Albana Topi

PERSONAL DETAILS

Birthday   December 14, 1992
Nationality   Albanian
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WORK EXPERIENCE

Postdoc position   2019 - present
GSI Helmholtzzentrum für Schwerionenforschung GmbH, Darmstadt, Germany
    Focus Area: Software development for Space Radiation research.
    Biophysics Departments, Treatment Planning and Verification Group.

The scope of the project is to extend the TRiP98 code for space radiation research. TRiP98 is a in-house deterministic code used as a treatment planning system in heavy ion therapy and the new extension, SpaceTRiP, will assess the dose received by astronauts behind shielding in deep space missions. In the mean time, I am involve in the design phase study of the future South East European International Institute for Sustainable Technologies (SEEIIST, seeiist.eu).

EDUCATION

PhD in Experimental Physics   2015 - 2018
Department of Physical Sciences, Earth and Environment, University of Siena, Italy
    Focus Area: Research and development in medical physics with a focus on charged particle therapy.
    Thesis Title: Positron Emission Tomography Applied in Proton Therapy for Treatment Delivery Verification.

Master of Science in Physics   2013 - 2015
Faculty of Natural Science, University of Tirana, Albania
    Focus Area: Dosimetric Devices for Nuclear Medicine.
    Thesis title: Daily Quality Control of Laminar Flow and Campitek.

Bachelor of Science in Physics   2010 - 2013
Faculty of Natural Science, University of Tirana, Albania

PUBLICATIONS

Norbury et al, Frontiers in Physics, DOI: 10.3389/fphy.2020.565954   2020

Topi et al, IEEE, DOI: 10.1109/TRPMS.2019.2924036   2019

Muraro et al, NIMA, DOI: 10.1016/j.nima.2018.10.015   2019

Topi et al, RAD, DOI: 10.21175/RadProc.2018.32   2018

Kraan et al, JInst, DOI: 10.1088/1748-0221/14/02/C02001   2018

Muraro et al, JInst, DOI: 10.1088/1748-0221/12/12/C12026   2017

Brombal et al, JInst, DOI: 10.1016/j.nima.2017.05.002   2017

ACADEMIC CONFERENCES AND SCIENTIFIC WORKSHOPS

Heavy Ion Therapy Masterclass School (17 - 22.05.2021)
Sarajevo, Bosnia and Herzegovina - virtual (https://indico.cern.ch/event/1019104)
Oral presentation: *Introduction to Radiobiology*
COSPAR 2021 - 43rd COSPAR Schientific Assembly (28.01. - 04.02.2021)
Sidney, Australia - virtual (cospar2021.org)
Oral presentation: *SpaceTRiP code for Space Radiation Research*
Start of SEEIIST Design Phase (18.09.2019)
Budva, Montenegro (https://indico.cern.ch/event/807172/overview)
Oral presentation: *Hub and network for Radiobiology (preparation of radiological experiments)*
1st Meeting of the International Biophysics Collaboration (20 - 22.05.2019)
GSI, Darmstadt, Germany (https://indico.gsi.de/event/7796/)
Oral presentation: *Space-TRiP: From Ion Beam Radiotherapy to Space Radiation Research*
International Medical Physics and Biomedical Engineering Workshop (25 - 28.07.018)
Ohrid, Macedonia (https://indico.cern.ch/event/646417/overview)
Part of the organizing committee of the workshop.
Sixth International Conference on Radiation and Applications in Various Field of Research (RAD2018) (18 - 22.06.2018)
Ohrid, Maccedonia (http://rad2018.rad-conference.org)
Oral presentation: *In-beam PET monitoring technique for proton therapy: Experimental data and Monte Carlo prediction.*
Award for the best student contribution.
International Medical Physics and Biomedical Engineering Workshop (06 - 10.11.2017)
Ionian University, Corfu, Greece (https://indico.cern.ch/event/670810/overview)
Oral presentation: *FLUKA Simulation in Medical Physics.*
Part of the organizing committee of the workshop.
Medical Physics and Biomedical Engineering Workshop (04 - 08.07.2016)
University of Elbasan, Albania (https://indico.cern.ch/event/542674)
Oral presentation: *Quantitative imaging by microPET/CT in radiotherapy research.*
Part of the organizing committee of the workshop.

PRACTICAL EXPERIENCE

Summer Student at CERN Jun - Ago 2015
ATLAS experiment, Geneva, Switzerland
Developing a graphical user interface in Matlab for the heat load assessment in superconducting solenoid magnets used in the ATLAS (CERN)and PANDA (GSI) experiment.
Italo-German Summer School May - Jun 2017
Siena (Italy), Stuttgard-Hohenheim (Germany)
International Summer School "CO_2 and Heavy Metal Research in the Field and in the Lab".

LANGUAGES

Albanian (mother tongue), **English** (C1), **Italian** (B2), **German** (B1)

COMPUTER SKILLS

Programming	C, C++, PYTHON, MATLAB, HTML, CSS, SQL, LATEX,
Software	Microsoft Office, ImageJ, ROOT, FLUKA