

Toohig Fellowship Candidates

A brief introduction

Dr. Miriam Fitterer

- COFUND Fellow at CERN 2013 - present
 - LHC vibration limits in view of civil engineering works
 - Tolerances on stability and current ripple of the inner triplet power converters for HL-LHC
 - Review and improvement of the crossing scheme and orbit correction in the interaction region for HL-LHC
 - Requirements on placement and precision of the BPMs in the inner triplet area for a sufficient alignment of the beams at the IP for HL-LHC
 - Development of alternative optics for HL-LHC
- Doctoral Student, Karlsruhe Institut für Technologie and CERN 2009 - 2013
 - Ph.D. Thesis title: Design Study of the Large Hadron Electron Collider and a Rapid Cycling Synchrotron as Alternative to the PS Booster Upgrade at CERN
 - Lattice and optics design of the LHeC electron ring and further studies of different beam dynamical aspects, i.e. chromatic corrections and coupling
 - Lattice and optics design of a rapid cycling synchrotron as alternative to the PS Booster 2 GeV energy upgrade
 - Study of the dependence of space-charge effects on the lattice and linear optics

Dr. Denise C. Ford

- Postdoctoral Reseracher, Argonne National Lab 2013 - present
 - First-principles modeling of the kinetics of glass corrosion by water, the electron-phonon interaction in superconductors, and niobium carbides
- Doctoral Student, Northwestern University 2009 - 2013
- Research assistant, Fermilab 2009 - 2013
 - Ph.D. Chemical engineering
 - Thesis Insights to Superconducting Radio-Frequency Cavity Processing from First Principles Calculations and Spectroscopic Techniques
- Additional Accelerator Specialty Coursework
 - Modeling Materials, Short course at Argonne National Laboratory
 - Fundamentals of Accelerator Physics and Technology, United States Particle Accelerator School
 - RF Technology Course, Sixth International Accelerator School for Linear Colliders

Dr. Emmanuele Ravaioli

- Ph.D. (foreseen in June 2015) Science & Technology University of Twente, Enschede (NL)
- Ph.D. Student, CERN 2012 - present
 - Development of the Coupling-Loss Induced Quench (CLIQ) protection system
 - Electro-thermal modeling of superconducting circuits
 - Quench performance test campaigns
 - Coordination of a small team of technical students working on quench simulations
- CERN Fellow July 2009 - June 2012
 - Study and circuit modeling of the dynamic behavior of chains of superconducting magnets
 - Optimization of the quench protection system of the LHC main dipole magnet circuit