

CESARE STOCCHI

Birthdate: 31/08/1984

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Education

- 2009 – 2013 IMPERIAL COLLEGE LONDON LONDON, UK
Postgraduate Researcher on Composite Structures (Ph.D. Student), Department of Aeronautics.
Research focused on the study (both numerical and experimental) and optimisation of composite structures, in particular of composite bolted joints for aircrafts. Supervisors: Paul Robinson and Pinho Silvestre. Project funded and managed by Airbus Ltd.
- 2007 – 2008 UNIVERSITY OF STRATHCLYDE GLASGOW, UK
International Erasmus Student Exchange.
Five month of Erasmus Exchange.
- 2003 – 2009 UNIVERSITA' DI PARMA PARMA, ITALY
Master Degree (3 + 2 years) in Mechanical Engineering. Mark: 110/110 cum Laude.
Specialisation in structures and design. Concluded in the due time. Final thesis: "Structural Analysis of the Composite Material Frame of the Formula SAE Race Car PR02" Supervisor: Alessandro Pirondi.

Experience

- 2013 – now DALLARA AUTOMOBILI VARANO DE MELEGARI, PARMA, ITALY
Structural analyst, composite designer and homologation specialist
- Designed and analysed components and assemblies, both in metallic and composite materials, for several categories and types of race cars. In the last years, he has worked predominantly on the Haas F1 cars.
 - Managed and performed the FIA homologation of chassis, crash structures and bodywork of all the Dallara race cars. This comprises F1, F2, F3, LMP1, LMP2, Formula Electric and SuperFormula cars. He has a fruitful professional relationship with several FIA delegates and Global Institute researchers.
 - Researched numerical methodologies for the simulation of several types of progressive damage. This comprises debonding, delamination, composite in-plane damage, core damage and metallic cracks. Developed several methodologies to aid the component design. Developed experimental technics for increasing the FEA-experimental tests correlation.
 - Taught for 2 years composite materials and structural analysis classes for the "Tecnico Superiore Per i Materiali Compositi e l' Additive Manufacturing", ITSMaker, Fornovo, PR.
- 2009 – 2013 IMPERIAL COLLEGE LONDON - AIRBUS LONDON, UK
Postgraduate Researcher on Composite Structures (Ph.D. Student), Department of Aeronautics.
- Studied, tested and optimised composite structures. Optimised, in particular, composite bolted joints for the introduction in the following generation of Airbus aircrafts.
 - Developed non-linear finite element (FEM) models for the study of composite and composite/metallic structures.
 - Performed static and fatigue experimental tests on materials, components and structures and developed experimental methodologies and real-time sensing technics.
 - Taught and marked for 3 years several classes and laboratories as graduate teaching assistant
 - Tutored 5 postgraduate students during their master final thesis
- 2006 – 2009 FORMULA ATA/SAE/STUDENT WITHIN THE PR43100 TEAM PARMA, ITALY
Founding Member of the Team and FE specialist.
- Raced in 3 seasons of the Formula ATA/SAE Italy, producing two race cars and performed the FE analysis of the car key components.

Relevant Technical Skills

- FE Analysis:* Highly non-linear structural FEM analysis, both implicit and explicit, with multiple parts, contacts, material types, element definitions, progressive damage models and high geometrical details. Abaqus (12 years), Altair Hyperworks (5 years), Fusion (3 years), Nastran (1 year).
- Experimental Testing:* 4 year experience, in Dallara, on race car homologations and experimental tests with the aim of improving accuracy of the test results and the FE-Experimental correlation.
3 year experience, during the Ph.D., on fatigue and static testing of materials, components and structures with several types of sensors and Labview codes to collect data and control the tests.
- Coding:* Python (3 years), Matlab (3 years), Labview (2 years), Visual Basic (1 year), C (1 year). Little experiences on Fortran and Java.
- 3D and 2D Drawing:* Solid works (4 years), Solid Edge (2 years), Abaqus (12 years), Autocad (4 years).
- Project Management:* Managed the homologation process for all the Dallara race cars and built a fruitful relationship with several FIA delegates and G.I. researchers. Managed the design of small car assemblies and research projects in Dallara. Managed his 4 year Airbus research project during the Ph.D.
- Electronics and Automation:* Some experience on PLC and microchip programming, and sensors, amplifiers and signal managements.

Interpersonal Skills

- Communication :* - Presented at international conferences, Airbus conferences and industrial meetings.
- Wrote 1 science journal paper, 2 conference papers and many industrial reports.
- Three years at Imperial College as teaching assistant, 2 years teaching at the ITSMaker
- Team Work:* - Worked in several teams in Dallara for various projects, including car design projects, research projects and car homologations.
- Worked within a research group, during the Ph.D. and collaborated with Airbus
- Created and worked in his Formula ATA/SAE Team for three years.
- Leadership:* - Managed and guided 5 master students during their final projects; all getting excellent marks.

Foreign Languages

English: Full proficiency (4 years in UK); *French:* Low intermediate; *Spanish:* Low intermediate.

Publications

- "A detailed finite element investigation of composite bolted joints with countersunk fasteners", Stocchi C, Robinson P, Pinho ST, 2013, journal paper, Composites Part A-Applied Science and Manufacturing, Vol: 52, Pages: 143-150, ISSN: 1359-835X, 25 citations at present day.
- "A detailed finite element investigation of composite bolted joints with countersunk fasteners", Stocchi C, Robinson P, Pinho ST, conference paper, ICCM18, 18th International Conference on Composite Materials, Jeju, South Korea, 2011
- "Using Strain Gauges to Monitor Bolt Clamping Force and Fracture in Composite Joints during Fatigue Tests", Stocchi C, Robinson P, Pinho ST, conference paper, ECCM15, 15th European Conference on Composite Materials, Venice, Italy, 2012

Honours and Memberships

Awarded with the "Aerospace Speakers Travel Grant" from the Royal Aeronautical Society, the "Post-Graduated Travel Grant" from the Old Centralians Trust and the "Conference Award" given by the Imperial College Trust. Member of the ATA (Associazione Tecnica dell'Automobile) (2006-2009), the Royal Aeronautical Society (2009-2013) and of the "Composite Centre" (2009-2013).

References available upon request.