CURRICULUM VITAE

Dieter Schardt

Personal data: Born December 7, 1950 in Grebenhain (Germany)
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Education:

1969 - 1975	University Giessen, Germany Diploma in Physics
1975 - 1979	Scientific assistant at University Giessen and Technical University Darmstadt, research work in experimental nuclear physics at GSI Darmstadt PhD in Nuclear Physics
1980 - 1981	Fellowship at CERN / Geneva, Switzerland Nuclear spectroscopy at the ISOLDE isotope separator
1981 - 1991	Researcher at GSI Darmstadt Nuclear spectroscopy at the GSI on-line mass separator and Projectile Fragment Separator FRS
1991 - present	Member of the GSI Biophysics group, Senior Researcher Deputy Technical Director of the Tumor Therapy Project at GSI Construction of treatment cave and control room Leader of the High-Energy Irradiation Facility "Cave A" Research activities: Physical characterization of ion beams for therapy applications, Irradiation experiments (Biophysics and Space research)
1993	Beam time coordinator of the GSI accelerator facilities UNILAC, SIS, ESR
1995 – 2000	Elected member of the internal scientific advisory board of GSI
01.07. – 31.12.2012	Half-year Sabbatical at Dept. Física Atómica, Molecular y Nuclear, Facultad de Física. Universidad de Sevilla

Awards: IBA Europhysics prize 2007

Invited talks at international conferences and research centers during the last years

XXX Seminario de Ingeneria Hospitalaria, Huelva (Spain), 2012
Int. Conf. on Medical Physics and Engineering, Poznan (Poland), 2011
6th DITANET Topical Workshop on Particle Detection Techniques, Sevilla (Spain), 2011
Invited Talks at Japanese Hadrontherapy Centers at NIRS (Chiba) and HIBMC (Hyogo) and Research Centers KEK (Tsukuba), PMRC (Nara), JAEA (Tokai), (2010)
Int. Symposium Heavy Ions in Therapy and Space, Köln (Germany), 2009
Int. Conference EURORIB 2008, Giens (France), 2008
Int. Workshop IFIMED: Research on Imaging and Accelerators applied to Medicine, Valencia (Spain), 2007
Int. Symposium on Medical Accelerators, MED-AUSTRON, Wiener Neustadt (Austria), 2007
Int. Conference on Nucleus-Nucleus Collisions, Rio de Janeiro (Brazil), 2006
Int. Workshop on Fast Neutron Detectors, University of Cape Town (South Africa), 2006

Selected publications 2007-2013

1. E. Haettner, H. Iwase, D. Schardt, Experimental fragmentation studies with ^{12}C therapy beams, *Rad. Prot. Dosim.* 122, 485 (2007)
2. W.G. Sannita, N.S. Peachey, E. Strettoi, S.L. Ball, F. Belli, V. Bidoli, S.Carozzo, M. Casolino, L. Di Fino, P. Picozza, V. Pignatelli, A.Rinaldi, M. Saturno, D. Schardt, M. Vazquez , V. Zaconte, L. Narici, Electrophysiological Response of the Mouse Retina to ^{12}C Ions, *Neuroscience Letters* 416, 231-235 (2007)
3. E. Rietzel, D. Schardt, T. Haberer, Range accuracy in carbon ion treatment planning based on CT-calibration with real tissue samples, *Radiation Oncology* 2, 14 (2007)
4. D. Schardt, Tumor therapy with high-energy carbon ion beams, *Nucl. Phys.* A787, 633c (2007)
5. C. Bert, N. Saito, A. Schmidt, N. Chaudhri and D. Schardt, Target motion tracking with a scanned particle beam, *Med. Phys*. 34, 4768-4771 (2008)
6. K. Gunzert-Marx, H. Iwase, D. Schardt, R.S. Simon, Secondary beam fragments produced by 200 MeV/u ^{12}C in water and their dose contributions in carbon ion radiotherapy, *New Journal of Physics* 10**,** 075003 (2008)
7. N. Saito, C. Bert, N. Chaudhri, A. Gemmel, D. Schardt, M. Durante, E. Rietzel, Speed and accuracy of a beam tracking system for treatment of moving targets with scanned ion beams, *Phys. Med. Biol.*, 54**,** 4849-4862 (2009)
8. D. Schardt, T. Elsässer, D. Schulz-Ertner, Heavy-Ion Tumor Therapy: Physical and Radiobiological Benefits, *Rev. Mod. Phys.* 82, 383-425 (2010)
9. M. Münter, M. Wengenroth, G. Fehrenbacher, D. Schardt, A. Nikoghosyan, M. Durante, J. Debus, Heavy ion radiotherapy during pregnancy**,** *Fertil Steril.*, 94 (6), 2329.e5-2329.e7 (2010)
10. G. Martino, M. Durante, D. Schardt, Microdosimetry measurements characterizing the radiation fields of 300 MeV/u 12C and 185 MeV/u 7Li pencil beams stopping in water, *Phys. Med. Biol.*, **55** (12), 3441-9 (2010)
11. C. Bert, A. Gemmel, N. Saito, N. Chaudhri, D. Schardt, M. Durante, G. Kraft, E. Rietzel, Dosimetric precision of an ion beam tracking system, *Rad. Oncology*, 5 (1), 61 (2010)
12. C. La Tessa, T. Berger, R. Kaderka, D. Schardt, C. Körner, U. Ramm, J. Licher, N. Matsufuji, C. Vallhagen Dahlgren, T. Lomax, G. Reitz, M. Durante, Out-of-field dose studies with an anthropomorphic phantom: Comparison of X-rays and particle therapy treatments, Radiotherapy and Oncology, (2012) in press
13. R. Kaderka, D. Schardt, M. Durante, T. Berger, U. Ramm, J. Licher, C. La Tessa, Out-of-field dose measurements in a water phantom using different radiotherapy modalities, *Phys. Med. Biol.* **57**, 5059-5074 (2012)
14. S.K. Hoeffgen et al, Investigations of Single Event Effects With Heavy Ions of Energies up to 1.5 GeV/n, *IEEE Trans. Nucl. Sci.* **59**(4), 1161-66 (2012)
15. D. Schardt, O. Kavatsyuk, M. Krämer, M. Durante, Light flashes in cancer patients treated with heavy ions, *Brain Stiumulation* (2012) in press
16. S. Carozzo, D. Schardt, L. Narici, S. Combs, J. Debus and W.G. Sannita, Electrophysical Monitoring in Patients With Tumors of the Skull Base Treated by Carbon-12 Radiation Therapy, *Int. J. Radiat. Oncol. Biol. Phys* **85**(4), 978-983 (2013)