Anania MP, Bacci A, Biagioni A, Bisesto F, Bellaveglia M, Cardarelli P, Cardelli F, Cianchi A, Chiadroni E, Croia M, Curcio A, Delogu P, Giovenale DD, Domenico GD, Pirro GD, Drebót I, Ferrario M, Filippi F, Gallo A, Galletti M, Gambaccini M, Giribono A, **Golosio B**, Li W, Mostacci A, Oliva P, Palmer D, Petrillo V, Petrarca M, Pioli S, Piersanti L, Pompili R, Romeo S, Rossi AR, Scifo J, Serafini L, Suliman G, Villa F (2016) The SPARC_LAB Thomson source, **Nuclear Instruments and Methods in Physics Research A**, doi: 10.1016/j.nima.2016.01.089
- [26] Sarno A, Mettivier G, **Golosio B**, Oliva P, Spandre G, Di Lillo F, Fedon, C, Longo R, Russo P (2016) Imaging performance of phase-contrast breast computed tomography with synchrotron radiation and a CdTe photon-counting detector, **Physica Medica**, doi: 10.1016/j.ejmp.2016.04.011
- [27] Masala GL, **Golosio B**, Tistarelli M, Grosso E (2016) 2D recurrent neural networks for robust visual tracking of non-rigid bodies, **Communications in Computer and Information Science**, vol. 629, 2016, p. 18-34, ISSN: 1865-0929, doi: 10.1007/978-3-319-44188-7_2
- [28] **Golosio B**, Cangelosi A, Gamotina O, Masala GL (2015). A Cognitive Neural Architecture Able to Learn and Communicate through Natural Language. **PLOS ONE**, vol. 10, p. e0140866, ISSN: 1932-6203, doi: 10.1371/journal.pone.01408
- [29] Brunetti A, **Golosio B**, Schoonjans T, Oliva P (2015). Use of Monte Carlo simulations for cultural heritage X-ray fluorescence analysis. **Spectrochimica Acta B**, vol. 108, p. 15-20, ISSN: 0584-8547, doi: 10.1016/j.sab.2015.03.014
- [30] Brunetti A, **Golosio B**, Melis MG, Mura S (2015). A high-quality multilayer structure characterization method based on X-ray fluorescence and Monte Carlo simulation. **Applied Physics A**, vol. 118, p. 497-504, ISSN: 0947-8396, doi: 10.1007/s00339-014-8838-9
- [31] **Golosio B**, Schoonjans T, Brunetti A, Oliva P, Masala GL (2014). Monte Carlo simulation of X-ray imaging and spectroscopy experiments using quadric geometry and variance reduction techniques. **Computer Physics Communications**, vol. 185, p. 1044-1052, ISSN: 0010-4655, doi: 10.1016/j.cpc.2013.10.034
- [32] Brunetti A, **Golosio B** (2014). A new Monte Carlo code for simulation of the effect of irregular surfaces on X-ray spectra. **Spectrochimica Acta B**, vol. 94-95, p. 58-62, ISSN: 0584-8547, doi: 10.1016/j.sab.2014.03.007
- [33] Rescigno R, Finck C, Juliani D, Spiriti E, Baudot J, Abou-Haidar Z, Agodi C, Alvarez M A G, Aumann T, Battistoni G, Bocci A, Boehlen T T, Boudard A, Brunetti A, Carpinelli M, Cirrone G A P, Cortes-Giraldo M A, Cuttone G, De Napoli M, Durante M, Gallardo M I, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Introzzi R, Krimmer J, Kurz N, Labalme M, Leifels Y, Le Fèvre A, Leray S, Marchetto F, Monaco V, Morone M C, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada J M, Randazzo N, Romano F, Rossi D, Rousseau M, Sacchi R, Sala P, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Tropea S, Vanstalle M, Younis H (2014). Performance of the reconstruction algorithms of the FIRST experiment pixel

- sensors vertex detector. **Nuclear Instruments & Methods A**, vol. 767, p. 34-40, ISSN: 0168-9002, doi: 10.1016/j.nima.2014.08.024
- [34] **Golosio B**, Oliva P, Brunetti A, Masala GL, Carpinelli M, Meloni F, Meloni GB (2013). Preliminary study of an angiographic and angio-tomographic technique based on K-edge filters. **Journal Of Applied Physics**, vol. 114, 064912, ISSN: 0021-8979, doi: 10.1063/1.4818501
- [35] Masala GL, **Golosio B**, Cutzu R, Pola R (2013). A two-layered classifier based on the radial basis function for the screening of thalassaemia. **Computers In Biology And Medicine**, vol. 43, ISSN: 0010-4825, doi: 10.1016/j.combiomed.2013.08.020
- [36] Masala GL, **Golosio B**, Oliva P (2013). An improved Marching Cube algorithm for 3D data segmentation. **Computer Physics Communications**, vol. 184, ISSN: 0010-4655, doi: 10.1016/j.cpc.2012.09.030
- [37] Endrizzi M, Oliva P, **Golosio B**, Delogu P (2013). CMOS APS detector characterization for quantitative X-ray imaging. **Nuclear Instruments & Methods A**, vol. 703, ISSN: 0168-9002, doi: 10.1016/j.nima.2012.11.080
- [38] Brunetti A, Piga G, Lasio B, **Golosio B**, Oliva P, Stegel G, Enzo S (2013). Elemental investigation on Spanish dinosaur bones by x-ray fluorescence. **Physica Scripta**, vol. 88, 015802, ISSN: 0031-8949, doi: 10.1088/0031-8949/88/01/015802
- [39] **Golosio B**, Endrizzi M, Oliva P, Delogu P, Carpinelli M, Pogorelsky I, Yakimenko V (2012). Measurement of an inverse Compton scattering source local spectrum using k-edge filters. **Applied Physics Letters**, vol. 100, ISSN: 0003-6951, doi: 10.1063/1.4703932
- [40] Abou-Haidar Z, Agodi C, Alvarez MAG, Anelli M, Aumann T, Battistoni G, Bocci A, Böhlen TT, Boudard A, Brunetti A, Carpinelli M, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, De Napoli M, Durante M, Fernández-García JP, Finck C, Gallardo M, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kurz N, Labalme M, Leifels Y, Le Fèvre A, Leray S, Marchetto F, Monaco V, Morone MC, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada JM, Randazzo N, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Sarti A, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Tropea S, Younis H (2012). Performance of upstream interaction region detectors for the FIRST experiment at GSI. **Journal Of Instrumentation**, vol. 7, ISSN: 1748-0221, doi: 10.1088/1748-0221/7/02/P02006
- [41] Pleskac R, Abou-Haidar Z, Agodi C, Alvarez MAG, Aumann T, Battistoni G, Bocci A, Böhlen TT, Boudard A, Brunetti A, Carpinelli M, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, De Napoli M, Durante M, Fernández-García JP, Finck C, **Golosio B**, Gallardo MI, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kurz N, Labalme M, Leifels Y, Le Fèvre A, Leray S, Marchetto F, Monaco V, Morone MC, Oliva P, Paoloni A, Piersanti L, Quesada JM, Raciti G, Randazzo N, Romano F, Rossi D, Rousseau M, Sacchi R, Sala P, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Tropea S, Younis H, Patera V (2012). The FIRST experiment at GSI. **Nuclear Instruments & Methods A**, vol. 678, p. 130-138, ISSN: 0168-9002, doi: 10.1016/j.nima.2012.02.020
- [42] Endrizzi M, Gureyev TE, Delogu P, Oliva P, **Golosio B**, Carpinelli M, Pogorelsky I, Yakimenko V, Bottigli U (2011). Quantitative phase retrieval with picosecond X-ray pulses from the ATF inverse compton scattering source. **Optics Express**, vol. 19, p. 2748-2753, ISSN: 1094-4087, doi: 10.1364/OE.19.002748
- [43] Schoonjans T, Brunetti A, **Golosio B**, Sanchez del Rio M, Solé VA, Ferrero C, Vincze L (2011). The xraylib library for X-ray-matter interactions. Recent developments. **Spectrochimica Acta B**, vol. 66, p. 776-784, ISSN: 0584-8547, doi: 10.1016/j.sab.2011.09.011
- [44] Oliva P, Carpinelli M, **Golosio B**, Delogu P, Endrizzi M, Park J, Pogorelsky I, Yakimenko V, Williams O, Rosenzweig J (2010). Quantitative evaluation of single-shot inline phase contrast imaging using an inverse compton x-ray source. **Applied Physics Letters**, vol. 97, ISSN: 0003-6951, doi: 10.1063/1.3491430
- [45] Oliva P, Bacci A, Bottigli U, Carpinelli M, Delogu P, Ferrario M, Giulietti D, **Golosio B**, Petrillo V, Serafini L, Tomassini P, Vaccarezza C, Vicario C, Stefanini A (2010). Start-to-end simulation of a Thomson source for mammography. **Nuclear Instruments & Methods A**, vol. 615, p. 93-99, ISSN: 0168-9002, doi: 10.1016/j.nima.2009.12.064
- [46] **Golosio B**, Masala GL, Piccioli A, Oliva P, Carpinelli M, Cataldo R, Cerello P, De Carlo F, Falaschi F, Fantacci Me, Gargano G, Kasae P, Torsello M (2009). A novel multithreshold method for nodule detection in lung CT. **Medical Physics**, vol. 36, p. 3607-3618, ISSN: 0094-2405, doi: 10.1118/1.3160107
- [47] Oliva P, **Golosio B**, Stumbo S, Carpinelli M (2009). Advantages of quasi-monochromatic X-ray sources in absorption mammography. **Nuclear Instruments & Methods A**, vol. 608, p. S106-S108, ISSN: 0168-9002, doi: 10.1016/j.nima.2009.05.043

- [48] Oliva P, **Golosio B**, Stumbo S, Bravin A, Tomassini P (2009). Compact x-ray sources for mammographic applications: Monte Carlo simulations of image quality. **Medical Physics**, vol. 36, p. 5149-5161, ISSN: 0094-2405, doi: 10.1118/1.3245876
- [49] Di Maria S, Oliva P, Bottigli U, Carpinelli M, **Golosio B** (2009). Image quality simulations in X-ray mammography. **Nuovo Cimento B**, vol. 124, p. 205-222, ISSN: 2037-4895, doi: 10.1393/ncb/i2009-10758-x
- [50] Retico A, Fantacci ME, Gori I, Kasae P, **Golosio B**, Piccioli A, Cerello P, De Nunzio G, Tangaro S (2009). Pleural nodule identification in low-dose and thin-slice lung computed tomography. **Computers In Biology And Medicine**, vol. 39, p. 1137-1144, ISSN: 0010-4825, doi: 10.1016/j.compbiomed.2009.10.005
- [51] **Golosio B**, Delogu P, Zanette I, Oliva P, Stefanini A, Stegel G, Carpinelli M (2009). Visibility of tumor-like details in inline phase contrast mammography using quasi monochromatic X-ray sources. **Nuclear Instruments & Methods A**, vol. 608, p. S66-S69, ISSN: 0168-9002, doi: 10.1016/j.nima.2009.05.037
- [52] Bottigli U, Brunetti A, Carpinelli M, Diaz N, Fiori PL, **Golosio B**, Masala GL, Oliva P, Randaccio P, Santona S, Zamai L, Centis F, Valentini M, Cesarini W, Canonico B, Grianti F, Balata M, Nisi S, Laubenstein M, Papa S, Bedogni R, Esposito A, Cherubini R, De Nadal V, Gerardi S (2008). Effect of cryo-preservation on the response of different biological systems to gamma-ray exposure: A feasibility study. **Nuovo Cimento C**, vol. 31(1), p. 11-20, ISSN: 1826-9885, doi: 10.1393/ncc/i2008-10276-6
- [53] **Golosio B**, Delogu P, Zanette I, Carpinelli M, Masala GL, Oliva P, Stefanini A, Stumbo S (2008). Phase contrast imaging simulation and measurements using polychromatic sources with small source-object distances. **Journal Of Applied Physics**, vol. 104(9), ISSN: 0021-8979, doi: 10.1063/1.3006130
- [54] Cauzid J, Philippot P, Bleuet P, Simionovici A, Somogyi A, **Golosio B** (2007). 3D imaging of vapour and liquid inclusions from the Mole Granite, Australia, using helical fluorescence tomography. **Spectrochimica Acta B**, vol. 62, p. 799-806, ISSN: 0584-8547, doi: 10.1016/j.sab.2007.06.014
- [55] Bellotti R, De Carlo F, Gargano G, Tangaro S, Cascio D, Catanzariti E, Cerello P, Cheran SC, Delogu P, De Mitri I, Fulcheri C, Grosso D, Retico A, Squarcia S, Tommasi E, **Golosio B** (2007). A CAD system for nodule detection in low-dose lung CTs based on region growing and a new active contour model. **Medical Physics**, vol. 34, p. 4901-4910, ISSN: 0094-2405, doi: 10.1118/1.2804720
- [56] Masala GL, Bottigli U, Brunetti A, Carpinelli M, Diaz N, P. Fiori PL, **Golosio B**, Oliva P, Stegel G (2007). Automatic cell colony counting by region-growing approach. **Nuovo Cimento C**, vol. 30(6), p. 633-644, ISSN: 1826-9885, doi: 10.1393/ncc/i2007-10273-3
- [57] Masala GL, Tangaro S, **Golosio B**, Oliva P, Stumbo S, Bellotti R, De Carlo F, Gargano G, Cascio D, Fauci F, Magro R, Raso G, Bottigli U, Chincarini A, De Mitri I, De Nunzio G, Gori I, Retico A, Cerello P, Cheran SC, Fulcheri C, Lopez Torres E (2007). Comparative Study of Feature Classification Methods for Mass Lesion Recognition in Digitized Mammograms. **Nuovo Cimento C**, vol. 30, p. 305-316, ISSN: 1826-9885, doi: 10.1393/ncc/i2007-10241-y
- [58] Baldelli P, Bacci A, Bottigli U, Ferrario M, Gambaccini M, Giuliotti D, **Golosio B**, Maroli C, Oliva P, Petrillo V, Serafini L, Stumbo S, Taibi A, Tomassini P, Vaccarezza C (2007). Dependence of image quality on energy spread for a Bragg diffraction based radiography system. **Nuclear Instruments & Methods A**, vol. 580, p. 986-989, ISSN: 0168-9002, doi: 10.1016/j.nima.2007.06.122
- [59] Bellotti R, Cerello P, Tangaro S, Bevilacqua V, Castellano M, Mastronardi G, De Carlo F, Bagnasco S, Bottigli U, Cataldo R, Catanzariti E, Cheran SC, Delogu P, De Mitri I, De Nunzio G, Fantacci ME, Fauci F, Gargano G, **Golosio B**, Indovina PL, Lauria A, Lopez Torres E, Magro R, Masala GL, Massafra R, Oliva P, Preite Martinez A, Quarta M, Raso G, Retico A, Sitta M, Stumbo S, Tata A, Squarcia S, Schenone A, Molinari E, Canesi B (2007). Distributed medical images analysis on a Grid infrastructure. **Future Generation Computer Systems**, vol. 23, p. 475-484, ISSN: 0167-739X, doi: 10.1016/j.future.2006.07.006
- [60] Bottigli U, **Golosio B**, Masala GL, Oliva P, Stumbo S, Delogu P, Fantacci ME, Abbene L, Fauci F, Raso G (2006). Comparison of two portable solid state detectors with an improved collimation and alignment device for mammographic x-ray spectroscopy. **Medical Physics**, vol. 33(9), p. 3469-3477, ISSN: 0094-2405, doi: 10.1118/1.2229431
- [61] Bottigli U, **Golosio B**, Masala GL, Oliva P, Stumbo S, Bravin A, Bacci A, Serafini L, Maroli C, Petrillo V, Ferrario M, Vaccarezza C (2006). Effect of different spectral distributions to image a contrast detail phantom in the mammography energy range. **Il Nuovo Cimento C** vol. 29, p. 215-228, ISSN: 1826-9885, doi: 10.1393/ncc/i2005-10196-y
- [62] Fanti V, Marzeddu R, Massazza G, Randaccio P, Brunetti A, **Golosio B** (2005). A simulator for X-ray images. **Radiation Protection Dosimetry**, vol. 114(1-3), p. 350-354, ISSN: 0144-8420, doi: 10.1093/rpd/nch551

- [63] Masala GL, **Golosio B**, Oliva P, Cascio D, Fauci F, Tangaro S, Quarta M, Cheran SC, Lopez Torres E (2005). Classifiers trained on dissimilarity representation of medical pattern: A comparative study. **Nuovo Cimento C**, vol. 28, p. 905-912, ISSN: 1826-9885, doi: 10.1393/ncc/i2005-10162-9
- [64] Brunetti A, Del Rio MS, **Golosio B**, Simionovici A, Somogyi A (2004). A library for X-ray-matter interaction cross sections for X-ray fluorescence applications. **Spectrochimica Acta B**, vol. 59, p. 1725-1731, ISSN: 0584-8547, doi: 10.1016/j.sab.2004.03.014
- [65] **Golosio B**, Brunetti A, Cesareo R (2004). Algorithmic techniques for quantitative Compton tomography. **Nuclear Instruments & Methods B**, vol. 213, p. 108-111, ISSN: 0168-583X, doi: 10.1016/S0168-583X(03)01542-8
- [66] Stumbo S, Bottigli U, **Golosio B**, Oliva P, Tangaro S (2004). Direct analysis of molybdenum target generated x-ray spectra with a portable device. **Medical Physics**, vol. 31, p. 2763-2770, ISSN: 0094-2405, doi: 10.1118/1.1785891
- [67] Aiello S, Bottigli U, Fauci F, **Golosio B**, Lo Presti D, Masala GL, Oliva P, Raso G, Stumbo S, Tangaro S (2004). FLUXEN portable equipment for direct X-ray spectra measurements. **Nuclear Instruments & Methods A**, vol. 518, p. 389-390, ISSN: 0168-9002, doi: 10.1016/j.nima.2003.11.030
- [68] Brunetti A, Cesareo R, Rao DV, **Golosio B** (2004). Geometrical factor influence on Compton profile measurement for biological samples. **Nuclear Instruments & Methods A**, vol. 526, p. 584-592, ISSN: 0168-9002, doi: 10.1016/j.nima.2004.02.029
- [69] Cesareo R, Brunetti A, **Golosio B**, Lopes RT, Barroso RC, Castellano S, Quarta S (2004). Material analysis with a multiple X-ray tomography scanner using transmitted and scattered radiation. **Nuclear Instruments & Methods A**, vol. 525, p. 336-341, ISSN: 0168-9002, doi: 10.1016/j.nima.2004.03.089
- [70] **Golosio B**, Somogyi A, Simionovici A, Bleuet P, Susini J, Lemelle L (2004). Nondestructive three-dimensional elemental microanalysis by combined helical x-ray microtomographies. **Applied Physics Letters**, vol. 84, p. 2199-2201, ISSN: 0003-6951, doi: 10.1063/1.1686892
- [71] Lauria A, Palmiero R, Forni G, Cerello P, **Golosio B**, Fauci F, Magro R, Raso G, Tangaro S, Indovina PL (2004). The CALMA system: an artificial neural network method for detecting masses and microcalcifications in digitized mammograms. **Nuclear Instruments & Methods A**, vol. 518, p. 391-393, ISSN: 0168-9002, doi: 10.1016/j.nima.2003.11.031
- [72] Bottigli U, Brunetti A, **Golosio B**, Oliva P, Stumbo S, Vincze L, Randaccio P, Bleuet P, Simionovici A, Somogyi A (2004). Voxel-based Monte Carlo simulation of X-ray imaging and spectroscopy experiments. **Spectrochimica Acta B**, vol. 59(10-11), p. 1747-1754, ISSN: 0584-8547, doi: 10.1016/j.sab.2004.03.016
- [73] Camerani MC, **Golosio B**, Somogyi A, Simionovici A, Steenari BM, Panas I (2004). X-ray fluorescence tomography of individual municipal solid waste and biomass fly ash particles. **Analytical Chemistry**, vol. 76, p. 1586-1595, ISSN: 0003-2700, doi: 10.1021/ac030282w
- [74] Chukalina M, **Golosio B**, Simionovici A, Funke H (2004). X-ray tomography: How to evaluate the reconstruction quality? **Spectrochimica Acta B**, vol. 59, p. 1755-1785, ISSN: 0584-8547, doi: 10.1016/j.sab.2004.03.017
- [75] Amendolia SR, Cossu G, Ganadu ML, **Golosio B**, Masala GL, Mura GM (2003). A comparative study of K-Nearest Neighbour, Support Vector Machine and Multi-Layer Perceptron for Thalassemia screening. **Journal Of Chemometrics**, vol. 69, p. 13-20, ISSN: 0886-9383, doi: 10.1016/S0169-7439(03)00094-7
- [76] **Golosio B**, Brunetti A, Cesareo R (2003). Correction for X-ray absorption in Compton tomography. **Journal De Physique IV**, vol. 104, p. 651-654, ISSN: 1155-4339, doi: 10.1051/jp4:20030164
- [77] **Golosio B**, Simionovici A, Somogyi A, Lemelle L, Chukalina M, Brunetti A (2003). Internal elemental microanalysis combining X-ray fluorescence, Compton and transmission tomography. **Journal Of Applied Physics**, vol. 94, p. 145-156, ISSN: 0021-8979, doi: 10.1063/1.1578176
- [78] **Golosio B**, Simionovici A, Somogyi A, Camerani C, Steenari BM (2003). X-ray fluorescence tomography of individual waste fly ash particles. **JOURNAL DE PHYSIQUE IV**, vol. 104, p. 647-650, ISSN: 1155-4339, doi: 10.1051/jp4:20030163
- [79] Lemelle L, Simionovici A, Susini J, Oger P, Chukalina M, Rau C, **Golosio B**, Gillet P (2003). X-ray imaging techniques and exobiology. **Journal De Physique IV**, vol. 104, p. 377-380, ISSN: 1155-4339, doi: 10.1051/jp4:20030103
- [80] Brunetti A, **Golosio B**, Cesareo R (2002). A correction procedure for the self-absorption artifacts in X-Ray Compton tomography. **X-Ray Spectrometry**, vol. 31, p. 377-382, ISSN: 0049-8246, doi: 10.1002/xrs.592

- [81] Amendolia SR, Brunetti A, Carta P, Cossu G, Ganadu ML, **Golosio B**, Mura GM, Pirastru MG (2002). A real time classification system of thalassaemic pathologies based on artificial neural networks. **Medical Decision Making**, vol. 22, p. 18-26, ISSN: 0272-989X, doi: 10.1177/02729890222062883
- [82] Cesareo R, Borlino CC, Brunetti A, **Golosio B**, Castellano A (2002). A simple scanner for Compton tomography. **Nuclear Instruments & Methods A**, vol. 487, p. 188-192, ISSN: 0168-9002, doi: 10.1016/S0168-9002(02)00964-6
- [83] Brunetti A, Cesareo R, **Golosio B**, Luciano P, Ruggero A (2002). Cork quality estimation by using Compton tomography. **Nuclear Instruments & Methods B**, vol. 196, p. 161-168, ISSN: 0168-583X, doi: 10.1016/S0168-583X(02)01289-2
- [84] Bottigli U, **Golosio B** (2002). Feature extraction from mammographic images using fast marching methods. **Nuclear Instruments & Methods A**, vol. 487, p. 209-215, ISSN: 0168-9002, doi: 10.1016/S0168-9002(02)00967-1
- [85] Brunetti A, **Golosio B** (2001). A new algorithm for Computer Tomographic Reconstruction from partial view projections. **Medical Physics**, vol. 28, p. 462-468, ISSN: 0094-2405, doi: 10.1118/1.1352577
- [86] **Golosio B**, Brunetti A, Amendolia SR (2001). A novel morphological approach to volume extraction in 3D tomography. **Computer Physics Communications**, vol. 141, p. 217-224, ISSN: 0010-4655, doi: 10.1016/S0010-4655(01)00398-8
- [87] Brunetti A, **Golosio B** (2001). Fit of EDXRF spectra with a genetic algorithm. **X-Ray Spectrometry**, vol. 30, p. 32-36, ISSN: 0049-8246, doi: 10.1002/xrs.464
- [88] **Golosio B**, Brunetti A, Cesareo R, Amendolia SR, Rao DV, Seltzer SM (2001). Images of soft materials: a 3D visualization of interior of the sample in terms of attenuation coefficient. **Nuclear Instruments & Methods A**, vol. 465, p. 577-583, ISSN: 0168-9002, doi: 10.1016/S0168-9002(01)00674-X
- [89] Brunetti A, **Golosio B** (2001). Software for X-ray fluorescence and scattering tomographic reconstruction. **Computer Physics Communications**, vol. 141, p. 412-425, ISSN: 0010-4655, doi: 10.1016/S0010-4655(01)00419-2

Book Chapters

- Masala GL, **Golosio B** (2014) Computer Aided Diagnosis of Thalassaemias. In: *Thalassaemia: Causes, Treatment Options and Long-Term Health Outcomes*. p. 57-70, Nova Science Publishers, ISBN: 9781631179549.
- Simionovici A, Bleuet P, **Golosio B**, Shroer C (2008). Scanning Tomography. In: *Advanced Tomographic Methods in Materials Research and Engineering*. p. 224-261, OXFORD: **Oxford University Press**, ISBN: 9780199213245

Conference Proceedings

- [1] Longo R, Arfelli F, Donato S, Bonazza D, Brombal L, Contillo A, Cova MA, Delogu P, Di Trapani V, Golosio B, Mettivier G, Oliva P, Rigon L, Taibi A, Tonutti M, Tromba G, Zanconati F (2020) Lesion visibility in phase-contrast breast CT: Comparison with histological images, *Proceedings of SPIE - The International Society for Optical Engineering*, 11513, art. no. 115130S, doi: 10.1117/12.2564202
- [2] Donato S, Brombal L, Arfelli F, Fanti V, Oliva P, Rigon L, **Golosio B** (2019) Optimization of a customized Simultaneous Algebraic Reconstruction Technique algorithm for breast CT. 2019 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC 2019 October 2019, art. n. 9060011, doi: 10.1109/NSS/MIC42101.2019.9060011
- [3] Brombal L, **Golosio B**, Arfelli F, Bonazza D, Contillo A, Delogu P, Donato S, Mettivier G, Oliva P, Rigon L, Taibi A, Tromba G, Zanconati F, Longo R (2018) Monochromatic breast CT: Absorption and phase-retrieved images. *Progress in Biomedical Optics and Imaging - Proceedings of SPIE*, vol. 10573, 2018, art. n. 1057320, doi: 10.1117/12.2293088
- [4] Hoff G, De Assis J, Brunetti A, Fanti V, **Golosio B** (2018) Comparison of XRMC and Geant4 on dosimetry applied to mammography. 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC 2017 - Conference Proceedings 12 November 2018, art. n. 8532758, doi: 10.1109/NSSMIC.2017.8532758
- [5] Oliva P, **Golosio B**, Arfelli F, Delogu P, Di Lillo F, Dreossi D, Fanti V, Fardin L, Fedon C, Mettivier G, Rigon L, Russo P, Sarno A, Tromba G, Longo R (2018) Quantitative evaluation of breast CT reconstruction by means of figures of merit based on similarity metrics. 2017 IEEE Nuclear Science Symposium and Medical Imaging

- Conference, NSS/MIC 2017 - Conference Proceedings 12 November 2018, art. n. 8532786. doi: 10.1109/NSSMIC.2017.8532786
- [6] Sarno A, **Golosio B**, Russo P, Arfelli F, Bellazzini R, Brez A, Brun F, Delogu P, Di Lillo F, Dreossi D, Fedon C, Longo R, Mettivier G, Oliva P, Rigon L, Spandre G, Tromba G. (2017) A framework for iterative reconstruction in phase-contrast computed tomography dedicated to the breast, 2016 IEEE Nuclear Science Symposium, Medical Imaging Conference and Room-Temperature Semiconductor Detector Workshop, NSS/MIC/RTSD 2016, art. n. 8026123, doi: 10.1109/TRPMS.2017.2749059
- [7] **Golosio B**, Cangelosi A, Gamotina O, Masala GL (2015) A Cognitive Neural Model of Executive Functions in Natural Language Processing. In: BICA 2015: Proceedings of the 6th Annual International Conference on Biologically Inspired Cognitive Architectures, 6-8 November Lyon, France, **Procedia Computer Science** vol. 71, p. 196–201, doi:10.1016/j.procs.2015.12.200
- [8] Oliva P, **Golosio B**, Masala GL, Schoonjans T, Brunetti A, Carpinelli M (2015) New techniques in diagnostic x-ray imaging: A simulation tool and experimental findings, **Physics Procedia** vol. 62, p. 3-10, doi: 10.1016/j.phpro.2015.02.003
- [9] Vaccarezza C, Alesini D, Anania M P, Bellaveglia M, Chiadroni E, Di Giovenale D, Di Pirro G, Ferrario M, Gallo A, Gatti G, Pompili R, Romeo S, Villa F, Cianchi A, Oliva P, **Golosio B**, Gambaccini M, Cardarelli P, Di Domenico G, Delogu P, Bacci A, Curatolo C, Palmer D, Petrillo V, Rossi A R, Serafini L, Tomassini P, Giribono A, Filippi F, Mostacci A (2014). The SPARC-LAB Thomson source commissioning . In: IPAC 2014: Proceedings of the 5th International Particle Accelerator Conference . ISBN: 978-395450132-8
- [10] Introzzi R, Abou-Haidar Z, Agodi C, Alvarez M.A.G, Aumann T, Balestra F, Battistoni G, Bocci A, Böhlen T.T, Boudard A, Brunetti A, Carpinelli M, Cirrone G.A.P, Cortés-Giraldo M.A, Cuttone G, De Napoli M, Durante M, Fernández-García J.P, Finck C, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Juliani D, Krimmer J, Kummali A.H, Kurz N, Labalme M, Lavagno A, Leifels Y, Le Fèvre A, Leray S, Liu B, Marchetto F, Monaco V, Morone M.C, Nicolosi D, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Randazzo N, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Samuel S, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Toppi M, Tropea S, Younis H (2013) Experiment FIRST: Fragmentation of 12C beam at 400 MeV/u, IEEE Nuclear Science Symposium Conference Record, art. n. 6829441, doi: 10.1109/NSSMIC.2013.6829441
- [11] Agodi C, Abou-Haidar Z, Alvarez MAG, Aumann T, Balestra F, Battistoni G, Bocci A, Bohlen TT, Bondì M, Boudard A, Brunetti A, Carpinelli M, Cappuzzello F, Cavallaro M, Carbone D, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, Napoli MD, Durante M, Fernandez-Garcia JP, Finck C, Foti A, Gallardo MI, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kurz N, Labalme M, Lavagno A, Leifels Y, Fevre AL, Leray S, Marchetto F, Monaco V, Morone MC, Nicolosi D, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada JM, Randazzo N, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Tropea S, Younis H (2013). FIRST experiment: Fragmentation of ions relevant for space and therapy. In: Journal of Physics: Conference Series. vol. 420, 012061, San Antonio, TX; United States, 27 May 2012 through 1 June 2012, doi: 10.1088/1742-6596/420/1/012061
- [12] Abou-Haidar Z, Agodi C, Alvarez M.A.G, Aumann T, Balestra F, Battistoni G, Bocci A, Böhlen T.T, Boudard A, Brunetti A, Carpinelli M, Cirrone G.A.P, Cortés-Giraldo M.A, Cuttone G, De Napoli M, Durante M, Fernández-García J.P, Finck C, Gallardo M.I, **Golosio B**, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kurz N, Labalme M, Lavagno A, Leifels Y, Le Fèvre A, Leray S, Marchetto F, Monaco V, Morone M.C, Nicolosi D, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada J.M, Randazzo N, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Sart A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Tropea S, Younis H. (2013) The FIRST experiment at GSI: Detector performances with a 400 MeV/u 12C beam. CERN-Proceedings, pp. 381-386.
- [13] **Golosio B**, Abou-Haidar Z, Agodi C, Alvarez MAG, Aumann T, Battistoni G, Bocci A, Bohlen TT, Boudard A, Brunetti A, Carpinelli M, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, De Napoli M, Durante M, Finck C, Hannan Y, Iarocci E, Iazzi F, Ickert G, Introzzi R, Juliani D, Krimmer J, Kurz N, Labalme M, Leifels I, Le Fevre A, Leray S, Marchetto F, Masala G, Monaco V, Morone MC, Oliva P, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada JM, Randazzo N, Romano F, Rossi D, Rousseau M, Sacchi R, Sala P, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Sipala V, Spiriti E, Stuttge L, Tropea S (2012). The FIRST experiment for nuclear fragmentation measurements at GSI . In: 2011 IEEE Nuclear Science Symposium and Medical Imaging Conference. Valencia, 23-29 October 2011, doi: 10.1109/NSSMIC.2011.6153861

- [14] De Napoli M, Agodi C, Brunetti A, **Golosio B**, Nicolosi D, Oliva P, Sipala V, Abou-Haidar Z, Alvarez MAG, Aumann T, Balestra F, Battistoni G, Bocci A, Bohlen TT, Bondi M, Boudard A, Carbone D, Cappuzzello F, Carpinelli M, Cavallaro M, Cirrone GAP, Cortes-Giraldo MA, Cuttone G, Durante M, Fernandez-Garcia JP, Finck C, Gallardo MI, Iarocci E, Iazzi F, Introzzi R, Ickert G, Juliani D, Krimmer J, Kurtz N, Labalme M, Leifels Y, Le Fevre A, Leray S, Marchetto F, Monaco V, Morone MC, Paoloni A, Patera V, Piersanti L, Pleskac R, Quesada JM, Raciti G, Randazzo N, Romano F, Rossi D, Rosso V, Rousseau M, Sacchi R, Sala P, Sarti A, Scheidenberger C, Schuy C, Sciubba A, Sfienti C, Simon H, Spiriti E, Stuttge L, Tropea S, Younis H (2012). The KENTROS detector for identification and kinetic energy measurements of nuclear fragments at polar angles between 5 and 90 degrees. In: 2012 IEEE Nuclear Science Symposium and Medical Imaging Conference, NSS/MIC 2012. IEEE NUCLEAR SCIENCE SYMPOSIUM CONFERENCE RECORD, ISSN: 1095-7863, Anaheim, CA; United States, 29 October 2012 through 3 November 2012, doi: 10.1109/NSSMIC.2012.6551444
- [15] Pogorelsky IV, Babzien M, Polyanskiy MN, Yakimenko V, Dover NP, Palmer CAJ, Najmudin Z, Shkolnikov P, Williams O, Rosenzweig J, Oliva P, Carpinelli M, **Golosio B**, Delogu P, Stefanini A, Endrizzi M (2011). Lasers as particle accelerators in medicine: From laser-driven protons to imaging with Thomson sources. In: AIP Conference Proceedings 21st International Conference on Application of Accelerators in Research and Industry, CAARI 2010. AIP CONFERENCE PROCEEDINGS, vol. 1336, p. 386-390, ISBN: 978-073540891-3, ISSN: 0094-243X, Fort Worth, Texas, (USA) , 8–13 August 2010, doi: 10.1063/1.3586126
- [16] Schoonjans T, Brunetti A, **Golosio B**, Del Rio MS, Solé VA, Ferrero C, Vincze L (2011). The xraylib library for X-ray-matter interaction cross sections: New developments and applications. In: Advances in Computational Methods for X-Ray Optics II. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 8141, ISBN: 978-081948751-3, ISSN: 0277-786X, San Diego, CA, 21 August 2011 - 24 August 2011, doi: 10.1117/12.892688
- [17] Endrizzi M, Carpinelli M, Delogu P, Oliva P, **Golosio B**, Gureyev TE, Bottigli U, Stefanini A (2010). X-ray phase-contrast imaging with an inverse Compton scattering source. In: 6th International Conference on Medical Applications of Synchrotron Radiation, MASR2010. AIP CONFERENCE PROCEEDINGS, ISBN: 978-073540813-5, ISSN: 0094-243X, Melbourne, February 2010 through 18 February 2010, doi: 10.1063/1.3478194
- [18] D'Acapito F, **Golosio B**, Shimizu Y, Scalese S, Italia M, Alippi P, Grasso S (2007). The site of in dopants in Si. In: AIP Conference Proceedings X-RAY ABSORPTION FINE STRUCTURE - XAFS13 . AIP CONFERENCE PROCEEDINGS, vol. 882, p. 375-377, ISBN: 978-073540384-0, ISSN: 0094-243X, Stanford, CA, 9 July 2006 -14 July 2006, doi: 10.1063/1.2644529
- [19] Alesini D, Bellaveglia M, Bertolucci S, Boni R, Boscolo M, Castellano M, Clozza A, DiPirro G, Drago A, Esposito A, Ferrario M, Ficcadenti L, Filippetto D, Fusco V, Gatti G, Gallo A, Ghigo A, Incurvati M, Ligi C, Marcellini F, Migliorati M, Mostacci A, Palumbo L, Pellegrino L, Preger M, Ricci R, Sanelli C, Serio M, Sgamma F, Spataro B, Stecchi A, Stella A, Tazzioli F, Vaccarezza C, Vescovi M, Vicario C, Alessandria F, Bacci A, Bonifacio R, Broggi F, Cola M, DeMartinis C, Giove D, Maroli C, Mauri M, Petrillo V, Piovella N, Pozzoli R, Romè M, Rossi A.R, Serafini L, Volpe L, Levi D, Mattioli M, Musumeci P, Medici G, Pelliccia D, Petrarca M, Bottigli U, **Golosio B**, Oliva P, Poggju A, Stumbo S, Barbini A, Baldeschi W, Cecchetti C.A, Galimberti M, Giulietti A, Giulietti D, Gizzi L.A, Koester P, Labate L, Laville S, Rossi A, Tomassini P. (2006) The PLASMONX Project for advanced beam physics experiments. In: EPAC 2006 - Contributions to the Proceedings, pp. 2439-2441.
- [20] Alesini D, Bellaveglia M, Bertolucci S, Biagini ME, Boni R, Boscolo M, Castellano M, Clozza A, Di Pirro G, Drago A, Esposito A, Ferrario M, Ficcadenti L, Filippetto D, Fusco V, Gallo A, Gatti G, Ghigo A, Guiducci S, Incurvati M, Ligi C, Marcellini F, Migliorati M, Mostacci A, Palumbo L, Pellegrino L, Preger M, Ricci R, Sanelli C, Serio M, Sgamma F, Spataro B, Stecchi A, Stella A, Tazzioli F, Vaccarezza C, Vescovi M, Vicario C, Alessandria F, Bacci A, Bonifacio R, Boscolo I, Broggi F, Cialdi S, DeMartinis C, Giove D, Maroli C, Mauri M, Petrillo V, Piovella N, Pozzoli R, Romè M, Serafini L, Mattioli M, Musumeci P, Petrarca M, Bottigli U, **Golosio B**, Oliva P, Poggju A, Stumbo S, Barbini A, Baldeschi W, Cecchetti CA, Galimberti M, Giulietti A, Giulietti D, Gizzi LA, Koester P, Labate L, Laville S, Rossi A, Tomassini P (2005). The project plasmonx for plasma acceleration experiments and a Thomson X-ray source at SPARC. In: Proceedings of the IEEE Particle Accelerator Conference, PAC 2005 . vol. 2005, p. 820-822, ISBN: 978-078038859-8, Knoxville, TN, 16 May 2005 - 20 May 2005, doi: 10.1109/PAC.2005.1590575
- [21] Bottigli U, **Golosio B**, Masala G.L, Oliva P, Stumbo S, Cascio D, Fauci F, Magro R, Raso G, Bellotti R, De Carlo F, Tangaro S, Mitri D, De Nunzio G, Quarta M, Preite Martinez A, Tata A, Cerello P, Cheran S.C, Lopez

- Torres E. (2005) Dissimilarity application for medical imaging classification. In: WMSCI 2005 - The 9th World Multi-Conference on Systemics, Cybernetics and Informatics, Proceedings, 3, pp. 258-262.
- [22] Simionovici A, **Golosio B**, Chukalina M, Somogyi A, Lemelle L (2004). 7 years of X-Ray fluorescence computed micro-tomography. In: Proceedings of SPIE - The International Society for Optical Engineering - Developments in X-Ray Tomography IV. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 5535, p. 232-242, ISSN: 0277-786X, Denver, CO, 4-6 August 2004, doi: 10.1117/12.558948
- [23] Cheran SC, Cataldo R, Cerello P, De Carlo F, Fauci F, Forni G, **Golosio B**, Lauria A, Torres EL, De Mitri I, Masala G, Raso G, Retico A, Tata A (2004). Detection and classification of microcalcifications clusters in digitized mammograms. In: IEEE Nuclear Science Symposium Conference Record - 2004 Nuclear Science Symposium, Medical Imaging Conference, Symposium on Nuclear Power Systems and the 14th International Workshop on Room Temperature Semiconductor X- and Gamma- Ray Detectors. IEEE NUCLEAR SCIENCE SYMPOSIUM CONFERENCE RECORD, vol. 7, p. 4140, ISSN: 1095-7863, Rome, 16 October 2004 - 22 October 2004
- [24] Bellotti R, Bagnasco S, Bottigli U, Castellano M, Cataldo R, Catanzariti E, Cerello P, Cheran SC, De Carlo F, Delogu P, De Mitri I, De Nunzio G, Fantacci ME, Fauci F, Forni G, Gargano G, **Golosio B**, Indovina PL, Lauria A, Torres EL, Magro R, Martello D, Masala GL, Massafra R, Oliva P, Palmiero R, Martinez AP, Prevete R, Quarta M, Ramello L, Raso G, Retico A, Santoro M, Sitta M, Stumbo S, Tangaro S, Tata A, Zanon E (2004). The MAGIC-5 project: Medical applications on a grid infrastructure connection. In: IEEE Nuclear Science Symposium Conference Record 2004 Nuclear Science Symposium, Medical Imaging Conference, Symposium on Nuclear Power Systems and the 14th International Workshop on Room Temperature Semiconductor X- and Gamma- Ray Detectors. IEEE NUCLEAR SCIENCE SYMPOSIUM CONFERENCE RECORD, vol. 3, p. 1902-1906, ISSN: 1095-7863, Rome, 16 October 2004- 22 October 2004
- [25] Lauria A, Fantacci ME, Bottigli U, Delogu P, Fauci F, **Golosio B**, Indovina PL, Masala GL, Oliva P, Palmiero R, Raso G, Stumbo S, Tangaro S (2003). Diagnostic performance of radiologists with and without different CAD systems for mammography. In: Proceedings of SPIE - The International Society for Optical Engineering - Medical Imaging 2003: Image Perception, Observer Performance, and Technology Assessment. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 5034, p. 51-56, ISSN: 0277-786X, San Diego, CA, 18-20 February 2003, doi: 10.1117/12.480079
- [26] Bottigli U, Cerello P, Delogu P, Fantacci ME, Fauci F, **Golosio B**, Lauria A, Lopez Torres E, Magro R, Masala GL, Oliva P, Palmiero R, Raso G, Retico A, Stumbo S, Tangaro S (2003). GPCALMA, a mammographic CAD in a GRID connection, International Congress Series, 1256 (C), pp. 944-949, doi: 10.1016/S0531-5131(03)00466-7
- [27] Fantacci ME, Bottigli U, Delogu P, Fauci F, **Golosio B**, Lauria A, Palmiero R, Raso G, Stumbo S, Tangaro S (2002). Search of microcalcification clusters with the CALMA CAD station. In: Proceedings of SPIE - The International Society for Optical Engineering - Medical Imaging 2002: Image Processing. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 4684, p. 1301-1310, ISSN: 0277-786X, San Diego, CA, 24-28 February 2002, doi: 10.1117/12.467091
- [28] Cesareo R, Brunetti A, Borlino CC, **Golosio B** (2001). A CT-scanner for transmission, scattering and fluorescent radiation imaging. In: Proceedings of SPIE - The International Society for Optical Engineering - Developments in X-Ray Tomography III. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 4503, p. 310-321, ISSN: 0277-786X, San Diego, CA, 2-3 August 2001, doi: 10.1117/12.452857
- [29] Brunetti A, **Golosio B**, Cesareo R, Borlino CC (2001). A correction procedure for the self-absorption artifacts in X-ray Compton tomography. In: Proceedings of SPIE - The International Society for Optical Engineering - in X-Ray Tomography III; San Diego, CA; 2 August 2001 through 3 August 2001. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 4503, p. 132-139, ISSN: 0277-786X, San Diego, CA, 2-3 August 2001, doi: 10.1117/12.452859
- [30] Brunetti A, **Golosio B**, Cesareo R, Borlino CC (2001). An analytical simulator for Compton tomographic measurements. In: Proceedings of SPIE - The International Society for Optical Engineering - Developments in X-Ray Tomography III. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 4503, p. 322-329, ISSN: 0277-786X, San Diego, CA, 2-3 August 2001, doi: 10.1117/12.452860
- [31] Brunetti A, **Golosio B**, Cesareo R, Borlino CC (2001). Computer tomographic reconstruction from partial view projections. In: Proceedings of SPIE - The International Society for Optical Engineering - Developments

in X-Ray Tomography III; San Diego, CA; 2 August 2001 through 3 August 2001. PROCEEDINGS OF SPIE, THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, vol. 4503, p. 330-337, ISSN: 0277-786X, San Diego, CA, 2-3 August 2001, doi: 10.1117/12.452861

(Prof. Bruno Golosio)
Bruno Golosio