Hugo Day

Contact Information

CERN
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Research Interests

Beam Dynamics, Wakefields and beam impedance, RF engineering, beam instrumentation, complex systems, numerical methods, nanotechnology, solid state physics

Education

School of Physics and Astronomy, University of Manchester, Manchester, United Kingdom

Doctor of Philosophy **September 2009 – present**

- Thesis title: "Measurements and Simulations of Impedance Reduction Techniques in Particle Accelerators" - Work done under placement at CERN (February 2010 – February 2013) through the CERN Doctoral Program
- Expected graduation date: February 2013
- Supervisors: Professor Roger Jones and Dr Elias Metral (CERN)

School of Physics and Astronomy, University of Southampton, Southampton, United Kingdom *MPhys (Hons) Physics* **October 2005 – July 2009**

- Classification: 1st Class
- Masters' Thesis: Controlling the synthesis of branched gold nanoparticles using a wet chemical synthesis method
- Supervisor: Dr Antonios Kanaras

Professional Experience

CERN, Geneve, United Kingdom

CERN Tour Guide/Conferencier **November 2010 – Present**

Giving introductory presentations and tours of experimental facilities at CERN to visitors, both public and private of all ages and knowledge.

University of Manchester, Manchester, United Kingdom

Teaching Assistant **September 2010 – January 2011**

Teaching assistant for undergraduate courses (Programming in C).

CERN, Geneve, United Kingdom

CERN Summer Student **June 2008 – September 2008**

Simulations of the H^- and electrons through the spectrometer in the 3MeV test stand for LINAC4. The magnetic field of the spectrometer was first realised, and then the trajectory of the particles simulated using the tracking code PATH.

Peer-Reviewed Publications

Day, H.A., Bartczak, D., Fairbairn, N., McGuire, E., Ardakan, M., Porter, A. E. and Kanaras, A.G., "Controlling the three-dimensional morphology of nanocrystals", *CrystEngComm*, 2010, 12, 4312-4316.

Conference Publications

Day, H.A., Barnes, M., Caspers, F., Jones, R.M., Metral, E., Salvant, B. "Evaluation of the Beam Coupling Impedance of New Beam Screen Designs for the LHC Injection Kicker Magnets", WEPPR071, IPAC'12, New Orleans, US, 2012.

Day, H.A., Caspers, F., Dallocchio, A., Gentini, L., Grudiev, A., Jones, R.M., Metral, E., Salvant, B. "Beam Coupling Impedance of the LHC TCTP Collimators", WEPPR070, IPAC'12, New Orleans, US, 2012.

Day, H.A., Caspers, F., Jones, R.M., Metral, E. "Simulations of Coaxial Wire Measurements of the Impedance of Asymmetric Structures. ", MOPS079, IPAC'11, San Sebastian, Spain, 2011.

Day, H.A., Barnes, M., Caspers, F., Jones, R.M., Metral, E., Salvant, B., C. Zannini "Coaxial Wire Measurements of Ferrite Kicker Magnets", MOPS078, IPAC'11, San Sebastian, Spain, 2011.

Day, H.A., Caspers, F., Jones, R.M., Metral, E., Salvant, B. "Comparison of the current LHC Collimators and the SLAC Phase 2 Collimator Impedances", MOPS080, IPAC'11, San Sebastian, Spain, 2011.

Invited Talks

Day, H.A., Biancacci, N., Salvant, B. Zannini, C. "Impedance simulations of the LHC collimators and low beta simulations of ferrite kicker magnets with CST Particle Studio", 6th CST European

User Group Meeting, Freising, Germany, 2011.

LANGUAGES English (Fluent), French (Intermediate), German (Beginner)

PROGRAMMING C, C++, Matlab, Mathematica, Python, Java, LaTeX 2_ε, R, *nix and Windows administration

REFEREES

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