

## CARLO BOLDETTI

**Nationality:** British and Italian

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### EDUCATION

June 2006

[University of Sheffield, Department of Mechanical Engineering](#),  
**PhD** on high resolution measurements of intra-granular deformation in structural materials at high temperature (sponsored by [EPSRC](#) and [IMPETUS](#))

- Numerical work with non-linear **FE** techniques and multi-scale modelling
- Experimental work on rolling and compression tests to validate FE models
- Metallurgy: casting of [stainless steel](#); anodising, etching, electro-etching and electro-polishing techniques on [stainless steel](#) and aluminium alloys
- Laboratory teaching, marking and supervising Master's students in their final year project
- Extensive writing of [scientific articles](#) published in international journals and conference proceedings

July 2003

- [University of Cagliari](#) (Italy), [University of Sheffield](#) (UK) by scholarship MEng Honours Mechanical Engineering, Grade I (*first*)
- 2002-2003 Research grant from the [University of Sheffield](#) to work on FE simulations of hot rolling processes of aluminium
- 2001-2002 [European scholarship](#) to study at [The University of Sheffield](#)

### WORK EXPERIENCE

Sept 2012 - Present

Senior Stress Engineer at [McLaren Racing](#), Woking (Surrey)  
Finite Element modelling and stress analysis of F1 car components

Sept 2006 - August 2012

Senior Structural Analysis Engineer at [Lotus F1 Team](#)  
(formerly Renault F1), Enstone (Oxfordshire)  
Finite Element modelling and stress analysis of F1 car components

- In charge of 2012 chassis stress analysis
- Modelling of composite parts including front and rear wings, wishbones, pushrods, crash structures, steering column, nosecones, etc.
- Modelling of metal parts, including gearbox components, differential, clevises, rockers, steering racks, roll hoop, exhausts, etc.
- Creation of test specs, test set up and supervision
- Impact simulations with large deformation using explicit codes
- Modelling adhesive joints using non linear techniques
- Proficiency in dealing with contact problems, large deformation, high strain rates and high temperatures

- Fatigue calculations
- High competence in [ABAQUS](#), [PATRAN/NASTRAN](#), Laminate Modeller, [Laminate Tools](#), [HYPERMESH](#)
- Composite and metal optimization: [OptiAssist](#), Genesis, Optistruct
- Working knowledge of [CATIA V5](#), [ANSYS](#), Matlab

Sept 2003 – July 2006

[Tutor](#) at Tapton Hall of Residence, Sheffield University (part time)

- Pastoral care with direct responsibility for over 70 students
- Ensuring discipline and providing psychological support to students
- Team work with the Hall staff

Oct 2002 – Jun 2003

Research placement at The University of Sheffield

- Individual research work on FE non-linear analysis of hot rolling processes
- Experimental validation of numerical results
- Assisted students in their final year project
- Team work and participation in residential team building courses

## COMMUNICATION SKILLS

- Bilingual English-Italian
- Spanish: basic understanding
- Highly competent in writing of [scientific reports for publication](#)
- Experienced public speaker including presentations to sponsors and academia

## OTHER ACHIEVEMENTS

Dec 2009 – Present

Construction of a primary school in a rural area of Uganda

- Extensive fundraising with over £25,000 raised in the first year
- Creation and management of a website to increase exposure and awareness for the school, see [www.seeta-nazigo.com](http://www.seeta-nazigo.com)
- Active involvement in decision making regarding the school build work and management
- Promotion and coordination of volunteering work