

PHYSICS *for* HEALTH *in* EUROPE *workshop*

Towards a European roadmap for using physics tools in the development of diagnostics techniques and new cancer therapies

2-4 February 2010
CERN - Switzerland

Charged particles in therapy and space
Radioisotopes in diagnostics and therapy
Prospects in medical imaging
Novel technologies in radiation therapy

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PHYSICS FOR HEALTH WORKSHOP

Book of bios

CERN, 2- 4 FEBRUARY 2010

ACHTERBERG, Nils

Born in Berlin in 1969 I grew up at the grey side of the Wall. Through a school project concerning dose calculations during diagnostic X-ray examinations I were attracted by the field of medical physics. After studying physics in Greifswald and Erlangen I worked at the Institute of Medical Physics in Erlangen. The topic of my thesis was "Design and simulation of a treatment unit for multibeam tomotherapy". I am now as a clinical physicist with the Department of Radiooncology at the University Hospital Erlangen (Strahlenklinik-Universitätsklinikum Erlangen). Research interests are new technologies in radiation therapy. My main focus at the moment is my family with two sons. That leaves no spare time for my favourite occupation: sport, in particular triathlon.

AKULINICHEV, Sergey

Position: head of Medical physics laboratory of INR (Moscow and Troitsk), project leader of the Complex of proton therapy of INR in Troitsk.

Fields of interest: hardon physics, medical physics, nuclear medicine, elementary particle physics, nuclear physics.

Born in 1951, education: Moscow State University (1974).

AMALDI, Ugo

Staff at CERN in the years 1973-1999.

Physics Professor in Milano Universities in the years 1992-2001.

Spokesman of the DELPHI collaboration: 1980-1993.

President of the TERA Foundation: 1992-now.

AMMAZZALORSO, Filippo

Filippo Ammazzalorso completed his MSc in Computer Science at Torino University (Italy) in 2004 with a dissertation on quality assessment of streaming transmissions in relation to communication errors, while working with the regional supercomputing center CSP.

In 2006 he directed his interests towards the application of computational techniques to radiation therapy and moved to the University Hospital of Tübingen (Germany), where he worked on modelling of patient positioning errors for application to IMRT planning, sponsored by a Marie Curie fellowship.

As of 2008 he is with the University Hospital of Marburg (Germany) in the workgroup for the upcoming Particle Therapy Center (PTZ). In Marburg he is currently working on robust radiotherapy planning with carbon ions, which is also the subject of his PhD project.

His research interests include the automatic analysis of treatment delivery uncertainties for photon and particle radiotherapy, its application to the creation of robust plans and the fast/parallel implementation of the related algorithms to enable online usage.

ARRICHELLO, Cecilia

Born in Naples on Sept. 25, 1977.

Graduated in Physics on the 7th/07/2004 at the University of Naples “Federico II” (Italy), with a first-class honours degree

Achieved the Title of MSc in Radiation Biology at the University College of London (U.K.), on the 1st/11/2005

Followed the NASA Space Radiation Summer School Training Awarded at Brookhaven National Laboratory, June 4-June 22/2007

Specialized in Medical Physics on the 16th/12/2008 at the University of Naples “Federico II” (Italy), with a first-class honours degree

Currently holder of a fellowship as Medical Physicist within the project: “New molecular entity for diagnosis and therapy in Oncology at Istituto Nazionale per lo Studio e la Cura dei Tumori “Fondazione G. Pascale”.

ASPRADAKIS, Maria

PhD in Medical Physics, The University of Edinburgh, 1996. Ptychio in Physics, Aristotle University of Thessaloniki, Greece, 1990 Professional certification: State registered clinical scientist/medical physicist in: UK, CH, GR Membership in professional societies: IOP, IPEM, AAPM, SGSMP, ESTRO, BIR, SASRO Professional record: total of 17 years as radiotherapy physicist in the radiation oncology; 15 years in hospital and 2 years in industry. Research interests: dose calculations in radiotherapy, dosimetry, radiobiology, radiobiological modeling.

ASSMANN, Walter

Born 15.07.1946, Diploma thesis in nuclear physics 1971, since 1972 working in accelerator physics, PhD thesis in nuclear physics 1982, since 1983 working in a superconducting cyclotron group, since 1989 head of materials research group working with heavy ion beams, 2004 habilitation in this field, since 2000 additional research and teaching in medical physics, since 2002 head of projects with hospitals and industry to develop and test radioactive implants based on ³²P.

ATTANASI, Francesca

I studied at the University of Pisa, where I got my Master of Science degree in Applied Physics in 2006, discussing a thesis intitled 'In vivo dose monitoring in proton therapy with Positron Emission Tomography'. Today, I am a postgraduate student at the Specialty School in Medical Physics, at the University of Pisa and, at the same time, I'm involved - within the Functional Imaging and Instrumentation Group (FIIG) of the Department of Physics - in the development of techniques for dose monitoring in hadron therapy with positron emission tomography.

ATTILI, Andrea

Citizenship: Italian. Born in Rome, 6 February 1972. Marital status: Married. - Education: 2003 - Ph.D. in Physics - Università degli studi "Roma Tre", Roma (Italy), "Study of the glass transition of a supercooled liquid mixture in bulk and confined phases". Sup.: Prof. M. Rovere and Dr. P. Gallo. 1998 - Graduated in Physics - Università degli studi "Roma Tre", Roma (Italy), "Study of the angular correlations between photo- and Auger-electron (APECS): an experiment on CU(111) using synchrotron radiation". Sup.: Prof. G. Stefani. Final grade: 110/110 cum laude. - Research Experience: 2006-2009 Research activity in Medical Physics (development of a Treatment Planning Systems (TPS) for hadrontherapy) - Research position, INFN (Istituto Nazionale di Fisica Nucleare) - Sezione di Torino (Italy); 2005-2006 Research activity in Medical Physics (Radiobiological models for radiotherapy using ion beams) - Università degli Studi di Torino - Torino (Italy). 2004-2005 Research activity in Bioinformatics ("machine learning" automatic techniques for the prediction of the quality of proteins structural models) - Department of Biochemical Sciences, Università "La Sapienza" - Roma (Italy). 2000-2003 Research activity for the Ph.D (Modeling and simulation of supercooled liquids and of the glass transition) - Ph.D. grant, Università degli Studi "Roma Tre" - Roma (Italy).

BALAKIN, Vladimir

1963- 1968 Novosibirsk State University, Student

1968-2004 Budker Institute of Nuclear Physics, Novosibirsk

2004- Director of Physical-Technical Center of Lebed Physical Institute, General Director Protom company, Protvino.

BARONI, Guido

Guido Baroni, Ass Prof., Msc, Ph.D. has a Master degree in Mechanical Engineering and has obtained a PhD degree in Bioengineering from the Politecnico di Milano where he is now Assistant Professor at the Department of Bioengineering. He teaches Technologies for Computer Assisted Surgery to Biomedical Engineering master students. His interests cover technologies and methods for 3D/4D optical human motion analysis and tracking with

application in surgical navigation and image guidance in radiotherapy and particle radiation therapy. His research activity is documented by more than 40 peer-reviewed international papers on stereophotogrammetry, human movement biomechanics and optical tracking of patient set-up in high precision radiotherapy. He is responsible of the Computer Assisted Radiotherapy Laboratory belonging to the Biomedical Technologies Laboratory of the Department of Bioengineering of the Politecnico di Milano; he leads the project Computer Aided Patient Positioning in Hadrontherapy for the Centro Nazionale di Adroterapia Oncologica (CNAO)

BATTISTONI, Giuseppe

G. Battistoni started the scientific activity in 1976 during the work for the Thesis in Physics at the Frascati Laboratories of INFN on the development of gaseous detectors (streamer tubes) under the supervision of E. Iarocci. After some experience in the research performed at the e+e- Adone storage ring, he participated to the NUSEX experiment on proton decay and to the development of the technique of digital calorimetry in view of the experimentation at LEP and for neutrino physics. Later he took part at the experimentation at Gran Sasso Laboratories in cosmic ray and neutrino physics, participating to the MACRO experiment. Since 1990 he is at INFN-Milano, where he joined the group for the detector R&D for LHC, participating to the development of Liquid Argon e.m. calorimeter for ATLAS. He later continued the research in non-accelerator high energy physics joining the ICARUS collaboration. Since 2001 he is spokesman of the FLUKA collaboration. In this framework he started to devote himself to the application of simulation techniques to the topic of hadron therapy, being involved in the development of new treatment planning systems for carbon therapy. At present he also coordinates a national strategic project of INFN for the development of medicine related projects. He is also coordinating the INFN participation to the Envision project in FP7 about imaging in hadron therapy with ions. In 2006 he has been appointed Director of INFN in Milano.

BELLOTTI, Roberto

PROFESSIONAL EXPERIENCE: 1999-present: Associate Professor of Experimental Physics - University of Bari, Italy 1992-1999: Researcher of Physics - University of Bari, Italy 1990-1991: Fellow, Istituto Nazionale di Fisica Nucleare (INFN), Italy MAIN ACTIVITIES: 1) 1988-present: Fundamental Research in Experimental Astroparticle Physics: MACRO Experiment at Gran Sasso Laboratory, WiZard Balloon-borne experiment, PAMELA satellite experiment. 2) 1997-present: Research in Medical Physics. 3) 2003-present: Coordinator of the Bari Unit of the MAGIC-5 (Medical Applications on a Grid Infrastructure Connection) experiment, granted by INFN. 4) 2006-2007: Head of the Italian project "Study and development of physical-computational systems for distributed analysis in biomedical images". R. Bellotti has developed his research activity in the following fields: Data acquisition systems -) First level trigger in the MACRO experiment: in the period 1988-91 he contributed to plan, carry out and study the performance of the trigger system for muon detection system of the MACRO experiment. -) ANNEXT Project: in the period 1995-97 he took part to the ANNEXT Project (ARTificial Neural Network for EXperimental Triggers), granted by INFN, whose goal was to develop neural network-based hardware systems for data mining. Statistical and Adaptive algorithms for data

analysis Classification of hadronic and electromagnetic showers detected by the silicon calorimeters of the balloon-borne and satellite (PAMELA) cosmic ray experiments. Processing of medical signals and images. -) Analysis of electroencephalographic signals Study of EEG in subjects affected by the Huntington Disease (HD). This study led to the implementation of an algorithm of diagnostic support which allows the classification of pathological subjects with high value of both sensitivity and specificity. -) The MAGIC-5 experiment R. Bellotti is engaged with the development of Computer Aided Detection systems for the analysis of CT images and he has begun the analysis of MRI which aims at studying the brain morphological alterations due to the Alzheimer's disease.

BELYAEV, Vladimir

w.b. 09.08.1949, gr. MEPhi in 1974, 1994 - prof MEPhi, 2000 -Chief of the department Medical physics Mephi, dean of the faculty of the experimental and theoretical physics Mephi from 1985 up to day

BERT, Christoph

1997 – 2002 University Erlangen-Nuremberg, 11/2002 diploma in physics

10/99-03/00 Imperial College, London

2003 - 2006 GSI and Technical University Darmstadt, 01/2006 Ph.D. on "Treatment planning for treatment of moving tumors with a scanned ion beam" supervised by Prof. Dr. G. Kraft

05/04-11/04 Research stay on 4DCT at Massachusetts General Hospital (Harvard Medical School), Boston (GTY Chen, Ph.D.) funded by a DAAD scholarship

2006-2009 PostDoc at GSI working on motion mitigation for scanned ion beam therapy

09/06-10/06 Research stay on Gating at NIRS, Chiba, Japan (S. Minohara, Ph.D.) funded by a DFG scholarship

since 2009 Staff position at GSI, Biophysics, Darmstadt with the current focus on 4D treatment options for scanned ion beam therapy.

BEYER, Gerd

Prof. Dr.rer.nat.habil. Gerd-Jürgen BEYER is a classical Radiochemist:

TU Dresden, D: PhD 1968, Habil. 1978, Prof. in Radiochemistry 1983.

Research fellow at JINR Dubna, RUS 1967-75, postdoc Aarhus, DK 1971.

Several leading positions at CINR Rossendorf, D 1975–91

1991-93 Scientific Associate CERN

1993-95 Guest Prof. Univ. of Geneva

1996-2005 Head of Cyclotron Unit of HCUGE Geneva

Since retirement 2005: Scientific Advisor of Isotope Technologies Dresden GmbH. Since 12 years Lecturer at ESI&JUAS Archamps, F on Isotopes in Medicine

Since 1984 expert of IAEA Vienna in medical isotope and radiopharmaceutical production.

Scientific fields: fast radiochem. separation techniques for basic research and application in isotope production, radiopharmaceutical development and production, use of particle physics research facilities for biomedical research, formulation of the nuclear medical research program at CERN-ISOLDE. Today active in implementation of medium scale LEU-fission-based ⁹⁹Mo production technologies.

He developed new techniques for off-line and on-line isotope separation, innovative methods for fast radiochemical separations based on chemical effects of nuclear transformations, discovered few new short-lived isotopes. He worked with very few atoms as well as multi-kCi activities, is experienced with the problems in large scale commercial isotope production and making available non-standard isotopes for research.

About 200 publications in internat. journals, books, patents.

BIANCHI, Riccardo Maria

He is a Particle Physicist working in High Energy Physics, who is now moving his interests toward the Medical Physics because he would like to start working in the Hadrontherapy research field. As member of the collaboration of the ATLAS experiment at the Large Hadron Collider (LHC) at CERN, he is currently completing his PhD Thesis in Freiburg University (Germany), working on the search for Supersymmetric particles with simulated and early data, and on the development of a software framework for advanced data analysis. He obtained his MSc "cum laude" in Nuclear and Subnuclear Physics at "Roma Tre" University of Rome (Italy) in 2006, with a thesis performed inside the ATLAS Muon Spectrometer group. The aim of the thesis work was the analysis of data from a test beam set up at CERN, looking for correlations between the calibration constants of the ATLAS muon gas chambers and the environmental variables like temperature and gas composition. In 2003 he obtained his BSc "cum laude" in Physics at "Roma Tre" University, with a thesis within the ATLAS Trigger and Data Acquisition group, testing several multithreading libraries for the Data Flow software. Beside the scientific knowledge in Particle Physics, he also has a very good knowledge of several programming languages and software environments and techniques, and a good knowledge of GRID network tools.

BISOJNI, Maria Giuseppina

Maria Giuseppina Bisogni is staff research scientist at the Physics Department “E. Fermi” of the University of Pisa and her main research activity is concentrated on the development of novel detectors for medical applications. She took her degree in Physics at the University of Pisa in 1994 discussing a thesis on a digital radiographic system based on silicon microstrip detectors. In 1999 she finished her PhD in Physics at the University of Pisa working on digital systems for mammography based on semiconductor strip and pixel detectors. She has also worked on the development of optoelectronics devices for High Energy Physics (GaAs optoswitch for the High Voltage control of the Micro Strip Gas Chambers and a Silicon BJT amplifier used as phototransistor). Since 1999, she is member of the international collaboration MEDIPIXII, based at CERN, for the production and characterization of imaging systems based on semiconductor pixel detectors. Since 2007, she is scientific coordinator for the R&D experiments of the INFN Pisa.

BORBURGH, Jan

Jan Borburgh obtained his engineering degree in power electrics in 1992 from the Eindhoven University of Technology (The Netherlands). In 1993 he joined CERN to work on the PS Booster to PS transfer line septa. In 2000 he became to head of the CERN/PS septa section and since 2003 of the CERN AB/BT septa section. During this period he actively participated in the design of the special magnets for CNAO (I) hadron therapy facility and presently for the MedAustron (A) facility.

BRACCINI, Saverio

Saverio Braccini is a senior physicist at the Laboratory for High Energy Physics of the University of Bern where he leads the research activities on medical applications of particle physics. Within the framework of the SWAN project – which aims at the constitution of a combined centre for radioisotope production, proton therapy and research in Bern – he is responsible for the technological and research aspects. He is in charge as cyclotron expert and radiation protection officer of the 18 MeV proton cyclotron laboratory now under construction. He was formerly Technical Director of the Foundation for Oncological Hadrontherapy TERA, where he contributed to the development of innovative accelerators and detectors for the treatment of tumours with hadron beams. Previously, he has been active in particle physics at the Large Electron Positron Collider (LEP) and at the Large Hadron Collider (LHC) at Cern, giving important contributions to low energy QCD and to the construction of high precision particle detectors. He is author of several publications, lectures and seminars on particle physics, particle therapy and other applications of physics to the medical field.

BRAUNN, Benjamin

Hadrontherapy treatments require a very high precision on the location of the dose in order to keep the benefits of the precise ions' ballistic. The largest uncertainty on physical dose is due to ion fragmentation. Up to now, the simulation codes are not able to reproduce the fragmentation process with the required precision. The constraints on nuclear models and fragmentation cross sections between 30 and 100MeV/u are not sufficient.

To constraint the codes, we have performed an experiment on May 2008 at GANIL with a 95 MeV/u ^{12}C beam. The goals were the measurement of the fluence, energy and angular distributions of the fragments coming from the nuclear reaction between ^{12}C and water-like PMMA targets of different thicknesses : from 0.5 to 4cm. At 95MeV/u, the ^{12}C Bragg Peak depth in PMMA is 2cm.

To detect the charged particles, the experimental set-up included five three stages E/E telescopes with two Si detectors and one CsI scintillator. These telescopes were mounted on rotating arms in order to cover angles from 0° to 60° . The setup also included four DEMON detectors to measure the neutrons at four different angles.

Production rates, from proton to carbons, have been obtained at 10 different angles for the five different PMMA thicknesses. Comparisons with Geant4 simulations have to be achieved in order to evaluate the accuracy of the models included in GEANT4 for hadrontherapy purposes.

A raw comparison between simulations and experimental data show some discrepancies. Thus, we will propose experiment on thin targets at GANIL (C-C, C-H, C-O, C-Ca... from 40 to 95 MeV/u). These double differential cross sections of charged fragments and neutrons are necessary to reach the precision required for a reference simulation code for hadrontherapy.

BUTLER, Anthony

Qualifications: MBChB - Medicine 1998 - University of Otago 1998 GradDipSc -Physics 2006, University of Canterbury FRANZCR -Radiology 2005, The Royal Australian and New Zealand College of Radiologists PhD - Engineering 2007, University of Canterbury Dr Anthony Butler is a radiologist with formal training in physics and computing. He has academic affiliations with the University of Otago Christchurch, the University of Canterbury, and CERN (European Centre for Nuclear Research). He works as a clinical radiologist at Canterbury District Health Board and is the director of the Centre for Bioengineering at the University of Otago Christchurch. He has won 10 awards for his research including awards from the Royal Society of NZ and the Royal Australian College of Radiologists. He is a named investigator on over \$6m of NZ government research grants.

BUZIO, Marco

Marco Buzio, born in Italy in 1965, is a magnet engineer with a university background in aerospace and nuclear fusion technologies. He works at CERN since 1998 in the Technology Department, where he is currently co-responsible for the magnetic field strength and quality testing of all permanent, resistive and superconducting magnets of the accelerator complex.

CABELLO, Jorge

I obtained a degree in Telecommunications Engineering in 2001 and a degree in Electronic Engineering in 2004 in the University of Alcala (Madrid, Spain). After a short period in the Medical Engineering industry working with Micro-PET tomographs in Suinsa Medical Systems, I started my Phd in the University of Surrey (UK) in Medical Imaging. My work there was based on developing and designing a variety of new CMOS detectors to be used in medical applications. I was involved in a large British consortium with some of the most important universities in UK, in collaboration with the STFC and the ICR. Some of our collaborators had extensive experience at working in CERN with silicon detectors for vertex detectors. I also worked developing Monte Carlo simulations and segmentation and registration techniques for beta- autoradiography.

I finished recently my PhD and moved to Valencia to work on PET image reconstruction as post-doc. Currently I am involved in several projects developing new alternatives to reduce scattering effects in image reconstruction and new compression techniques for using large system matrices.

CASSE, Gianluigi

Gianluigi Casse is a Senior Researcher in the High Energy Physics group of the University of Liverpool, with a long track record in silicon detector development in LHCb-VELO, ATLAS SCT and in dedicated R&D activities (e.g. CERN-RD48, RD50).

CHERNYSH, Alexandr

Data of birth 22.08.1941.

Residing place – Moscow, Russia

Dr. Biol. Scie

Professor of Sechenov Moscow Medical Academy,

Scientist of V.A. Negovsky Research Institute of General Reanimatology, Russian Academy of Medical Sciences, Moscow, Russia

The field of scientific interests: electroporation, nonuniform structure of heart, red blood cells, the diagnostics of latent damages of membrane, ionizing radiation, atomic force microscopy, farmchemicals

Education interests: lecturer for medical students. The author of textbook Physics and Biological Physics for medical students.

CHEW, Ming

I was originally trained as a Medical Laboratory Scientist (Bachelor Biomedical Sciences (Hons)) majoring in Anatomic Pathology and Cytology, and certified by the International Academy of Cytology to report gynaecological and non-gynaecological specimens. My scope of work involves daily reporting of gynaecological, non-gynaecological and preliminary reporting of fine needle aspirate specimens as well as abnormal phenotype patient cytogenetic chromosomes analysis in hospital and private laboratories in Malaysia and New Zealand.

The frequent diagnosis of different types of cancer impressed upon me a need to help these cancer patients with effective treatments. Just to offer good diagnostic skill in cancer is not good enough for the patients. What cancer patients need is to have an effective treatment or cure.

To better equip myself to contribute to the field of curative treatments for cancer, I enrolled in the Medical Nuclide Techniques Master's Programme at Uppsala University, Uppsala, Sweden. At Uppsala University, I extended my knowledge of diagnostic tools using radionuclide and nuclear medicine with additional modalities of cancers treatment. Now, I am working as an ESR for the PARTNER program at the University of Surrey in the field of radiobiology. My present challenge is to be able to contribute to better treatments for glioblastomas patients especially GBM. I sincerely hope to find more effective treatments for these patients using hadron- and chemotherapy.

CHINCARINI, Andrea

After his degree in physics in 1994 and two years specialization on superconducting cavities for particle accelerators, Andrea Chincarini's interests turned to gravitational waves experiments. He joined INFN in February, 2000, working on a superconducting microwave interferometer, under the supervision of Prof. E. Picasso. His activity on gravitational waves detectors lead him to joining the VIRGO collaboration, in 2008. Since 2006 Andrea Chincarini started collaborating with Prof. S. Squarcia and joined his medical physics laboratory. He then gave birth to an activity of image analysis aimed at the early assessment of the Alzheimer's disease. In 2007 he became local coordinator for the MAGIC5 experiment, which hosts a versatile group of physicists, medics and IT people, researching new algorithms and tools for medical image analysis. Since 2008 he is also supervisor for the neuroimaging branch within the MAGIC5 collaboration. His contributions focus on structural MRI and have been presented to several

international conferences as well as in published papers. The neuroimaging activity supported within the MAGIC5 framework consists in finding a simple yet robust biomarker extracted from the MRI to be used as reliable gray-matter atrophy measure in neurodegenerative processes, particularly in the medial temporal lobe area.

CIRRONE, G.A. Pablo

Dr. G.A. Pablo Cirrone got his PhD in nuclear physics in 2003 at University of Catania and his Medical Physics qualification in 2000 at University of Florence.

He is a confirmed researcher at Laboratori Nazionali del Sud" of INFN in Catania (I) and his main research field is related to the proton/ion therapy. In particular his activity is dedicated to test and development of detectors for proton/ion dosimetry and in the development of Monte Carlo simulations to be applied in Medical Physics.

CLARK, C. John

International authority in radiopharmaceutical sciences.

Member of several advisory boards in both Academic and Industrial arenas.

e.g Member of Scientific Management Board for EU FP6 Networks of Excellence Diagnostic Molecular Imaging DIMI, and General Electric, Cyclotrons and PET chemistry issues

Teacher/mentor in imaging sciences with PET as a specialist topic. External examiner for Kings College London, MSc course in Radiopharmaceutical Chemistry

Upwards of 25 post docs trained in PET Science under my direction at various centres including MRC Cyclotron Unit Hammersmith, University of Cambridge and now at The University of Edinburgh /Sinapse.

IAEA consultant in cyclotrons and cyclotron targetry.

Current appointment has a highly interdisciplinary role covering pre-clinical molecular imaging through to clinical delivery in neuroscience, cardiovascular medicine and oncology

Team leader for Cyclotron Engineering, PET Radiopharmaceutical Chemistry, PET Physics, Biokinetic modelling of PET in vivo data. Pioneering joint EPSRC funded project leader (PET) in the development of a preclinical PET/MRI instrument in collaboration with The University of Cambridge Dept of Physics at The Cavendish Laboratory.

CLEMENTEL, Enrico

Enrico Clementel graduated from in Physics from University of Milan in 2005 with a thesis focused on a new PET/CT scanner characterization and optimization. He worked for GE Healthcare as Application Specialist in Molecular Imaging before joining Ghent University as a PhD student. His work is centered around clinical applications of TOF PET.

COLAUTTI, Paolo

He is INFN nuclear physics researcher studying since the beginning of eighties of last century experimental dosimetry and microdosimetry. He has conceived and he still coordinates STARTRACK, an experiments to measure the ionization yield structure at nanometre level, namely at DNA level. He has been coordinating the multidisciplinary LNL project on the BNCT. In the frame of such researches, he has coordinated two European projects about specification and measurements of radiation quality at nanometre level in the nineties. He has also coordinated the detector sub-project research in the INFN-ATER experiments dedicated to develop new technologies for hadron therapy. He has published about 70 papers in international scientific magazines.

CROSETTO, Dario

Dario Crosetto has 25 yrs' experience in int'l collaboration in high energy physics (HEP). He has been on research teams and presented seminars and articles at conferences at universities and research labs in several countries: CERN, SSC, FERMILAB, BNL, SLAC, NEVIS, BERKLEY, DESY, University of Heidelberg, SACLAY, CPPM, etc. He lectured at CERN School of Computing, published several books, 100+ articles and owns several patents. For 20 yrs he designed and improved apparatuses to detect high-energy particles, and during the last years focused on designing, simulating, building and testing components for his cancer screening 3D-CBS (Three-dimensional Complete Body Screening) device. In 1992, in one month he presented his innovation at 3 int'l conferences: Computing in HEP, Annecy, France; Calorimetry in HEP, Corpus Christi, TX; IEEE-NSS-MIC, Orlando, FL; and published two articles in the peer reviewed journal NIM. In 1993 he passed a major int'l scientific review at FERMIlab and emeritus scientists in the field wrote testimonials (see www.crosettofoundation.org/uploads/167.pdf). His innovation was adopted for use at GEM at SSC in 1993 and LHCb at CERN in 1995 and included in their TDRs. However, U.S. DOE suddenly stopped funding both projects. Since then, he has focused on an efficient, cost effective particle detection application for Medical Imaging with objectives of lower radiation dose to patients, lower cost and providing an efficacious early cancer detection tool.

CUPLOV, Vesna

I obtained my PhD in Physique des Particules, Physique Mathematiques et Modelisation at the Universite de la Mediterranee, Marseille. I studied the isospin breaking and radiative corrections in semileptonic kaon decays. During my PhD, I gathered knowledge on the phenomenology of pions and kaons at low energy and learned how to use tools needed to work with highly complicated Feynman diagrams and perform numerical analysis of the calculated results. After my thesis, I joined the D0 and CMS collaborations as a post-doctoral research associate and was based two years at Fermilab, Chicago. I worked on the search for a scalar or vector particle in the Zgamma events using D0 RunII data. This analysis has taught me the process a particle physicist goes through from simulating the physics using Monte-Carlo methods to the analysis and comparison to data. We found no excess of events over the Standard Model and thus derive 95% confidence level upper limits on the cross section times branching fraction into Zgamma. At the same time, I was part of the team who assembled the CMS silicon pixel detector, the forward part, which is one of the subdetectors in CMS and forms part of the tracking system. The Pixel detector is closest to the interaction point. I was also responsible for updating and maintaining the forward pixel geometry simulation written in C++/GEANT4. Since november 2008, I am the co-convenor of the CMS Tracker Simulation group: detector's geometry and electronics response. Since April 2009, I am involved in a CMS Top physics analysis for early data whose aim is to measure the ttbar production cross section by looking for semileptonic decays of the top quark pairs in the electron channel with reliance on b-tagging.

CUSSONNEAU, Jean Pierre

Jean Pierre Cussonneau is an assistant professor at the School of Mines in Nantes (France). He received a PhD in nuclear and particle physics from University of Orsay (France). His PhD's was mainly devoted to the study of the neutrino oscillations near a nuclear power plant. He then joined the CEA (Commissariat à l'Energie Atomique) as a postdoc to study the high energy proton proton collisions at Fermilab (Chicago). Since 1995 he joined the Subatech department of the School of Mines and his research activity was first focused on the development of tracking detectors for the ALICE experiment at CERN. This experiment is an international collaboration of physicists who are interested in the understanding of the fundamental physical processes involved in heavy ions collisions at LHC. Then, he worked on the development of a new type of gamma-rays Compton camera using liquid xenon as detection medium and dedicated to the nuclear medical imaging.

DARVE, Christine

My experience is in cryogenic design of accelerator components. I have participated in the design, installation and commissioning of the LHC cryo-magnets, the LH2 absorber of the Muon collider, the cryo-distribution of the VLHC and the cryo-cavities of the ILC/proton driver. For these experiments, I have also designed test benches to validate the use of various accelerator and detector components. I have also specified the use of various instrumentation techniques

and completed safety analysis. Constraining environments, like magnetic field, cryogenic temperature, and high radiation areas often drive a special design. In order to continually further my knowledge in the domain of cryogenics, I have started a PhD on the topic of the Phenomenological and Numerical Studies of Superfluid Helium Dynamics in the Two-Fluid Model. Particle Image Velocimetry techniques are analyzed in this research. Although my career led me toward cryo-engineering for HEP accelerators, I have always been interested by its medical applications. I attended an International week on in vivo Nuclear Magnetic Resonance, which gave me an inside in the possibilities to combine cryogenics and medical applications. I am participating in the organization of a biennial school of Physics in Africa. Among other tasks, I am organizing a one-week class dedicated to the Accelerators and Technology. I believe that Sub-Saharan countries and universities can obtain important deliverables from our HEP world. Applications like medical imaging, accelerator driven source will be emphasized. The workshop will give me the opportunity to further explore the world of medical applications and potentially to find the best way to apply my cryo-engineering expertise.

D'AURIA, John

Professor at Simon Fraser University, Vancouver, Canada from 1967 to 2004(retired) and now Professor Emeritus. Sabbatical leaves (several) at CERN/ISOLDE. Basic Nuclear chemistry and nuclear astrophysics research at TRIUMF and TRIUMF-ISAC for 45 years. Worked at Department of Energy, Office of Nuclear Physics, in the USA for 1.5 years (2008)and involved with Isotope Production program. Presently working with AAPS/TRIUMF on Radioisotope Production for Nuclear Medicine.

DAUVERGNE, Denis

Denis Dauvergne is experimental physics researcher at CNRS since 1994. He has been involved in cross disciplinary ion-matter interaction experiments, and turned recently to the problematics of ion-therapy. He is involved in the research program connected to the ETOILE therapy project in Lyon.

DENDOOVEN, Peter

Dr. Peter Dendooven has a broad experience in techniques for producing and manipulating radioactive ions, ion beams and atoms and in the detection of nuclear radiation. This experience has been gained in the fields of nuclear structure, inertial confinement fusion (ICF) and molecular imaging.

A study of reflection asymmetry in light actinide nuclei at the Institute for Nuclear and Radiation Physics, University of Leuven, Belgium, resulted in a PhD degree in 1992. During a subsequent 2-year post-doc appointment at Lawrence Livermore National Laboratory, U.S.A., new neutron and gamma-ray diagnostics for use in ICF were developed. The years 1994 to 2001 were spent

as senior researcher at the Accelerator Laboratory of the Department of Physics, University of Jyväskylä, Finland, where the ion guide technique was further developed and nuclear spectroscopy experiments were performed, both in Jyväskylä and elsewhere. In 2001, Dr. Dendooven joined the KVI, University of Groningen, Netherlands, as a staff member. He is developing ion catcher devices based on cryogenic helium gas and superfluid helium. In recent years, attention has shifted to the development of novel time-of-flight positron emission tomography detector technology and new applications thereof (e.g. in proton therapy).

DE PRADO, María

María de Prado Leal, borned 1978 in Palencia (Spain), studied Physics in Valladolid University. After applying for a PhD research grant at Ciemat (Energetic, Environmental and Technological Research Facility, Madrid), she moved to Madrid, where she studied a Master in Nuclear Technology: Fission, Fusion and Nuclear Medicine, organized by Ciemat and Universidad Autónoma de Madrid. After finishing this Master, she started her PhD scholarship at Ciemat, on a research on a liquefied noble gas detector and its possible application to PET scanning. At the same time, she studied another Master, organized by Universidad Complutense de Madrid, on Biomedical Physics. She has started her last year as PhD grant student and should present her thesis by March 2011.

DIMITROYANNIS, Dimitri

Trained in experimental high energy physics, with a doctorate awarded for work on proton-antiproton total cross section measurements at the Fermilab Collider. Following completion of a medical physics residency obtained a junior faculty position in Radiology, Harvard Medical School. Currently in private practice as a medical physicist with USOncology, the premier oncology services company in the USA.

DOMINIETTO, Marco

Marco Dominietto is a medical physicist who has been working since 2008 as PhD student at the Institute for Biomedical Engineering (ETH and University of Zurich, Switzerland). From 2005 to 2007 he worked at the TERA Foundation (c/o CERN, Geneva, Switzerland) and from 2000 to 2005 at Novara Hospital (Novara, Italy).

During his experience in the clinical environment he got the expertise in conventional radiotherapy, nuclear medicine and medical imaging. Additionally he contributed to research about physical aspects of patient treatment and radiation protection.

He decided then to move to research starting his collaboration at the proton therapy project of TERA Foundation. The first project was the study of the medical uses of radioisotopes produced

by a 30 MeV cyclotron. Afterwards he collaborated at the development of a 3D dose calculation code for proton pencil beam irradiation in radiotherapy treatment.

The PhD project he has started is in the area of basic animal research. The goal of such project is to set up new imaging modalities and use them to study the angiogenesis in tumor mice models. The first results have been presented at the World Molecular Imaging Congress (2008, 2009). Actually he is working on a novel model to analyze medical imaging data using fractal analysis methods.

ENGELKE, Julia

10/2004 - 07/2009 University of Heidelberg Physik Diplom

since 07/2009 Universitätsklinik Heidelberg / German Cancer Research Center PhD Student

FAURE, J. Emmanuel

Jean-Emmanuel Faure graduated from the Ecole Normale Supérieure, Lyon, France, and holds a Ph.D in cellular and molecular biology (1994). He completed post-doctoral fellowships, both at the Volcani Center, Israel, and at the University of California, Davis, USA. He then worked for 7 years at CNRS, France, as group leader in the field of developmental biology. He was the recipient of EMBO and HHMI fellowships, of the Foulon prize 1997 from the French Academy of Sciences, and of the CNRS Bronze medal 2003. He joined the European Commission in 2003, and is now Scientific Officer for Research Infrastructures (Directorate General for Research, unit B3), in the fields of Life Sciences and Nanotechnologies. Currently, he is in particular in charge of projects integrating research infrastructures such as biological resource centres, data repositories, marine genomics stations, facilities for clinical research, etc.

FAUS-GOLFE, Angeles

Accelerator Physics

FERRETI, Roberta

Roberta Ferretti, physicist, got her degree at "Universita' degli Studi del Piemonte Orientale" (Alessandria, Italy) in July 2008. During her study she has collaborated with TERA Foundation for the development of a particular detector for health applications (adrontherapy). Since September 2008 she has worked at CERN in the ALICE experiment (Silicon Pixel Detector group). EXPERIENCE Since September 2008, ALICE experiment, CERN. She joined the ALICE

experiment and became part of the Silicon Pixel Detector group where she developed tools for data analysis during the commissioning of the detector. She also took part in the data taking after the LHC start up. From 2006 to 2007 at TERA Foundation. TERA, hosted at CERN in Geneva, designs and realizes advanced accelerators and detectors for applications. As student, she was involved in the development of a detector for particles therapy which has been integrated in the dose delivery system at Paul Scherrer Institut (PSI, Villigen). She took part in the tests of the detector (X-Rays and protons beam) and she was responsible for the data analysis. All this work was included in her degree thesis: "Test di un rivelatore a camera a ionizzazione a strip per il controllo dei fasci di protoni in adroterapia oncologica" ("Test of a strip ionization chamber detector for the monitoring of protons beams in adrontherapy").

FRISCH, Benjamin

Benjamin Armand FRISCH studied Technical Physics at the Technical University of Vienna. In parallel, he worked as a Quality Assurance Manager at Siemens PSE on medical software projects. He received his Master Degree in 2007, after research on scintillating crystals for nuclear medicine applications at CERN.

Since 2007 he writes his PhD in Technical Physics as a doctoral student at CERN on the ClearPEM-Sonic project, a combined positron emission mammograph and ultrasound scanner.

GAMBACCINI, Mauro

Mauro Gambaccini graduated in Physics at the University of Ferrara in 1977. From November 2002 he is Full Professor with the Physics Department at the University of Ferrara. His research is devoted to the physics of medical imaging with attention to the processes of image formation, detection and manipulation in both x- and gamma- rays. To this aim he has led projects involving research groups from various universities. He has also led research groups in experiments carried out in synchrotron radiation facilities like Frascati (ADONE), Trieste (ELETTRA) and Grenoble (ESRF). He is currently involved in two projects for the development of novel monochromatic x-ray sources: BEATS (INFN project to use inverse Compton scattering) and LABSYNC (European project to use a compact synchrotron light source). He is author and co-author of more than 90 publications in peer-reviewed journals. He has attended various national and international conferences as invited speaker. He is fellow of the Italian Association of Medical Physics (AIFM) and the Italian Society of Physics (SIF). Member of the Physics in Radiology committee for the ECR in 2002. Secretary of the ETP committee within the European Federation of Organizations for Medical Physics (EFOMP). Member of the International Advisory Board of the scientific journal Physics in Medicine and Biology. Member of the Research Council of Ferrara University. Lecturer at the Italian School of "Senologia" directed by Prof. U. Veronesi.

GAMMINO, Santo

I received the degree in Physics from the University of Catania, Italy in 1987 and I joined the Istituto Nazionale di Fisica Nucleare in 1988, at the Laboratori Nazionali del Sud in Catania (INFN-LNS), becoming Research Physicist in 1990 and Principal Research Physicist in 2002. My research has included the production of monocharged and highly charged beams, and their acceleration. I have proposed innovative concepts for the development of ECR (electron cyclotron resonance) ion sources, and I actively worked on the construction of many ion sources. In particular the project SERSE came in operation in 1997 and for many years it was on the forefront for the production of highly charged ions. The activity in the last years has been focused on the development of 3rd generation ECRIS, as the MS-ECRIS source under construction at GSI, Darmstadt. In this field I carried out various experiments at the major facilities worldwide (LBNL, GSI, MPI, MSU, etc). I have also designed and built other types of ion and plasma sources, as laser ion sources and the microwave ion sources MIDAS and TRIPS, for high efficiency ionization and for intense beam production respectively. In the period 1986-2002 I worked on the development of the K-800 Superconducting Cyclotron and on the design and construction of the EXCYT radioactive beam facility at INFN-LNS. I served as a member of the National Committee of INFN for the Technological Research for three terms from 1996 to 2002 and from 2008 to 2011.

GARIBALDI, Franco

F. Garibaldi has a master degree in physics, Rome 1971. He worked in the Physics Lab of ISS in hadronic and nuclear physics. He has been spokesperson of experiments in Saclay, Nikhef, Jefferson Lab, in hypernuclear physics and neutron spin structure physics and directed experimental teams to perform and analyze such experiments and to build many experimental devices: targets, Cherenkov detectors, RICH detectors. He started (1996) a research activity in detectors for Molecular Imaging by radionuclides. He was funded by Italian Ministry of Health for clinical trials for diagnosis of breast cancer by means of high-resolution detectors. He proposed an original dual detector setup successfully used in clinical trials. He has been funded for a project in collaboration with Johns Hopkins University: building a ultra-high resolution and high sensitivity SPECT device to detect vulnerable atherosclerotic plaques and monitor the stem cells therapy of myocardial infarction. He proposed recently a new experiment, approved by INFN, TOPEM (PET TOF MRI detector for diagnosis of prostate cancer). He organized workshops on imaging techniques for different diseases: breast cancer, prostate cancer, vascular diseases, imaging for stem cell therapy, imaging probes for surgery. He worked in different field of radiation protection. He is chairman of a study group on quality insurance in nuclear medicine devices. He published more than 200 peer reviewed papers.

GAUR, Maheep Singh

Dr. Maheep Singh Gaur has practiced neurosurgery since 1994 following his residency and postdoctoral degree program in Neurosurgery at S.M.S. Medical College & Hospital, Jaipur under Rajasthan University. In 1996 he joined fellowship program in Stereotactic Functional

Neurosurgery and radiosurgery at Stereotaxis and Gamma Knife centre, Fujieda Heisei Memorial Hospital, Shizuoka, Japan, under Dr. Tatsuo Hirai and Dr. Takaaki Takizawa, During this fellowship he participated in about 500 Gamma Knife Surgeries and Micro-recording assisted functional neurosurgery procedures for movement disorders. He learnt various aspects of stereotactic frame based and frameless neuro navigation. On return to India in 1997 he joined Vidyasagar Institute of Mental Health and Neuro Sciences [Vimhans] at New Delhi India as Consultant Neurosurgeon. In 1998 he established first gamma knife centre in a dedicated neuroscience centre in SAARC region. He is head of Gamma knife surgery since then at Vimhans. He has experience of more than 2000 Gamma Knife Treatments collectively. He founded Asian Gamma Knife Academy and conducted Asian Gamma Knife Training Program at Saitam Japan in 2007 , Tokyo Women's Medical college in 2008 and Busan Korea in 2009. Since August 2009 he is Director of Kumud Chawla Gamma Knife centre at Goodwill Hospital NOIDA Delhi NCR INDIA.

GAZIS, Evangelos

Education: Physics, Univ. of Athens, 1973. PhD in Nuclear Heavy-Ion Physics, Univ. of Athens, 1980.

Professional positions:

- Visiting Professor, Physics Department, Univ. of Lund, 2007-present.
- Professor, AMPS School, NTU Athens, 2003-present.

Academic and Professional experience: He has co-authored more than 300 publications in the top refereed journals of his field. He has given more about 20 invited talks and academic colloquia at international conferences or universities and research labs of the abroad. He has published one invited chapter for the DCS of the ATLAS muon spectrometer. He has lectured under- and post-graduate courses at NTUa and UoLund (2007). He has supervised a total of four PhD students and is currently supervising two more PhD students at NTUA. He has been external examiner of PhD theses at the universities of Athens, Ioannina, Thessaloniki, LMU, Taragona and Lund.

He has held, and is holding, major positions in scientific administration. Since 2005, he is the Deputy Greek Delegate, CERN Council; the Industrial Liaison Office Greek Delegate, CERN; the Greek delegate on the CERN LHC-RRB committee; the Secretary & Financial Officer of the Greek Committee for cooperation with CERN, 2005-present. He is also the coordinator of the WG CERN-GREECE since 2007 and the Greek Delegation.

GIORDANENGO, Simona

I'm a PhD student in Torino University and my activity is involved in the development of the beam delivery system of the Centro Nazionale di Adroterapia Oncologica (CNAO) in Pavia (Italy). In particular I work on the implementation of the beam delivery hardware and software control.

I took my Physics degree in 2002 and my thesis work was in the framework of a scientific collaboration between the Experimental Physics Department, the INFN (Istituto Nazionale di Fisica Nucleare) and the TERA foundation for oncology (Therapy with hadronic radiations). Inside this collaboration it was developed a detector for the on-line control of hadron beams. This detector is an ionization pixel chamber with the anode segmented into 1024 pixels.

The subject of my thesis was the real time data acquisition with the pixel chamber optimized for carbon ion beams.

Since my degree I'm working on hadron therapy in the Torino University and INFN, first with a two years long fellowship and then three years as PhD student. My PhD will be concluded in March 2010

GOEL, Namita

MS. NAMITA GOEL PhD Student Guide: Dr.Juergen Gerl Gamma Spectroscopy Group Gessellschaft fur Schwerionenforschung mbH,GSI Darmstadt, Germany N.Goel@gsi.de I am a physicist doing research in GSI, Rising(Rare Isotope Investigation at GSI) group, in Darmstadt as a PhD student. I am involved in AGATA(Advanced Gamma Tracking Array) project. Presently I am developing a system to determine the HPGe detector pulse shapes as a function of γ -ray interaction position inside the detector. It is based on the principle of pulse shape comparison procedure (PSC). Our system also utilizes the concept of positron emission tomography (PET), which makes it faster from other scanning systems. For the system, we developed a position sensitive detector based on a crossed wire anode position sensitive photomultiplier tube (PSPMT). The main difference between our approach and the other conventional methods is that we use the multianode readout method. Being a member of RISING (Rare Isotope Spectroscopic Investigation at GSI), I get the opportunity to have a hand on experience in various nuclear physics experiments.At RISING, the experiments are done using radioactive beams at relativistic energies and isomeric fragment beams which have been studied with three different setups for fast beam, g-factor and stopped beam measurements. Publications : 1. "A position sensitive γ - ray scintillator detector with enhanced spatial resolution, linearity and field of view", Medical Imaging, IEEE Transactions on Volume 28, Issue 12, Dec. 2009 Page(s):2007 - 2014 2. "A scanner for gamma-ray detectors based on principles of positron tomography", GSI scientific report 2007. 3.Nuclear structure 'southeast' of 208Pb: isomeric states in 208Hg and 209Tl, Rapid Communication by Physical Review C. ACADEMIC BACKGROUND Masters in Physics 2007 72.8% University of Delhi, India (Topper in Expt .Nuclear Physics) (Experimental Nuclear Physics) Bachelors in Physics (B.Sc) 2005 85% (4th ranker in University) Hans Raj College, Delhi University, India Higher Secondary 2002 87% in P.C.M Central board of secondary education, India Secondary 2000 87.6% Central board of

secondary education, India ACADEMIC PROJECTS 1 Project based on semiconductor physics, during final year of bachelors Year 2005 Reference: Dr. A.K Goel Reader Hans Raj College, Delhi University India 2 Study of Ionization gas detectors, this work was being done as a part of orientation programme ,at Inter University Accelerator Centre (formerly called as Nuclear Science Centre),Delhi, India Year 2006 Reference: Dr.Tapan Nandi Scientist “E” Inter University accelerator Centre,New Delhi, India 3 Study of energy and position resolution of segmented high purity Germanium (HPGe) clover detectors. This work was done as part of Visiting Students research programme (VSRP) at Tata Institute of Fundamental Research, Mumbai, India Year 2006 Reference: Dr.Rudrajyoti Palit Tata Institute of Fundamental Research, Mumbai, India ACHIEVEMENTS 1. Received “Science Meritorious Award” for three successive years from University of Delhi, India. 2. Fourth ranker in University of Delhi during graduation. 3. Received Best experimentalist prize in a workshop organized by Tata Institute of Fundamental research, Mumbai. I hereby declare that the particulars stated by me in this curriculum vitae are true to the best of my knowledge. January 2010

GREILICH, Steffen

- Studied Physics and Philosophy at the Humboldt University, Berlin and the University of Heidelberg.
- Graduated in Physics in 1999 at Heidelberg University. Diploma thesis (Institute for Environmental Physics): ‘Measurement of organic content in alpine ice cores’.
- Received doctorate in 2004 from the Faculty of Physics and Astronomy, University of Heidelberg. Thesis: ‘The dating of stone surfaces using optically stimulated luminescence’.
- Employed 2004-2006 at the Heidelberg Academy of Science, working in the Archaeometry Research Group at the Max-Planck-Institute for Nuclear Physics within a project on the first numeric dating of the Nasca lines at Palpa, Peru, by the luminescence dosimetry technique developed during doctorate thesis.
- Worked 2006-2009 in the Medical Dosimetry Program at the Radiation Research Department, Risø National Laboratory, Roskilde, Denmark. Main topic: Luminescence dosimetry in clinical (MeV) proton and ion beams - influence of ionization density on the radioluminescence and optically stimulated luminescence from Al₂O₃:C and organic scintillators. Experimental (using all-optical fibre-coupled detectors) and theoretical (Monte-Carlo transport and detector response simulations) studies.
- As of 2009 employed at the German Cancer Research Center (DKFZ), Heavy Ion Therapy Program. Main project: study on solid-state detector and radiobiological response models for MeV charged particle beams in radiotherapy.

GROPPI, Flavia

- Degree in Physics on November 1983, at Physics Department of the Università degli Studi di Milano, Italy
- Degree of Specialization School in “Health and Hospital Physics” on March 1987.
- Professor of Health Physics for the Master Degree in Health Physics at the Faculty of Sciences, Università degli Studi di Milano and for the Medical Physics Specialization School.
- Research Collaborator of National Institute of Nuclear Physics, INFN, since 1984.
- Research activity related to:
 - A. Cyclotron Production with innovative methods of short-lived radionuclides for biomedical (Nuclear Medicine and Radionuclide Therapy), biological, toxicological and environmental studies.
 - B. Instrumental and Radiochemical Proton Activation Analysis (IPAA, RPAA) of trace elements in biological and environmental samples.
 - C. Elemental analysis techniques: proton and neutron activation analysis, gamma spectrometry, beta spectrometry by liquid scintillation counting, alpha spectrometry, atomic absorption and emission spectrometries.
 - D. Radioprotection.
 - National Qualified Expertise for Radiation Protection, since 1987, and EQ of the Radiochemistry Laboratory of LASA.
 - Member of the Presidential Board of International Nuclear Chemistry Society – INCS.
 - Nominated Liaison Officer of the NEA Data Bank, France.
 - Participate to different UNI Commission Working Groups.
 - Author and Co–author of about one hundred of scientific papers.

GRZANKA, Leszek

PhD student (since 2008) in the Institute of Nuclear Physics PAN Cracow, Poland. Studied theoretical mathematics with elements of physics at the Jagiellonian University in Cracow and in parallel computer science at the University of Science and Technology (also in Cracow). After obtaining MSc degree in 2006 spend 2 years at CERN (European Organization for Nuclear Research) near Geneva, Switzerland working on dedicated software for physics reconstruction in TOTEM experiment and in IT division of CERN (development of SLC Linux distribution used at CERN). Interested in radiobiological models of cell survival in ion beams, especially amorphous track structure models.

HADDAD, Ferid

PhD in nuclear physics in 1993

Post doctoral position at TAMU (1993-1995)

Assistant professor at the university of Nantes since 1995

working at subatech since 1995

head of R&D at arronax

HARFENSTELLER, Mark

Dr.-Ing. Mark Harfensteller studied Mechanical Engineering at the Technische Universitaet Muenchen. He specialized in the field of production technology where he joined Prof. Zaeh and Prof. Reinhart at the institute of machine tools and industrial management (iwb) from 2002 to 2006. Besides production development in mechatronic and chemical engineering he focused in the development of production technology of the alpha-emitter Actinium-225 by the proton irradiation of Radium-226. Mark accompanied the successful Ac-225 project until 2008 where he joined ITG isotope technologies Garching as head of production.

HARTMANN, Bernadette

In October 2004 I have started my studies of Medical Physics at the Martin-Luther-University Halle-Wittenberg in Halle(Saale), Germany. After finishing a 6-month reasearch project at the University of Canterbury in Christchurch, New Zealand, I have started to work on my Diploma thesis at the German Cancer Research Center (DKFZ), Department of Medical Physics in Radiation Oncology, in May 2009. The topic of the thesis is the investigation of new dosimetric devices for quality assurance in particle therapy.

HENRIQUET, Pierre

Born on 1977 April 25

Master of Sciences in Medical Physics (2006-2007) (Université Claude Bernard Lyon1)

Currently PhD student at the IPNL (Institut de Physique Nucleaire de Lyon)

Thesis subject : Study of the emission of secondary charged particles for beam monitoring and in-line dosimetry in carbon-ion therapy

HOLZSHEITER, Michael

PhD in Physics from University Mainz in 1978

Post Doctoral Fellow at Texas A&M University 1979 – 1981

Research Scientist at University of Mainz 1981 - 1983

Assistant Professor at Texas A&M University 1983 - 1985

Staff Member at Los Alamos National Laboratory, 1985 - 2003.

Adjunct Professor at University of New Mexico since 2005

25 years of fundamental research in trapped ion physics, low energy antiproton physics, and quantum computation at Texas A&M University, Los Alamos National Laboratory, and CERN. Acted as Spokesperson for CERN Experiments PS200 and ATHENA. In 2003 my interest turned to particle therapy and I started the Experiment AD-4/ACE to study biological effects of antiprotons. Spokesperson for AD-4/ACE since 2003.

Currently employed under a Marie Curie Fellowship at Max Planck Institute for Nuclear Physics in Heidelberg, Germany.

HORODYSKY, Petr

Petr Horodyský, Ph.D. (*1978) Petr Horodysky is R&D physicist at Crytur Ltd., Turnov, Czechia. He received his Ph.D. degree in physics from Charles University in Prague for his dissertation “Optical properties of CdZnTe” in 2006. In 2007-2008, he worked in the frame of Marie-Curie RTN program as a post-doc researcher in the field of quantum cascade lasers in Alpes Lasers SA, Neuchatel, Switzerland. Since 2008 he is working as specialist for scintillation detectors for electron microscopes and for scintillation detectors of other types of ionizing radiation.

IVANTCHENKO, Anton

Dr. Anton Ivantchenko has a Post Doctoral position in CENBG, Bordeaux, France. His scientific background was started in 1996 with his diploma theses on chemistry at Novosibirsk State University, Russia. In 1999-2004 he was PhD student at Inorganic Chemistry Institute, ETHZ, Zurich, Switzerland, working on development and investigation of new nano-materials. Since 2005 he was working in hadron production HARP experiment at CERN PS214, Geneva, Switzerland. Since 2007 he is a member of Geant4 collaboration working on validation of hadronic generators and Geant4 system testing. He contributed to projects of adaptation of stopping power database to Geant4. Since 2009 he begins to work on the Geant4-DNA project.

JAEKEL, Oliver

1990 Diploma in Physics at the University Erlangen, Thesis on Experimental Pion Physics

1994 PhD in Physics, Thesis on Theoretical Investigations of Chiral Bag Models

Since 1994 Postdoc at the Dep. Medical Physics of the German Cancer, Research Center (DKFZ), Heidelberg

Research Area: Heavy Ion Therapy at GSI

Since 1998 Coordinator for Medical Physics of Heavy Ion Therapy at GSI

2006 Appointment as Associate Professor for Medical Physics

Since 2007 Head of Medical Physics Director at the Heidelberg Ion Beam Therapy Center

JASTRZEBSKI, Jerzy

BORN February 13, 1934 Poznan, Poland

MARITAL STATUS Married

EDUCATION

1950 - 1955 Mat.Phys.Chem Fac. Poznan Univ.

1958 - 1959 Fac.Sci. Univ. de Paris,Sorbonne

1963 PhD Nucl. Structure

EMPLOYEMENT

1957-1983 Inst. Nucl. Research

1971 Associate Prof.

1981 Professor of Phys.

1983- Warsaw University

1984-2008 Director of the Heavy Ion Laboratory

2009- PET Project Manager

LONGER SCHOLARSHIP OR EMPLOYEMENT ABROAD

1957 -1961 Inst.Phys.Nucl. ORSAY Fr. and CEA Saclay Fr.

1966 -1967 Inst.Phys.Nucl.ORSAY Fr.

1967 -1968 CERN, ISOLDE

1976 -1977 Indiana University Cyclotron Fac. USA

1996 -1997 CERN, LEAR

PUBLICATIONS

More than 100 papers in referees sci. journals

See also CERN COURRIER Vol 41, Nov 2001 about my team work at LEAR

JONES, Bleddyn

He became interested biophysics related to cancer as an undergraduate medical student at Cambridge University. After higher Medical training at Guy's Hospital, London, he then studied Radiation Biology, followed by clinical training in cancer care, becoming a Specialist Consultant in Radiotherapy and Oncology at several UK hospitals engaged in conventional radiotherapy, chemotherapy and hadrontherapy at Clatterbridge, Hammersmith and Birmingham. Worked with Prof. Roger Dale and others to develop many clinically relevant mathematical modelling solutions to problems in radiation oncology, including the subtleties associated with particle beam RBE. He has joined the new Gray Institute for Radiation Oncology and Biology at Oxford University, led by Gillies McKenna, where he is engaged in teaching and multidisciplinary research and is also co-Director of the new Particle Therapy Cancer Research Institute in Oxford Physics with Ken Peach. Over the past 7 years, he has been a leading advocate for a particle therapy expansion in the UK.

JORAM, Christian

- 1993: PhD in Particle Physics. - Since 1994: at CERN (research fellow, then staff). - Current position: leader of PH/DT group (detector technology). - Main activity: detector development, construction and integration (Cherenkov and photodetectors, tracking). - Since 2002: involvement in medical imaging activity. AX-PET project.

KARKAR, Sonia

Engineer in physics PhD and postdoc in Astroparticle Physics (ANTARES + VIRGO) Now in bio-medical imaging (Simultaneous PET-CT for small animal)

KARPUK, Sergei

Personal Information Dr. Sergei Karpuk

Date and place of birth 06.08.1967, Vidomlja (Belarus)

Scientific career

1991: Diploma thesis, department of the laser spectroscopy, University of Minsk (Belarus)

1991-1996: Scientific Assistant at the department of the laser spectroscopy, University of Minsk (Belarus)

2001: Doctoral thesis, University of Minsk (Belarus)

from 1996: Research Scientist at the Institute of Physics, University of Mainz (Germany)

Main research fields

Atomic Physics: Optical pumping, Laser saturation spectroscopy

Applied Physics: Production, transport and administration of hyperpolarised He-3 for magnetic resonance imaging of the lungs.

KLEIN, Felix

Physics diploma student at University Heidelberg since winter term 04/06.

Start of my diploma thesis about "Ion therapy dosimetry by fiber-coupled thin-film-luminescence detectors" on September 1. in 2009.

KOESTER, Ulli

1995 diploma in physics (with radiochemistry) at TU Munich

2000 PhD in physics at TU Munich with long stays at TRIUMF, CERN and ILL

1999-2001 CERN Fellow at ISOLDE

2001-2005 Coordinator of the EU-RTD project TARGISOL at ISOLDE-CERN

Since 2006: scientist in the nuclear and particle physics group at ILL, coresponsible of the fission fragment separator LOHENGRIN

(Co-)author of about 150 publications, mainly on production of carrier-free radioisotopes and their applications.

Interests:

-radioisotope production and separation

-applications of radioisotopes

-nuclear and atomic spectroscopy

-skiing volcanoes

KOVALENKO, Alexander

Alexander Kovalenko graduated from Moscow Physical Engineering Institute in 1968. He is working at JINR since that time. His current position is Deputy director of the Laboratory of High Energy Physics. The main scientific interests are connected with design and construction of a high energy ion accelerators, superconducting magnet technologies and the experimental study of ion interactions. Author and co-author of more than 300 scientific and technical papers. Doctor's degree in Physics and Mathematics since 1997.

KOZLOVA, Elena

Data of birth 07.05.1958.

Residing place – Moscow, Russia

Dr. Phys-mathem. Scie

Professor of Sechenov Moscow Medical Academy,

Scientist of V.A. Negovsky Research Institute of General Reanimatology, Russian Academy of Medical Sciences, Moscow, Russia

The field of scientific interests: red blood cells, membrane, atomic force microscopy, ionizing radiation.

Education interests: The author of textbook Physics and Biological Physics for medical students.

KRAEMER, Michael

Studied physics at Technical University Darmstadt.

Diploma in 1982. Ph.D. in 1988, thesis in atomic and nuclear physics.

Postdoc position at GSI on parallel and vector computing.

From 1989 to 1994 data processing and UNIX system management for the FOPI experiment at GSI.

Since 1994 in GSI/Biophysics.

Worked mostly for the radiotherapy pilot project, responsible for developing the treatment planning software TRiP98. Also responsible as a medical physicist for providing biological treatment plans and supervising patient irradiation.

Other areas of interest: microscopic track structure and delta-electron emission
(code TRAX, Toroid electron spectrometer).

Still moonlights as a UNIX sysadmin.

LABALME, Marc

Medical application group of LPC Caen

LALLI, Narinder

I am a Part II Medical Physicist specialising in Radiotherapy Physics. I have been working at University College London Hospital (UCLH) for over a year and am currently working towards being state registered within the next year. The radiotherapy department at UCLH is one of the largest in London and I work as part of a team to ensure that the quality of a patient's radiotherapy treatment is maintained and consistent to a high degree of accuracy and precision.

LA ROSA, Alessandro

He was born in Genova (IT) in 1978. He graduated in Physics at Genova University in 2003 and he completed his PhD at Torino University in 2006 with a thesis on development, characterization and commissioning of an ionization pixel detector for monitoring hadrontherapy beams. In 2007 he joined INFN-Torino and he has been involved in the study of ionizing effects on front-end electronics for pixel detectors and in the study of new pixel sensors for Super-LHC environment. Between November 2007 and March 2008 he got a Visiting Scholar position at LBNL (CA, USA) and worked on development Monolithic Active Pixel Sensors for ILC and (possible) Super-LHC project. From 1st April 2008 he is Senior Fellow at CERN PH-DT and works on Pixel Sensors R&D for Super-LHC Tracking Detectors environment. From Sept. 2009 he is Co-coordinator of Radiation Hardness Studies Working Group in the ATLAS 3D Collaboration. He is member of ATLAS, RD42, RD50 collaborations.

LE FOULHER, Fabrice

I was born in 1984. I'm a third year PhD student working at the Institut de Physique Nucléaire de Lyon. I'm working on the detection of prompt gamma-rays in order to monitor hadron therapy irradiations and an important part of my work is the Geant4 simulation of our experiments performed at the GANIL and the GSI facilities.

LEWIS, Dewi M.

Currently Head of Physics, General Electric HealthCare R&D in the UK. Scientific and technical expertise includes accelerators and cyclotrons for radioisotope production, radiopharmaceutical development, nuclear reactor applications for medical isotopes, instrumentation for medical imaging, software design for medical image processing and analysis, SPECT and PET imaging, design & organization of clinical trials for medical imaging, (ultrasound) echocardiography and radiotherapy. Education includes PhD in positron detection and postdoc fellowship in accelerator software & instrumentation at CERN. Formerly, Engineer in charge of the first CERN proton collider before joining industry. Industry career has included cyclotron project management, operations management, radiochemistry production, radiopharmaceutical manufacturing, imaging agent development, R&D in medical imaging, business and strategy management, design and organisation of clinical trials. Academic affiliations include visiting professorships and advisory board membership of several UK universities. Former Council member of the UK research funding agencies and current adviser for STFC, EPSRC and MRC; also chairman of the European Isotope and Reactor Committee (AIPES) in Brussels from 1992-2007. Current technical interests include ⁹⁹Mo production technology, brain imaging with SPECT & PET and instrumentation development for molecular imaging.

LLOSA, Gabriela

Dr. Gabriela Llosá works in instrumentation development for medical imaging applications. She got a MSc degree in Physics at the University of Valencia (Spain) in 1998. She started her research career in particle physics, first at the Paul Scherrer Institut (PSI) and the ETH Zurich (Switzerland), and then at the Instituto de Física Corpuscular (IFIC) Valencia, in the construction of silicon modules for the SCT of the ATLAS experiment. She defended her PhD thesis in 2005 at the University of Valencia, on the application of silicon detectors to Compton imaging, within the CIMA collaboration that includes CERN (Geneva, Switzerland) and the University of Michigan (Ann Arbor, USA) among others. In 2006 she started a postdoctoral period in Pisa (Italy), in the group of Prof. Alberto Del Guerra, first as a INFN postdoctoral fellow, and later on as a Marie Curie Intra-European Fellow. She worked in the application of silicon photomultipliers (SiPMs) to the construction of a small animal PET scanner and to the combination of PET and magnetic resonance imaging technologies. Since April 2009 she is a postdoctoral fellow and also a Marie Curie European Reintegration fellow at IFIC. She continues to work with SiPMs for PET and hadrontherapy applications. She also participates in the MADEIRA FP7 project for high resolution PET with silicon detectors. She has about 50 publications, and she has presented her work in more than 20 international conferences.

LOBKO, Alexander

Alexander S. Lobko (1959) currently is Research Director in Research Institute for Nuclear Problems, Belarus State University and also serves as part-time Professor in Nuclear Physics Department of the same university (Minsk, Belarus). He was awarded his Ph.D. degree in Nuclear and Particle Physics by Belarus State University in 1992 and D.Sc. degree (habilitated

Doctor) in Nuclear and Particle Physics by Institute of Physics, Belarus Academy of Science in 2007. His research interests include various aspects of charged particle radiation in periodic media (mainly experiments with parametric x-rays and other types of hard radiation produced by charged particles in crystal targets), research and application of modern scintillating crystals (e.g. PWO), and devices for scientific research. He took active part in pioneering experiments on detection of parametric x-rays from protons and observation of multi-wave mode of parametric x-rays generation. He is author or co-author of more than 130 scientific publications and one monograph entitled "Experimental Research of the Parametric X-Rays" (in Russian).

LUKIC, Dragoljub

Education: 2002: Bachelor degree: Faculty of Physical Chemistry, University of Belgrade, Serbia. 2005: Master degree: Faculty of Physical Chemistry, University of Belgrade, Serbia. Thesis theme: Examination of sorption of wolframate and perrhenate anions on alumina for developing W-188/Re-188 radionuclide generator. 2009: Doctorate degree: Faculty of Physical Chemistry, University of Belgrade, Serbia. Thesis theme: Production of radionuclide Y-86 and its application in positron emission tomography. Working experiences: 2003-2005: Research assistant, Institute of Nuclear Sciences "Vinca", Belgrade, Serbia. Occupancy: Production of Mo-99/Tc-99m radionuclide generators and development of W-188/Re-188 radionuclide generator. 2005-2009: Assistant doctorant, University of Medicine, University of Geneva, Switzerland. Occupancy: Development of electrochemical system for production and concentration of radionuclide Y-86. 2009-till present: Radiochemist, University Hospital of Geneva, Cyclotron Unite, Switzerland. Occupancy: development and production of C-11, N-13, F-18, Cu-64 and Y-86 based radiopharmaceuticals for Positron Emission Tomography (PET).

MACIOCCO, Luca

L. Maciocco, born 1968, holds a degree in mechanical engineering (fluid dynamics and turbomachinery). In 1995 he joined the the CRS4 research centre in Italy where he worked for 7 years, first on the development of Computational Fluid Dynamics (CFD) simulation codes and, starting from 1997, on the thermal hydraulic design of the Energy Amplifier system proposed by C. Rubbia in 1996. During this period he got specialised in the CFD simulation of liquid metals and in spallation targets and Accelerator Driven Systems design.

He joined AAA in 2003 as researcher and cyclotron engineer. He collaborated in the TRiga. Accelerator-Driven Experiment (TRADE) on the design of the proton target. He has been project manager for the Eureka INBARCA project (Innovative Brachytherapy through Adiabatic Resonance Crossing using Accelerators, 2005 2009) and is currently coordinating the THERANEAN project (THERAPy through NEutron Activation using Nanoparticles), both focused

on the development of a cyclotron-driven neutron activator for therapeutic radioisotopes production. He is author of several publications on the subject.

MAGADDINO, Vera

Laurea Degree in Physics in 2005 at Univ. Naples (Italy, advisors M. Durante & G. Gialanella) with a Thesis titled "Simulation of the fragmentation of heavy ions in different shieldings to study the biological effectiveness of a fragmented beam." Master of Science in Radiation Biology – University College London (UK, advisors J. Kummermehr –LMU Munich- & K.R. Trott - Univ. London) in 2006, with a Thesis titled "The dependence of the relative biological effectiveness (RBE) of fission neutrons on dose and on gamma ray contamination in human SCC megacolonies." Research activity at the Nuclear Research Reactor FRM-II, Garching, Munich, and the Radiobiological Institute, LMU Munich. Lecturing periods at: Gray Cancer Institute, Mount Vernon Hospital, Northwood (UK); Department of Oncology, UCL (UK); University of Leiden Medical School (Netherlands); Universite Catholique de Louvain (Belgium); Radiobiological Institute, LMU, Munich (Germany); Institute of Physics and Biophysics University of Salzburg (Austria). July-September 2007: Visiting period at Fermilab's Neutron Therapy Facility (Batavia, IL - USA) to be trained in the calibration procedures for the clinical fast neutron beam (supervision by A. Lennox (NIU & Fermilab, Batavia, IL) and L.S. Yasui (NIU, IL) November 2009: Medical Physics Specialization Degree in Naples (4 year post-graduate university degree, advisors M.K. Fix, P. Manser-Inselspital Bern- & P. Scampoli), with a Thesis titled "Validation of the Swiss Monte Carlo Plan for static and dynamic 6 MV photon beam." From January 2009 to November 2009 research activity accomplished in the Division of Medical Radiation Physics, Inselspital and University of Berne, Switzerland. In 2007/2008 participation to the BIORT project in collaboration with Univ. Pisa (Italy).

MAGRIN, Giulio

Giulio Magrin, physicist, got his degree at University of Padua (Italy) and worked for since 1991 in the field of experimental physics and development of radiation detectors for medical purposes in several for several Institutions at the Italian Institute of Nuclear Physics, INFN, at the Radiological Research Center, Columbia University in New York, and at TERA Foundation by CERN. In 2008 he joined ADAM where he became project leader of the first unit of the linear accelerator for proton therapy. During his career he has collaborated and coordinated innovative projects, overseen young researchers in multidisciplinary environment. With CERN he promoted particle therapy as scientific secretary of the European network of hadron therapy, ENLIGHT. EXPERIENCE Since 2008, ADAM sa, Geneva. ADAM (Applications of Detectors and Accelerators to Medicine) funded in 2007 researches and develops linear accelerators and detectors for health applications. As Project Leader he coordinates the activities for developing and testing LIGHT, the linear accelerator for protontherapy. From 2003 to 2007 at TERA

Foundation. TERA, hosted at CERN in Geneva, designs and realizes advanced accelerators and detectors for applications. As research scientist and coordinator, G. Magrin studied the optimization of dose delivery and detectors for particle therapy. He was scientific secretary of ENLIGHT, a group of sixty Institutions from seventeen countries, that promotes hadrontherapy throughout meetings, conferences, trainings, and publications. At INFN, Legnaro G. Magrin worked at the INFN starting in 1991 and continued in different periods until 2002. As research fellow he worked in several projects developing detectors for neutron dosimetry and microdosimetry. From 1995 to 1997 at Center for Radiological Research Columbia University, New York. The Center studies, in a multidisciplinary platform, biological consequences of ionizing radiation to human health. G. Magrin worked in the development and test of ultra miniature counters for microdosimetry.

MANTI, Lorenzo

Graduated in Physics at University of Naples Federico II, Italy, Lorenzo Manti is currently assistant professor at the Radiation Biophysics Group. He achieved a MSc at the University of London and a PhD in Radiation Biology with the University of Wales. His research interests are radiocytogenetics radiation-induced genomic instability and cellular radiosensitivity (cell death mechanisms), non-cancer late effects of heavy ions (premature cellular senescence and accelerated telomere shortening). He is Principal Investigator (PI) of two Italian National Institute of Nuclear Physics (INFN)-funded projects: BIORT, on the study of the radiobiological properties of IORT (Intra-Operatory Radiotherapy); ARCAICA, on the interaction between radiofrequency fields typical of mobile telephony and Wi-Fi devices and high LET alpha particles. He is also involved in another INFN-funded project (TPS), on the radiosensibilization of radioresistant gliomas by concomitant use of high-LET ion radiation (carbon ions) and chemotherapy. He is member of several scientific societies (SIF- Italian Physics Society, RRS-Radiation Research Society, and is Councillor elected for the European Radiation Research Society and Councillor for Physics to the Società Italiana per la Ricerca sulle Radiazioni (SIRR, Italian Radiation Research Society). He is Peer Reviewer for the International Journal of Radiation Biology, Radiation and Environmental Biophysics, Nuclear Instruments and Methods in Nuclear Physics B, Journal of Biotechnology and Chief-Editor of the Official SIRR Magazine (Bollettino della Società Italiana per le Ricerche sulle Radiazioni). He is author of 26 publications on international journals and over 70 communications at congresses. He is also involved in teaching Physics (Electromagnetism) to second year students at Sciency faculty, University of Naples Federico II and supervision of final years theses in radiation biophysics.

MARES, Jiri

Institute of Physics, Academy of Sciences of the Czech Republic, Cukrovarnicka 10, 162 53 Prague 6, Czech Republic (*e-mail: amares@fzu.cz)

At present time I am working as senior scientist at the Institute of Physics (Academy of Sciences of the Czech Republic) in the Department of Optical Materials (in the Laboratory of Luminescence and Scintillation Materials). From 90-ties of the last century my research was connected with research of new fast and high effective-Z scintillators for applications either in (i) new generation of electromagnetic calorimeters at LHC of CERN (mainly Ce³⁺-doped efficient crystals and low light yield PWO one) or (ii) different imaging equipments which use efficient, fast and high density inorganic scintillating materials based on (Lu-Y) garnet and perovskite compounds. Scintillating research was carried out in close cooperation with CERN (with PH-DT2 group). Especially, scintillators based on Ce³⁺-doped aluminum garnets and perovskites should have different applications as in small gamma cameras (e.g. based on YAP:Ce), ISPA set-ups or X-ray micro-radiography. Close cooperation with CERN was aimed to use a sophisticated HPMT based set-up for characterization of scintillating crystals but similar set-up was compiled at the luminescence and scintillation laboratory in Prague.

MARTINELLI, Marsha

Marsha A Martinelli BS, CNMT, RT(N) trained as a technologist in nuclear medicine and became supervisor in the Department of Nuclear Medicine, University of Pittsburgh Medical Center. In 1992 she became supervisor at the newly-established PET Center of the University of Pittsburgh where she was responsible for the daily operations of the research center. She managed a staff of technologists and nurses who participated in complex research protocols for neuroscience, cardiac and metabolic applications. In 1996 she obtained a BS in Health Services. She assisted in establishing a clinical PET service for oncology patients prior to Medicare reimbursement for the modality which was first approved in 1998. She was the first to acquire PET/CT patient studies in 1998 on the pioneering PET/CT prototype developed in collaboration with the University of Pittsburgh. She developed new PET/CT protocols particularly for oncology imaging. In 2000, she became clinical PET technologist and then clinical PET coordinator in 2002 as the Medicare reimbursement for PET expanded. She coordinated all clinical activities between UPMC and the newly-created Hillman Cancer Center. In 2006, she became operations manager at the UPMC Monroeville Imaging Center with responsibility for all imaging modalities including PET and staff of over 30 technologists and nurses. She has over ten years experience in clinical PET/CT imaging.

MARTISIKOVA, Mária

I was born in 1979 in Bratislava, Slovakia. In 2002 I graduated at the Comenius University in Bratislava in Physics (nuclear and particle physics). In 2005 I finished my PhD studies at the University of Hamburg, Germany. There I performed data analysis at the H1 experiment at DESY. In 2006 I switched to medical physics. Since 2007 I work in the Heavy Ion Therapy Group of the German Cancer Research Center (DKFZ) in Heidelberg, Germany. I concentrate on investigation the possibilities of use of new two-dimensional detectors in heavy ion beam therapy (Gafchromic EBT films and amorphous silicon pixelized detectors), especially for dosimetric purposes. The main aims are to improve the spatial resolution and reduce the time currently needed for measurements performed with thimble type ionization chambers. I supervise Julia Engelke and Bernadette Hartmann, working on complementary projects using the same detectors (abstracts also submitted to this workshop).

MEER, David

2000: M.Sc. in experimental physics at the Federal Institute of Technology Zurich

2000-2004: Ph.D. student in the H1 collaboration at DESY. Ph.D. thesis with the title "Heavy Quarks in Photoproduction at HERA and a Linking Algorithm for the Fast Track Trigger"

Since 2004: Research scientist at the Paul Scherrer Institute in the Center of Proton Therapy. Design and realization of experiments on new scanning methods in the context of the new Gantry 2

MEOT, François

Accelerator Physicist, CEA Saclay, on leave at CNRS/IN2P3, LPSC

Initiator and coordinator of the RACCAM project (Recherche en Accélérateurs et Application Médicale http://lpsc.in2p3.fr/service_accelerateurs/raccam.htm), a study dedicated to the investigation of the application of the FFAG method in the domain of hadrontherapy. RACCAM is a collaboration between LPSC, SIGMAPHI and Grenoble University Hospital radiotherapy group, funded by the French Agence Nationale de la Recherche.

The RACCAM project includes a preliminary design of a ~200 MeV variable energy proton accelerator and its variable injector H- cyclotron, and the design and prototyping of an FFAG cell dipole : a strong focusing spiral sector scaling FFAG dipole.

The author, F Meot, is involved in hadrontherapy accelerator R&D since 2000, starting with the ETOILE project in Lyon.

MIEDERER, Matthias

Curriculum vitae Dr. med. Matthias Miederer, DOB 30.10.1975

Klinik für Nuklearmedizin der Universitätsmedizin Mainz, Langenbeckstrasse 1, 55131 Mainz, phone: +40 6131 176516 email: miederer@nuklear.klinik.uni-mainz.de

1996 – 1998 school of medicine University of Hamburg, Germany

1998 - 2002 school of medicine, Technische Universität München, Germany

1999 - 2002 Technische Universität München, department of nuclear medicine: biological experiments with alpha emitting isotopes (Dr. med.)

2002 – 2003 Sloan Kettering Institute in New York, research fellow preclinical development on Actinium-225 therapy

2003 - 2004 Charité, Berlin, postgraduate medical training

2004 – 2009 Technische Universität München, department of nuclear medicine (Prof. Dr. Schwaiger), nuclear medicine training

Since 2009 leading senior physician, department of nuclear medicine, Mainz, Germany

MOREL, Christian

Christian Morel heads the imXgam group at the Centre for Particle Physics of Marseille (CPPM) and is involved with the development of X-ray photon-counting CBCT and simultaneous PET/CT imaging. After a PhD Thesis on J/Psi production at the UA6 experiment in 1990 (CERN), he moved his research interests towards the application of particle physics to biomedical imaging. He has been involved with two consecutive EU projects on 3D PET image reconstruction and worked for six years at the Department of Radiology of the Geneva University Hospitals to set up the PET cyclotron unit of the hospital. Besides his research and developments on image reconstruction, he pioneered the development of position sensitive detectors based on the use of neural networks. He then moved to EPFL until 2005, when he was appointed as a Professor at the Department of Physics of the Aix-Marseille University. In Lausanne, he developed one of the ClearPET prototypes in the framework of the Crystal Clear collaboration and initiated the development of GATE, the Geant4 Application for Emission Tomography, while setting up and chairing the OpenGATE collaboration until 2005. Since then, he is carrying on the combination of the ClearPET phoswich detectors with XPAD hybrid pixel detectors developed at CPPM. Besides his research activities, he is involved with the set up of CERIMED in Marseille and with the creation of the start-up imXPAD to produce and sell hybrid pixel detectors. Christian Morel is author of more than 90 publications. He was junior laureate of the ANR Programme « Chaires d'excellence » in 2005 and received the Rotblat Medal in 2009. He was elected member of the IEEE NMISC from 2005 to 2008 and is member of the the French GDR MI2B (Modelling and Instrumentation for Bio-Medical Imaging) council since 2008.

MOVCHAN, Sergey

Movchan Sergey Aleksandrovich (10.01.1957, Moldova, USSR->Russia).

The physicist. Graduated from the Moscow Engineering Physics Institute (MEPHI), 1980.

The candidate of physical and mathematical sciences (PhD-2007).

The chief of "Gas coordinate detectors" sector of Laboratory of High Energy Physics of Joint Institute for Nuclear Research (LHEP JINR), Dubna, Moscow region, Russia (1993-2009).

Area of scientific interests: coordinate detectors for high energy physics, medicine and crystallography. Physics of gas detectors.

Most important results – first muon station ME1/1 of CMS/LHC, R&D of straw tracker for NA62/CERN, 1-D and 2-D detectors for protein crystallography, gamma-camera for medicine.

Has published more than 70 scientific works.

MÜLLER, Reinhold

Born 1946 physics diploma thesis about thermodynamic properties of bio solutions; dissertation on water structure in living cells, teaching thesis at Medical Faculty on cellular effects of low dose rate ionisation (I-125; < 0.5 Gy/h); engaged in radiation physics, radiation biology and biophysics; leading medical physicist at the Clinic of Radiation Oncology at University Erlangen-Nuremberg since 1980; patents on an objective optical patient positioning system TOPOS®, new multifocal X-ray treatment device TOM'5® in ring structure, new kind of EBCT TOM'AGE® in ring structure; actually active in Monte Carlo treatment planning for particles (p+ and C6+) including locally biological weighting of cellular reaction (RBE) on voxel basis; biological weighting for macroscopic clinical effects like TCP and NTCP on basis of new also voxel based models; objective and absolute voxel based thermometry for hyperthermia using NMR-spectrometry; new materials and sandwich technology for radiation protection buildings;

MYTSIN, Gennady

Dr. Gennady Mytsin,

Head of the Medico-Technical Complex for Hadron Therapy, Joint Institute for Nuclear Research, Laboratory of Nuclear Problems, 141980, Dubna, Moscow Region, Russia

DATE AND PLACE OF BIRTH:

December 25, 1959, Moscow Region, USSR

NATIONALITY: Russian

MARITAL STATUS: Married, 1 child

EDUCATION AND SCIENTIFIC DEGREE:

1967-1977 Primary and Secondary school, Dubna, Russia

1977-1983 Physical Department of Moscow State University, Moscow, Russia

1998 Candidate of Science, JINR, Dubna, Russia

EXPERIENCE:

1983-1988 Engineer, JINR, Dubna, Russia

1988-1998 Research Scientist, JINR, Dubna, Russia

1998 Head of the Medico-Technical Complex, JINR, Dubna, Russia

MEMBER of the “Proton Therapy CO-Operative Group (PTCOG)” Steering Committee

RESEARCH INTEREST: Hadron radiotherapy, X-ray and proton tomography, positron emission tomography

NECCHI, M. Monica

Monica M. Necchi has been working as Project Collaborator to ULICE at the CNAO Foundation since October 2009, for the design of a Carbon gantry for hadrontherapy. In 2003, at the University of Pavia, she had her master degree with a thesis dealing with BNCT treatment to the liver cancer with autotransplant. In 2009 she discussed her Ph.D. thesis on Resistive Plate Chambers as gaseous detectors re-conceived for neutral particles, in particular for photons coming from a PET scan. She collaborated with the University of Brescia for dose simulation studies (neutron and gamma radiation) in the Eritrack Project.

NICUALE, Dana

Chemist, Radiopharmacist

Senior Scientist, Project Manager

Head of research group _Radiopharmaceuticals

MSc in Radiochemistry (1995), University of Bucharest

Postgraduated Course in Radiopharmacy (2001-2002), Saclay, France (EANM)

PhD in Radiochemistry (2006), University of Bucharest

Courses in: Molecular Imaging (2008), ERASMUS, Rotterdam; PET and SPECT

Radiopharmaceuticals preparation: Design, Radiolabelling Strategy and Radiosynthesis (2008)

and GMP, Regulatory Aspects and Prerequisites for Human Application (2009), DiMi, Tours;

Ethics and Cancer Research in FP7 (2009), ANCS Bucharest.

Main interests:

Designing new radiopharmaceuticals for molecular imaging and cancer diagnosis using Tc-99m, Ga-68, F-18 and radioiodine isotopes;

Targeted radioterapy and radioimmunotherapy of cancer using beta and alpha emitters (Lu-177, Re-188, I-131), linked to specific biomolecules i.e. antibodies, peptides and nucleotides (aptamers)

In vitro, in vivo and ex vivo testing of radiopharmaceuticals: HPLC, TLC, in vivo imaging, biodistribution, uptake, ADME studies, in vivo cell binding and internalization, cytotoxicity, therapeutic potential and internal dosimetry.

Labelling of anti-EGF Mab WITH ¹⁷⁷Lu: RADIOCHEMICAL AND BIOLOGICAL EVALUATION, J Label Compd Radiopharm, (in press, 2010)

RADIOLABELLING OF SOMATOSTATIN ANALOGUES LANREOTIDE AND OCTREOTATE WITH THERAPEUTIC RADIONUCLIDES, J Label Compd Radiopharm vol 50, pag 588-589, 2007.

NIEMINEN, Petteri

Dr. Petteri Nieminen has worked in the European Space Agency on various space radiation environments and effects issues since 1997. He has been the ESA Technical Officer for some 30 R&D projects in the domain, and is the sensor designer and co-PI of the ESA Standard Radiation Environment Monitor (SREM), currently flying and producing data on 6 ESA missions, as well as the coordinator of various other ESA radiation instrument activities. Together with ESA astronaut Christer Fuglesang, he initiated the DESIRE project that simulated the radiation levels in the European Columbus module of the International Space Station. He is also the ESA representative in the Oversight Board of the Geant4 Collaboration, a joint activity of CERN, ESA, and a number of other institutes and laboratories world-wide.

OLIVER, Charles

Physiologist,clinician and endocrinologist.Head of clinical department of endocrinology for 15 years.Head of CNRS lab for 4 years,then of an INSERM lab for 12 years.Since 2005,coordinator of the CERIMED project.

OLIVER, Josep F.

Josep F. Oliver obtained his Ph.D. at the University of Valencia in 2004. He got a two-years postdoc at the Universite Libre de Bruxelles. Then, we had an "excellence" postdoc in IFIC (CSIC-UV), Spain, and at the moment he is contracted by the CSIC under a JAEDoc contract.

OSORIO MORENO, Jhonnatan

Jhonnatan Osorio Moreno. Has been working as project collaborator to PARTNER at the CNAO Foundation since October 2009, for design of carbon Ion Gantry. In 2005 at the National University of Colombia, he obtained the Bachelor degree in physics. During 2006 and 2007 he worked as teacher of physics and mathematics in the "Minuto de Dios University". In 2007 he started studies program master in Medical Physics and finished in 2009 at the National University of Colombia. His thesis was electron contamination in X-ray beams and it obtain the recognition praiseworthy thesis.

PATARAIA, Sophio

Apr. 2006 – Nov. 2009 PhD Thesis: "Studies on Top quark-pair production in pp collisions at the Large Hadron Collider with the ATLAS experiment". ATLAS Group, Max Planck Institute of Physics, Munich, Germany. Sept. 2003 – Jun. 2005 Master of Science, Specialty – Astrophysics, Diploma Paper - "Long term variation of cosmic rays, using the 5 reservoirs model for calculating the global rate of ^{14}C creations in the atmosphere" . Department of Nuclear and Atomic Physics, Iv. Javakhishvili State University of Tbilisi, Georgia. Sept. 1999 – Jun. 2003 Bachelor degree, diploma with honors, Specialty - Physical Informatics, Department of physics, Iv. Javakhishvili State University of Tbilisi, Georgia. Sept. 1999 – Jun. 2004 Diploma with honors, specialty - international law, International University of business and law of Tbilisi, Georgia.

PAUWELS, Dieter

I am a post-doc in the nuclear-spectroscopy group at the university of Leuven. Currently, my main interest is the investigation for unique research activities at the ISOL@MYRRHA facility in Mol (Belgium), which is a planned ISOL facility with high beam intensities (100 to 200 μA) and with the availability of long beam times (up to several months). During my Ph.D., I was working on the beta decay of neutron-rich nickel, cobalt, and iron isotopes at the LISOL facility in Louvain-La-Neuve, Belgium.

PERALTA, Luis

Luis Peralta is a Professor at Lisbon University. He got his PhD in Particle Physics working in a heavy ion experiment at CERN. Later on, he worked in e+e- physics at LEP and some years ago his interests turned to the application of radiation physics to medicine.

PETROVIC IVAN

EDUCATION

1980 **B.Eng. (Hon.)**, University of Belgrade, Faculty of Electrotechnical Engineering, Department of Applied Physics

1989 **M.Sc.**, University of Belgrade, Faculty of Electrotechnical Engineering, Department of Nuclear Reactor Technique

1993 **Ph.D.**, University of Paris XI - Orsay (France), Département de Physique Nucléaires, title: *Improvements of the Neutron Leakage Model in the Calculation Procedure of the Critical Conditions and the Homogenized Parameters of a Nuclear Reactor*

PROFESSIONAL EXPERIENCE

1981-82 Teaching Assistant at the University of Belgrade, Faculty of Electrotechnical Engineering, Physics Laboratory

1983-89 Research Assistant at the VINČA Institute of Nuclear Sciences (Belgrade), Laboratory of Nuclear Engineering and Applied Physics, field: *Physics of nuclear reactors (neutron diffusion theory)*

1989 Grant of the French Government at Centre d'Études de Saclay (France), field: *Physics of nuclear reactors (neutron diffusion theory)*

1989-93 Research Contract with Commissariat à l'Energie Atomique at Centre d'Etudes de Saclay (France), field: *Physics of nuclear reactors (neutron transport theory)*

1993-95 Senior Research Associate (invited) at Ecole Polytechnique de Montréal (Québec, Canada), Institut de Génie Nucléaire, field: *Physics of nuclear reactors (neutron transport theory)*

1995-96 Senior Research Associate (invited) at the University of California at Berkeley (USA), Department of Nuclear Engineering, field: *Physics of nuclear reactors (neutron transport theory)*

1996-01 Senior Research Associate at the VINČA Institute of Nuclear Sciences, Laboratory of Physics, field: *Design of ion transport line for radiobiological experiments, particle transport theory and biomedical applications*

2001-02 Assistant Minister in the Ministry of Science, Technology and Development, Government of the Republic of Serbia, Head of the Department of Basic Research

2001-07 Associate Research Professor at the VINČA Institute of Nuclear Sciences, Laboratory of Physics, field: *Radiobiology with protons and carbon ions*

2007- Research Professor at the VINČA Institute of Nuclear Sciences (Belgrade, Serbia), Laboratory of Physics, field: *Radiobiology with protons and carbon ions and numerical simulations with GEANT4 code*

PETTERI, Nieminen

Dr. Petteri Nieminen has worked in the European Space Agency on various space radiation environments and effects issues since 1997. He has been the ESA Technical Officer for some 30 R&D projects in the domain, and is the sensor designer and co-PI of the ESA Standard Radiation Environment Monitor (SREM), currently flying and producing data on 6 ESA missions, as well as the coordinator of various other ESA radiation instrument activities. Together with ESA astronaut Christer Fuglesang, he initiated the DESIRE project that simulated the radiation levels in the European Columbus module of the International Space Station. He is also the ESA representative in the Oversight Board of the Geant4 Collaboration, a joint activity of CERN, ESA, and a number of other institutes and laboratories world-wide.

PIA, Maria Grazia

The speaker has many years' experience in Monte Carlo simulation, both as a developer and as a user in a variety of experimental applications.

PISAKOVA, Hana

1998 – 2003 - Master Study, Physics of molecular and biological structures, Charles University, Faculty of Mathematics and Physics

2003 - 2009 - PhD. Study, Physics of Molecular and Biological Structures, Charles University in Prague, Faculty of Mathematics and Physics

2009 - present - Institute of Physics, Academy of Sciences of the Czech Republic, position: physicist

I am interested in the modelling of the radiobiological mechanism of irradiation by light ions in cells.

I analyze the published experimental data sets with the help of Probabilistic two-stage model proposed by our group at The Institute of Physics. I especially study the repair processes in various types of cells, which represent one of the crucial factors in the radiobiological response of cells to irradiation.

POWOLNY, Francois

Francois POWOLNY, born the 14th of august 1980, is a french scientist that did his PhD in 2009 at CERN, in the microelectronics group, with the university of Neuchatel.

His thesis is entitled "Characterization of time resolved photodetector systems for positron emission tomography", and mainly discusses the development of a high time resolution detection system composed of a scintillator (LSO), a photodetectors (APDs, PMTs, MCPs or SiPMs), and a readout electronic developed at CERN (the so-called NINO architecture).

Currently fellow at CERN, his work focuses mainly on the study of the contribution from these different elements to the time resolution, and on the study of the timing limits reachable.

PREST, Michela

- 1993: degree in Physics with full marks ("Lambda-Lepton correlations

in DELPHI: a new method to measure the oscillations of B0 mesons")

- 1997: PhD in Physics ("SYRMEP: at the frontiers of digital mammography")

- since 31/12/2002 researcher at the Insubria University, Como where she gives several courses (Physics Lab. III and IV, Electronics and Detectors Physics)

- INFN local responsible for: AGILE, NTAHCCC, COHERENT; in 2009 national responsible of UA9 and deputy spokesperson; project leader of the AGILE silicon tracker

- among the authors of more than 140 publications

- at present, tutor of 4 PhD, 4 bachelor and 4 master students in particle and medical physics

** Present scientific Activity

- Medical Physics:

* development of scintillating fibers real time dosimeters for electrons, photons and neutrons

* development of real time instrumentation for the characterization of the in-hospital neutron beam (PhoNeS project) for BNCT and for the imaging of the boron in biological samples

- Nuclear and particle physics:

* ASACUSA: responsible of the scintillating fiber tracker for antiproton annihilation cross section measurements and of the scintillating bar tracker for the characterization of the MUSASHI CUSP trap

* activity on bent crystals for collimation and radiation studies

* MICE: responsible of the frontend electronics of the Electron Muon Ranger

* activity on SiPMs for calorimetric and space applications (INFN and ASI projects)

PREZADO, Yolanda

I hold a PhD in experimental Nuclear Physics. The data was obtained through a series of experiments at CERN. I am a certified Medical Physicist. I have experience both in clinical assistance and research in Radiotherapy. I have worked during some years in Radiotherapy departments at two hospitals. I am currently working as a scientist and medical physicist at the Biomedical Beamline at the European Synchrotron Radiation Facility (ESRF) in France. My main research line is the development of new radiotherapy techniques by using synchrotron radiation. I work both in experimental and theoretical dosimetry for preclinical studies and to prepare the future clinical trials.

PUGATCH, Valery

Date of birth - 30.01.1945, Ukraine.

Ukrainian.

Education: Taras Shevchenko National University, Kiev - 1966.

Employment: National Academy of Sciences of Ukraine,

Institute for Nuclear Research (since 1966 till now).

PhD (Nuclear Physics: Many-particle nuclear reactions) - 1975.

Doctor of Science (Physics&Mathematics: Giant Resonances, Deep hole states, Short-lived resonance properties, Interference phenomena) - 1986.

Head of the Laboratory for correlated Nuclear Processes (KINR): 1985 - 1996.

Head of the High Energy Physics Department (KINR): 2005 - till now.

Professor at the Taras Shevchenko National University (1993 - till now): Courses - Methods and Devices for Radiation Measurements, Many-Particle Nuclear Reactions, Technique of Experiments: High Energy Physics, Nuclear Physics.

Nuclear Physics studies: 1966 - 1994.

High Energy Physics: 1994 -till now.

Member of the Collaboration Board: HERA-B, LHCb, CBM.

Related to the Workshop stuides: Development of the Metal Detector physics and technics. Designed, built and tested: Radiation Monitoring Systems, Microstrip and Micropixel Metal detectors for the beam diagnostics.

RAFECAS, Magdalena

Senior research scientist, Universidad de Valencia, Spain. Principal investigator of the group "Physics in Medical Imaging" at the Instituto de Física Corpuscular (Valencia, Spain). Research topics: Positron Emission Tomography, image reconstruction, modeling, compensation techniques for image degradation effects, algorithmics, and Monte-Carlo simulations.

RAVN, Helge

PERSONAL DATA

Born 19-12-1939
Nationality: Danish
E-Mail: Helge.Ravn@me.com
Home address:
34A Chemin des Vidollets
CH-1214 Vernier
Home telephone: +41223410516

EDUCATION

PERIOD	FORMATION
1959	General Certificate of Education
1959 - 1965	Master of Science Study in Chemical Engineering at The Technical
1980	Dr. Sci. Nat., University of Aarhus

EMPLOYMENT HISTORY.

1959 – 1965. Part time employed at The Danish Isotope Center for industrial use of radio isotopes.

1965 – 1967. CERN fellow in the CERN Nuclear Chemistry Group

1967 – 1971. Scientific post at The Institute of Physics University of Aarhus, Denmark.

1971 – 1973. CERN, NP staff member with the responsibility to develop the ISOLDE target system.

1973 – 1976. Project leader of the ISOLDE reconstruction.

1976 -1979. Technical responsible for the ISOLDE operation.

1979 -1980. SC physics coordinator during the start of the heavy ion program.

1980 -1983. Participated in Internal Bremsstrahlung Electron Capture experiment on the neutrino mass.

1984-1989. Joined as deputy to the SC group leader the leadership of the ISOLDE-3 high resolution mass separator project.

1989-2004. Group leader for a new ISOLDE technical group with the responsibility of developing and operating the new BOOSTER ISOLDE facility.

1989-2000. Representative at CERN of the ISOLDE collaboration.

RICHARD, Marie-Hélène

- Born on 22/11/1986

- Master of science in medical physics in 2008/2009, Claude Bernard university in Lyon.

- Currently PhD student at the Institute of Nuclear physics of Lyon (also with the laboratory of Non Destructive Testing Using Ionizing Radiation – INSA Lyon).

- Thesis subject: Design of a Compton camera in order to detect in real time the prompt gammas emitted subsequently to the nuclear fragmentation processes during a carbon ion or a proton irradiation. Such a detection makes it possible to monitor the dose deposition in hadrontherapy because the prompt gamma emission profile is highly correlated with the dose profile. This study is carried out by means of Monte Carlo simulations.

RISTIC-FIRA, Aleksandra

EDUCATION

1982 **B.Sc.**, University of Belgrade (Yugoslavia), Faculty of Biology, Department of Molecular Biology and Physiology.

1985 **M.Sc.**, University of Belgrade (Yugoslavia), Faculty of Biology, Department of Molecular Biology and Physiology: *Molecular Mutagenesis in PolA Mutants of E.coli K12: Cloning and Preliminary Analysis of Histidin Operon.*

1996 **Ph.D.**, University of Belgrade (Yugoslavia), Faculty of Biology, Department of Molecular Biology and Physiology: *The Effects of Glucocorticoid Hormones on Mouse Melanoma Cell Growth and Differentiation.*

PROFESSIONAL EXPERIENCE

1982-83 Assistant at the University of Belgrade (Yugoslavia), Faculty of Biology, Department of Molecular Biology and Physiology, course: *Molecular Genetics* (Grant of the Serbian Ministry of Science).

1983-87 Research Assistant, Laboratory of Molecular Biology and Endocrinology, Vinča Institute of Nuclear Sciences, Belgrade Yugoslavia. Research field: molecular genetics, molecular biology of malignant cell; molecular endocrinology.

1987-88 Specialization (Grant of the French Government) at Unité de Virologie - fondamentale et appliquée, INSERM, CNRS, Lyon, France. Research field: molecular biology of malignant cell; molecular endocrinology, autocrine secretion of malignant cells.

1988-89 Specialization (Grant of the Serbian Ministry of Science) at Cornell University, Department of Poultry and Avian Sciences, Ithaca, New York, USA. Research field: immunology.

1996-01 Assistant Research Professor, Laboratory of Molecular Biology and Endocrinology, Vinča Institute of Nuclear Sciences, Belgrade, Yugoslavia.

2001- Associate Research Professor, Laboratory of Molecular Biology and Endocrinology, Vinča Institute of Nuclear Sciences, Belgrade, Serbia.

INTERNATIONAL COLLABORATION

1998-00 The Royal Society Joint Project with Central/Eastern Europe, University of Glasgow, Scotland UK. Research field: molecular biology.

1998- Collaboration with Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali del Sud, Catania, Italy. Research field: cellular radiation biology.

ROELLINGHOFF, Frauke

Frauke Roellinghoff is a physics student at the University of Erlangen-Nürnberg (Germany) since 2005. Currently, she is working on her master thesis on the design of a multiple scattering Compton Camera for real time prompt gamma imaging in ion beam therapy using Geant4 simulations at CNDRI laboratory in Lyon, France.

ROMAN, Faustin

Laurentiu Marie Curie Early Stage Researcher in the PARTNER FP7 Project working at CERN, developing a prototype Grid testbed for Hadron Therapy, since 2009. Previously working as an independent IT consultant and researcher in nuclear data evaluations. Interested in eHealth, distributed computing, hadron therapy, applied nuclear physics.

Prof. SELIVERSTOV, Dmitry

I am the leader of Petersburg Nuclear Physics Institute in Experiment ISOLDE, CERN and participant of LHC Experiment ATLAS and CMS. In PNPI I am responsible person for medicine programme on 1000 MeV synchrotron in PNPI.

SAVAZZI, Simone

Simone Savazzi is a graduate of the Università degli Studi Milano Bicocca of Milan from October 2008. During his thesis, titled “ Measurement of the tune and commissioning of the LEBT at CNAO” , he worked under the supervision of CNAO, the national centre of oncologic hadron therapy (Centro Nazionale di Adroterapia Oncologica). The work carried out in this thesis compared various methods of tune measurements. Particular attention was paid to the development of a new method of measurements, the so called “Phase method”. During this period he collaborated with CNAO staff at the commissioning of the LEBT (Low Energy Beam Transfer line) of the CNAO synchrotron. Now he is working as a Project Collaborator to ULICE at CNAO Foundation since October 2009.

SCARPA, Marcella

Particle Physicist by background, since April 2008 has joined Bayer Schering Pharma (Berlin), business unit Diagnostic Imaging, as Scientific Advisor of MRI global marketing. She supports the development of MRI strategy and life cycle management of MRI contrast media. In this multifunctional and multicultural role, she collaborates in and initiates projects involving different functions, such as R&D and sales, and with worldwide reach. MBA graduate (2007) in General Management at the European School of Management and Technology (esmt, Berlin). Eight years experience as member of CERN's experiment, including University degree, PhD and post doctorate. During that period she collaborated to Delphi, NA48 and P326 experiments. University degree (University of Milan - Italy, 1999) and PhD in particle physics (University of Ferrara - Italy, 2003).

SELIVERSTOV, Dmitry

I am the leader of Petersburg Nuclear Physics Institute in Experiment ISOLDE, CERN and participant of LHC Experiment ATLAS and CMS. In PNPI I am responsible person for medicine programme on 1000 MeV synchrotron in PNPI.

SELLNER, Stefan

I have studied Physics since 2004 at the Universität Heidelberg, Germany. Currently I am working on my diploma thesis in the field of medical physics at the Max-Planck-Institute for Nuclear Physics, Heidelberg, and aim for graduation in July 2010.

SHADRACK, Anthony

Born: 1972 citizen: kenya highest degree: master of science

SHEEHY, Suzanne

I am in the final year of a DPhil in the John Adams Institute for Accelerator Science, within the Particle Physics sub-department at The University of Oxford. I moved to the UK in 2007 after completing a BSc(Hons.) in physics from The University of Melbourne, Australia. My current research focuses on the design of new type of particle accelerator for charged particle therapy as part of the PAMELA (Particle Accelerator for MEdical Applications) project. My broader research interests lie in the areas of particle physics and accelerator physics. I am particularly interested in developing new types of particle accelerators for various applications from the treatment of cancer to finding new ways to provide sustainable and safe energy sources. I am also highly active in physics outreach through my current program 'Accelerate!', delivering explosive and entertaining science shows to thousands of students in the UK.

SILARI, Marco

Dr. Marco Silari graduated in physics in 1982 and obtained a PhD in medical physics in 1985 at the University of Milano. In 1983 he worked in the Health Physics department of the main hospital in Brescia. From 1984 to 1995 he held a research position with the Italian National Research Council in Milano. He spent the first two years of this period as visiting scientist at the MRC (Medical Research Council) Cyclotron Unit at the Hammersmith Hospital in London (UK), where he worked on the installation of a 40 MeV proton medical cyclotron. From 1987 to 1991 Dr. Silari carried out research work on applied nuclear and radiation physics. From 1991 to 1995 he worked within the Hadrontherapy Project led by Prof. Ugo Amaldi, where he was project leader of the National Centre for Oncological Hadrontherapy (CNAO), which is now close to start operation in Pavia, near Milano. In this framework he was part-time Scientific Associate at CERN from September 1994 to October 1995. He is staff member at CERN since 1996, presently senior physicist. He has worked on radiation protection around the SPS, PS and LEP, and was responsible for radiation protection of LEP decommissioning. He has been involved with radiation protection of the LHC experiments and radiation studies for the future CERN accelerators. Throughout the years he has maintained a keen interest in Medical Physics and he continues teaching at the PhD School of Medical Physics in Milano.

SPEER, Stefan

PhD student

SPIGA, Jenny

I got my degree and PhD in Physics at the University of Cagliari (Italy) in cooperation with the Biomedical Beamline (ID17) of the European Synchrotron Radiation Facility (ESRF) of Grenoble (France) and the National Institute for Nuclear Physics (INFN).

At the moment I work as a post-doctoral researcher for the same institutes.

I am involved in different research projects, most of which are related to the Microbeam Radiation Therapy (MRT). MRT is a new type of therapy for brain cancer, which exploits the limited damages caused to normal tissues by parallel microbeams of X-rays. The main aim of my work is to simulate the dose distributions for different energy levels and different settings using the Geant4 toolkit, and to compare the results of these simulations with those obtained using other Monte Carlo software and experimental data.

STOKKEVÅG, Camilla

Hanquist Master thesis in nuclear physics at the University of Bergen, Norway. In my master thesis I have investigated the unwanted neutron dose contribution during radiotherapy. The experimental part of the work has mainly been performed in the therapeutic photon beam applied in cancer treatment at Haukeland University Hospital (HUS) in Bergen. This part of the work has comprised; neutron measurements during the different treatment modalities, Intensity Modulated Radiotherapy (IMRT) and 3D conventional radiotherapy. Detection methods utilized have included; bubble detectors and thermoluminescence dosimeters (TLD). The studies have also involved tests in the neutron field of the nuclear reactor JEEP II at Institute for Energy Technology (IFE) outside Oslo, Norway and neutron measurements during radiotherapy with carbons at Gesellschaft für Schwerionenforschung (GSI). Future work will expectantly involve further efforts related to radiotherapy with photons and carbons.

SUGDEN, Stephen

I was based at the Harwell Research Laboratory in the UK for around 25 years working on the applied use of radiation and radioactivity in various markets. Two years ago I started Harwell Consulting, and independent technical consultancy organisation providing services and advice to clients in involved in practical applications of radiation technology. I have a particular interest at present in the possible production of the medical isotope Mo-99 using accelerator technology as an alternative to using research reactors.

SYRESIN, Evgeny

1976-1981 Novosibirsk State University

1981-1984 Postgraduate of Budker Institute of Nuclear Physics

1984-1988 Assistant of Novosibirsk State University

1988 PhD

1989-1993 Researcher, Senior Researcher, Liding Researcher of BINP

1994-1998 Senior Researcher of JINR

1998 Doctor of Sciences

1999 Deputy Director of Laboratory Nuclear Problem, JINR

2004 Professor

Research interests: Accelerator physics, charged particle beam applied for proton and carbon therapy

SZEFLINSKI, Zygmunt

Dr hab. Zygmunt Szepliński

Associated professor at the Physics Faculty of Warsaw University.

Born: August 13, 1946

Employment: 1970-2010

Institute of Experimental Physics, Physical Faculty, University of Warsaw

Visitor employment:

1974-1978 Joint Institute for Nuclear Research, Dubna, Russia

1985-1986 Max Planck Institute for Nuclear Physics, Heidelberg, Germany

1990-1991 The Svedberg Laboratory, University of Uppsala

Description of Scientific and Technical Fields of Activities:

Current: Radiobiological Studies at Institute of Experimental Physics, University of Warsaw

Previous: Proton Induced Reactions to study GDR; Radioactivity Released in the Chernobyl Accident, Neutron Induced Reactions in the 50 - 200 MeV Range, Test of Bell's Inequality Using Annihilation Photons

TASKAEV, Sergey

Was born on the 19th of December, 1959 in the USSR.

Graduated from Novosibirsk State University in 1983.

Since 1983 has been working at Budker Institute of Nuclear Physics, now as a Senior researcher.

Until 2000, was engaged in obtaining and studying high temperature plasma in open magnetic traps.

In 1998 proposed a novel accelerator based neutron source for neutron capture therapy and is now working on the development of this source.

Is an author of more than 100 articles, has 5 patents.

TAUCHER- SCHOLZ, Gisela

1972-1978	Diploma: Biochemistry (M.Sc.), University of Chile, Santiago
1978-1982 (summa)	Ph.D. Max Planck Institute for Medical Research/University of Heidelberg cum laude)
1982-1983	Post-doc, MPI for Medical Research, Heidelberg
1986-1987	Visiting scientist, Dept. of Virology, University of Chile
1988-1990	Research Associate, Biophysics GSI
1991-1998	Staff Scientist, Biophysics GSI
since 1999	Senior Scientist, Biophysics GSI Head of the DNA Damage Research Group, GSI

Scientific Activities and Honors

since 2007 Executive Member Committee of the National Competence Network for Radiation Research

Elected ICRR council member

since 2007 Member of Radiation Research Society (USA)

since 1999 Member DNA Repair Network

Member German Society for Radiation Biology Research

1976 Faculty of Science Award (University of Chile)

Coordinator: BMBF project 02S8355 "Molecular and cellular effects of densely ionizing radiation" Darmstadt Competence Center for Radiation Research (co-coordinator, start 2006)

BMBF project 03NUK001A "Interaction of Repair Pathways: Repair Factor Dynamics at Localized Lesions", Radiation Research Competence Network, coordinator, start 2008

Publications (peer reviewed): around 50 in the field of radiation research

Current Research Fields

- Heavy ion-related molecular radiation biology
- DNA damage repair in the context of chromatin
- Live cell imaging

TESTA, Etienne

Etienne Testa received his engineering degree of the Central school of Nantes in 2001 and a MSc degree in particle physics from Grenoble University in 2002. He obtained a PhD degree from Lyon 1 University in 2005 on channelling experiments and modelling of highly charged ions in thin silicon crystals and has been an associate professor at Lyon 1 University since 2006. His main interest is the physics of particle–matter interactions, in particular for medical applications. He is currently involved in several projects concerning the development of an imaging system for hadrontherapy monitoring (Gamhadron project funded by ANR, European project ENVISION). He is a member of the research group associated to the ETOILE Hadrontherapy Center, to be built in Lyon.

TIMLIN, Claire

I am currently a James Martin research fellow at the Particle Therapy Cancer Research Institute, University of Oxford. My responsibilities include radiobiological modelling, analysis of extant and emerging radiobiological and clinical data, supervision of three DPhil students and general organisation of our institute. I am developing models which estimate malignant induction probability following radiotherapy. Together with DPhil Student Tracy Underwood I am researching the relationships between relative biological effectiveness (RBE), linear energy transfer (LET) and the oxygen enhancement ratio (OER) in order to understand the biological response of cells to high LET radiation. Other projects that I am overseeing include: development of a virtual phantom using simulation software which is being conducted by DPhil student Daniel Warren and creation of a data sharing platform for medical and research

purposes in radiotherapy being conducted by DPhil student Daniel Abler. Prior to this I obtained a PhD in particle physics from Imperial College London.

TODD, Benjamin

Benjamin Todd has worked for the past seven years as a machine interlocks engineer at the European Organisation for Nuclear Research (CERN) in Geneva, Switzerland. He received a B. Eng. first class honours degree in Electrical and Electronic Engineering from the University of Sunderland and a Ph. D. in accelerator controls from Brunel University. Dr. Todd is responsible for the design, development and implementation of two mission critical electronic safety systems for the protection of the Large Hadron Collider (LHC) at CERN. The LHC is a multi-billion dollar machine, being the most powerful particle accelerator ever constructed, having Gigajoules of stored energy, and is the world's largest machine, with a circumference of 27 kilometres. The nature of CERN's research, in building unique machines such as the LHC, involves exotic technologies engineered and exploited solely to solve CERN's engineering challenges. This makes safety particularly challenging, as the design of functionally correct components is already very difficult, safety has to be considered in a different context to conventional domains. Dr. Todd is currently researching dependable system design using programmable logic, and is working inside CERN to encourage the consideration of system safety in CERN's design and realisation processes. Dr. Todd's interlock system is being retro-fitted to the whole of CERN's accelerator complex, and his collaboration has been sought for the protection system design of the International Thermonuclear Experimental Reactor (ITER) at Cadarache, France. Benjamin can be reached at his CERN e-mail address, benjamin.todd@cern.ch.

TOUS, Jan

Jan Tous, PhD. (*1969)

Crytur Ltd., Palackého 175, CZ-51101 Turnov, Czech Republic, e-mail: tous@crytur.cz

I graduated in plasma physics at the Faculty of Mathematics and Physics of the Charles University in Prague, Czech Republic.

At present I am working as a research worker in the R&D of Crytur Ltd. I am responsible for the research and development of ionizing radiation imaging systems based on different inorganic scintillation materials combined with the position-sensitive detectors.

In 1997-1998 I participated in the development of the PbWO₄ single crystals for CERN at Preciosa Crytur company (crystal-growth department).

During recent years I have been working on the development of high-resolution X-ray digital imaging system for non-destructive inspection and imaging. We have developed brand-new scintillating plates (imaging screens) that exhibit resolution in the range of about 1 micrometer. These screens can be used in X ray micro radiography and together with a high resolution CCD camera are used in research at synchrotron facilities over the world.

TOWNSEND, David

David W. Townsend is Head of PET and SPECT Development for the Singapore Bioimaging Consortium and a Professor in the Department of Diagnostic Imaging, National University Hospital. He has a Ph.D. in Particle Physics from the University of London and was a staff member for eight years at the European Centre for Nuclear Research (CERN) in Geneva, Switzerland. In 1980, he joined the faculty of Geneva University Hospital as a physicist in the Department of Nuclear Medicine. He has worked on PET instrumentation development since the early eighties, and designed and built the first rotating partial ring PET scanner using BGO block detectors. In 1993, he moved to the University of Pittsburgh as an Associate Professor of Radiology and Senior PET Physicist. He was Co-Director of the Pittsburgh PET Facility from 1996-2002, and became Professor of Radiology in 2000. In 1995, he was Principal Investigator on the first proposal to design and build a combined PET/CT scanner. The PET/CT scanner, attributed to Dr Townsend and Dr Nutt, then President of CPS Innovations, was named by TIME Magazine as the medical invention of the year 2000. In recognition of his work on PET/CT, he received the 2004 Distinguished Clinical Scientist Award from the Academy of Molecular Imaging, and the 2008 Nuclear Medicine Pioneer Award from the Austrian Society of Nuclear Medicine. In 2006, he was elected a Fellow of the IEEE. From 2003 to 2009, he was Professor of Medicine and Radiology, and Director of the Molecular Imaging and Translational Research Program at the University of Tennessee, Knoxville, USA.

TRBOJEVIZ, Dejan

Dejan Trbojevic is a tenured physicist at Brookhaven National Laboratory. He received a Ph.D. in Physics from Georgetown University 1984. At Fermi National Laboratory he designed and built the vertical overpass in the Main Ring over the TEVATRON D0 detector and presented at the EPAC 1990 design of synchrotron lattice without transition energy later known as Flexible Momentum Compaction Lattice*. He left Fermi as head of the Main Ring group in 1992 to participate in designing and building Brookhaven's Relativistic Heavy Ion Collider (RHIC). He was Head Commissioner of RHIC in 1999. From his involvement with muon collider and neutrino factory collaborations came a triplet design of the Non-Scaling-Fixed Field Alternating Gradient in 1999. He is an APS fellow.

*D. Trbojevic et. al., "Design Method for High Energy Accelerator Without Transition Energy", EPAC1990, Nice, June 12-16, (1990) pp.1536.

TYUTYUNNIKOV, Sergey

Tyutyunnikov Sergey Ivanovich (21.06.1947, Rossosh Voronezh region).

The physicist. Graduated from the Voronezh state university by Lenin Komsomol (1970).

The candidate of physical and mathematical sciences (1987). Doctor of Science (1999).

The scientific secretary of program - advisory committee on condensed matter physics of the JINR with 1997 on 2009.

Reads a course «Synchrotron radiation in researches of the condensed matter» on neutronography department at physical faculty MSU (since 2000).

The chief of sector of Laboratory of particle physics of the Joint institute of nuclear researches (Dubna) (1999-2004).

The chief of department (2004-2007)

The acting as deputy director of Laboratory of particle Physics (2007-2008)

The acting as head of methodological research and innovation scientific department of Laboratory of High Energy Physics (2008). Tjutyunnikov S.I. in the co-authorship is awarded with twice JINR premium for works on collective methods of acceleration.

Area of scientific interests: physics and techniques of beams of the charged particles, diagnostics of plasma, optical spectroscopy of condensed matter physics, Synchrotron radiation, x-ray spectroscopy of condensed matter on beam Synchrotron radiations. Most important results with using of Synchrotron radiations - the measurement of energy gap high-temperature superconductors film as $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$. and its behavior are received for the temperature. Has published more than 110 scientific works.

UDIAS, Jose

BD: 27th-12-1964. M. in Physics 1987. Ph.D. in Physics, 1993, both at Universidad Autónoma de Madrid, 1988. After being Marie Curie postdoctoral fellow at NIKHEF-K (The Netherlands) in 1993-1995, postdoctoral research associate at Tübingen University (Germany) during 1995-1996 and at Grenoble University Joseph Fourier (France) between 1996-1997, CURRENTLY, I am associate Professor in the Department of Atomic, Molecular and Nuclear Physics of UCM since 1997, where I'm lecturing Nuclear and Particle Physics, Computational Physics, and Nuclear Structure, both at graduate and undergraduate level. I also supervise M. Sc projects in the Master in Biomedical Physics. I'm also co-director of the Nuclear Physics Group of UCM (more than 22 members, including 9 staff ones), taking responsibility of the applied nuclear physics activities of the group. My main research topics include all aspects of POSITRON EMISSION TOMOGRAPHY (PET) and MC simulations in nuclear imaging.

My research record include over 65 articles co-authored in high impact journals with and H index=20 (2009). I am co-author of advanced reconstruction algorithms for PET, currently being

used worldwide. I am or was head of 10 research projects at national and local levels including several industrial cooperation agreements between UCM and nuclear imaging companies.

Currently I am chairing the Nuclear Physics Group of the Royal Spanish Society of Physics and I am also member of the EPS Nuclear Physics Board.

VAN DEN HEUVEL, Frank

Prof Van den Heuvel received a licentiaat in physics degree at the University of Antwerp (Belgium) concentrating on high energy physics. In 1994 he was awarded a doctoral degree in Physics from the Free University of Brussels (Belgium) with work on patient positioning and entered the field of medical physics. In 1996 he started at Wayne State University in Detroit, Michigan (USA). There he still worked on patient movement and imaging with smaller contributions in radiobiology and neutron therapy. In 2003 he was promoted to associate professor. In 2005 he returned to Belgium to join the University of Leuven as a full professor and head of the physics division. There he concentrated on getting the physics department updated to current technology and became involved in bringing hadron therapy to Belgium. Recently his interests also include nanotechnology and the combination of molecular biology with radiation. Currently he is a workpackage leader in Allegro a European funded project investigating the impact of new radiation treatment applications on patient safety.

VANDENBERGHE, Stefaan

Stefaan Vandenberghe (MSc, PhD) obtained his MSc in Physics in 1996 and an additional degree in Biomedical Engineering in 1997 from KU Leuven. After working in the nuclear medicine department of the University Hospital Ghent (1997-1999) he started a Ph.D. in the MEDISIP group of the University of Ghent. His research was on the optimal configuration of gamma cameras for PET imaging and on list-mode reconstruction techniques for PET systems. He received a Ph.D. (Engineering) from this university in 2002. During his FWO postdoctoral research he worked on rotating slat systems (with solid state detectors) Monte Carlo simulations and natural pixel reconstruction. In 2004 he joined Philips Research USA (Briarcliff) to work as a Senior Scientist in the Clinical Site Program. The position was at the University of Pennsylvania (Dr. Joel Karp) in Philadelphia. During this period he worked on simulations, reconstructions and measurements for Time-Of-Flight PET systems (LaBr₃ and LYSO). At the end of 2005 he returned to Belgium (return grant) in the MEDISIP group. In collaboration with different researchers in the group a variety of topics is covered: Monte Carlo simulations, rotating slat SPECT, Time-of-Flight PET and quantification for radionuclide dosimetry. He has been appointed as full time research professor (BOF-ZAP) at UGhent since October 2007. Within the Hyperimage collaboration the group's contribution is MR based attenuation correction for PET and system design simulations.

VAN DEN HEUVEL, Frank

Prof Van den Heuvel received a licentiaat in physics degree at the University of Antwerp (Belgium) concentrating on high energy physics. In 1994 he was awarded a doctoral degree in Physics from the Free University of Brussels (Belgium) with work on patient positioning and entered the field of medical physics. In 1996 he started at Wayne State University in Detroit, Michigan (USA). There he still worked on patient movement and imaging with smaller contributions in radiobiology and neutron therapy. In 2003 he was promoted to associate professor. In 2005 he returned to Belgium to join the University of Leuven as a full professor and head of the physics division. There he concentrated on getting the physics department updated to current technology and became involved in bringing hadron therapy to Belgium. Recently his interests also include nanotechnology and the combination of molecular biology with radiation. Currently he is a workpackage leader in Allegro a European funded project investigating the impact of new radiation treatment applications on patient safety.

VAN GOETHEM, Marc-Jan

I have been working on particle therapy related topics since 2005 when i started on the design and optimization of the field forming equipment of the Proscan-OPTIS2 project at the Paul Scherrer Institute (Switzerland). Since 2008 i have been working on a carbon ion irradiation facility at the Kernfysisch Versneller Intituut for the purpose of performing radio-biology experiment with cell-cultures and DNA-plasmids. Since 2010 i am also involved in the preparation of the proton therapy center project for the University Medical Center Groningen. I have also spent time on GEANT4 simulations of both proton and carbon ion beams.

VANIACHINE, Alexandre

Alexandre Vaniachine, Ph.D., High Energy Physics Division, Argonne National Laboratory. As a member of the American Association of Physicists in Medicine, Dr. Vaniachine is trained in medical imaging physics and acquired experience in technology transfer of the high-gain HEP detectors for advancements in medical imaging. He is an expert in large-scale data processing relevant for the next generation digital imaging technologies as well as for the LHC experiments at CERN. During 1997-1999 Dr. Vaniachine conceived and planned the interdisciplinary medical imaging project to develop low-dose high-resolution photon counting imaging system based on novel high-gain detector from HEP. After a successful completion of the R&D phase the project has received more than \$100M of funding to develop and test novel imaging systems. Dr. Vaniachine received M.Sc. and Ph.D. degrees in Physics from Moscow Engineering Physics Institute (MEPhI), Russia. During 1980-2000 he was affiliated with MEPhI and has worked at the High Energy Physics group led by Prof. Dolgoshein. (This group pioneered silicon photomultiplier development and applications in High Energy Physics and PET imaging). In 2006 Dr. Vaniachine launched several projects on applications of silicon photomultipliers for the next generation PET imaging detectors.

VIVIANI, Claudio

Claudio Viviani was a graduate of the University of Pavia from March 2006. The title of his graduated thesis was "Multigap RPC prototype for biomedical application". During his PhD (2006-2009), he worked in the Pavia research group involved in the Compact Muon Solenoid (CMS) experiment at CERN (Geneva). His PhD thesis was on the Detector Control System of the Resistive Plate Counter detectors ("Detector Gas Control System for Resistive Plate Counters in the CMS Experiment"). Now Viviani works at the CNAO (Centro Nazionale di Adroterapia Oncologica) Foundation, involved in the design of a carbon ion gantry in the ULICE European project.

VOSTRIKOV, Vladimir

Vladimir Vostrikov is a researcher in the Budker Institute of Nuclear Physics, Novosibirsk, Russia. His current research interests are: accelerator physics, electron cooling, beam dynamics and cancer therapy by proton and ion beams.

Mr. Vostrikov received his B.S. in 1996 and M.S. in 1998 in physics of charged particle beams and accelerator physics from the Novosibirsk State University.

VRBA, Vaclav

Václav Vrba – short CV 1972 – graduated from the Faculty of Mathematics and Physics, Charles University, Prague. 1972-1975 – postgraduate student at the Institute of Physics, Academy of Sciences, Prague. Involved in the data analysis of antiproton-proton interactions measured using 2m hydrogen bubble chamber. 1975-1982 – stay at JINR Dubna, Russia, continued working on bubble chamber experiments. 1982 – PhD thesis: "Resonance production in antiproton-proton interactions at 22.4 GeV/c". 1983-2000 – DELPHI experiment at CERN. Participation in the construction of the Hadron Calorimeter, simulation studies, data analysis, upgrade of the Hadron Calorimeter, construction of the DELPHI Very Forward Tracker, particularly the DELPHI Pixel Detector. This period also includes a stay at INFN Sanita, Rome (1990-1993). 1993-2000 – member of the CERN RD19 collaboration: development of hybrid and monolithic silicon micro-pattern detectors. In 1993-2000 Czech group leader in that collaboration. 1995-2000 – Institute group leader in the CERN RD48 project: development of radiation tolerant semiconductor detectors. 1995-now – ATLAS experiment. Czech group leader in the ATLAS Pixel detector project. Mainly involved in the development of n-on-n double sided radiation hard pixel sensors: design of sensors, sensor testing, contact with industrial producers, radiation hardness studies, beam tests and data analysis; also involved in detector assembly, installation and commissioning. 2000-now – Institute group leader in the CERN RD50 project: development of radiation hard devices for very high luminosity colliders. 2001-now – CALICE project: calorimetry for future particle physics experiments; Czech representative in the CALICE

steering board; development of silicon sensors for the silicon-tungsten electromagnetic calorimeter. 2001-now – Institute group leader in the CERN MediPix project: silicon pixel detectors for imaging applications. 2002-now – member of the ATLAS Collaboration board. 2003-now – Head of the Experimental Physics Department, Institute of Physics of the Czech Academy of Sciences. 2003-now – lecturer at the Czech Technical University. Topics: particle physics, experiment instrumentation. Supervision of student projects and PhD dissertations. 2004-now – coordinator of the Czech participation in the ATLAS experiment.

WAGNER, M. Franz

Born in 1949, German, physicist, expert for radiation protection and medical physics. Since 1980 at Technische Universität München. In charge of the fast neutron facilities at the old and new research reactors FRM and FRM II. Contributions to the European concerted action on “Boron Neutron Capture Therapy of Tumours”. Cooperation with the medical neutron irradiation group at Obninsk, Russia. About 50 publications.

WATTS, David

David Watts is currently pursuing a PhD in physics at the Universita Autònoma de Barcelona. His thesis concerns the development of radiation detectors for quality assurance and diagnostics in hadrontherapy, specifically, in-beam PET, proton range radiography, and other novel techniques such as interaction vertex imaging and nuclear scattering tomography. David is one of the Early Stage Researchers of the PARTNER Marie-Curie network. He carries out his research with the TERA Foundation under the direction of Prof. Ugo Amaldi and Prof. Fabio Sauli.

YTRE-HAUGE, Kristian

Kristian Ytre-Hauge I finished my master's thesis in nuclear physics in May 2009 at the University of Bergen, Norway. The topic was radiotherapy for cancer and the title was: "Measurements of Neutron Doses from Radiotherapy with ^{12}C Ions and Photons". My experimental work has mainly been conducted at medical linear accelerators in Norway. Bubble detectors and thermoluminescence detectors have been used to measure neutron doses. In March I will start on my Phd with the preliminary title: "Measurements of Radiation Dose outside the Treatment Volume in Radiation Therapy with Photons, Protons and Ions" .

ZANINI, Luca

L. Zanini obtained the PhD in experimental neutron physics in 1998 at the Delft University of Technology, with a work performed at the GELINA facility of the IRMM in Belgium on measurement of spin and parity of neutron resonances. He has worked as a post-doc at LANSCE (Los Alamos) on fast neutron cross section measurements, and in the nTOF collaboration at CERN. Since 2003 he is working at the Paul Scherrer Institut on neutronic and nuclear calculations and measurements of relevance for Accelerator Driven Systems (MEGAPIE experiment) and for spallation neutron source development.

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2001 - 2006 Master of Physics at ETH Zurich

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Born in 1978, Russian Federation

1995 Study of Chemistry (Diploma), St. Petersburg State Institute of Technology (Technical University), Russian Federation

2001 Dipl.Ing. Chemical Engineering and Technology

2006 PhD in chemistry, University of Mainz

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2006-2009 Research Scientist at Institute of Radiochemistry, Technical University of Munich, Germany

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