



CLAUDIO GIANINI

STRUCTURAL ENGINEER AND PROFESSOR

PROFILE

I am a Structural Engineer with more than 30 years of experience built up in many Hi-Tech industrial fields: from railways to aerospace, from nuclear energy to Motorsport.

I can perform calculations with classical methods and with Finite Elements Models on complex structures made out of advanced materials: lightweight alloys, thermoset composites and metal matrix composites.

I am very familiar with static linear, non linear with large deflections, contacts and material plasticity and with dynamic analyses with both the implicit and explicit approaches.

I can work with total autonomy, but I am also a team player and I can act as a tutor for younger and less experienced colleagues in order to help them to perform their tasks; this attitude lead me, few years ago, to write and publish three books on the correct usage of the Finite Element Method: the latest one is available in both English and Italian languages.

In 2024 I won the tender to hold the course "Finite Element Simulation for Mechanical Design" at Politecnico of Milan.

CONTACTS

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SKILLS

- Strong Knowledge in **Solid Mechanics**
- Strong Knowledge in the **Finite Element Method Theory**
- Strong Knowledge in most of the commercial **CAE** software (**Abaqus, Ansys, Nastran**)
- Strong knowledge in most of the commercial **Pre-Processor** software (**Abaqus/CAE, ANSA, Hypermesh, FEMAP**)
- Very good capability in writing **technical reports**, articles and presentations
- Very good **communication** capability
- Very good ability in **tutoring** less experienced engineers
- Good ability in **leading** a team
- Excellent knowledge in **Italian** (mother tongue), both spoken and written
- Very good knowledge in **English**, both spoken and written (C1)
- Good knowledge in **French**, both spoken and written (B1)
- Basic knowledge in **German** (A2-B1)

PROFESSIONAL EXPERIENCES

Politecnico of Milan - Contract Professor

08.2024 – On going

Teaching the course "Finite Element Simulation for Mechanical Design" at the Piacenza Campus.

CG CAE Sagl - Founder, owner and Chief Technical Officer

09.2013 – On going

Managing the Company, but still keeping my hands on the most complex simulations. A list of our Customers cab found here: www.cgcae.com/customers/

Sauber Motorsport - Senior Structural Engineer

07.2012 – 10.2014

Supporting through **simulations** the design of lighter, stronger, stiffer and safer parts for the **Formula 1** vehicle, from suspension components to wings.

LTC Engineering - Co-Founder and Senior Structural Engineer

10.2009 – 06.2012

Responsible for the thermo-structural activities (contracts, simulations, employees management); main customer was the ITER (**International Themonuclear Experimental Reactor**) Organisation (www.iter.org).

Toyota Motorsport GmbH - Group Leader of the Structure Office

11.2005 – 09.2009

Responsible for the **structural analyses** of the whole group working on the **Formula 1** vehicle.

PUBLICATIONS

Co-Author of the text "Temi d'esame svolti di Costruzione di Macchine", a collection of solved Machine Construction exercises-
Author of almost 30 articles on the usage of the Finite Element Method in the Industry, published on various Italian technical magazines.
Author of the books "Computer Aided Structural Design", "Advanced Techniques in Structural Design" and "Computational Structural Engineering"
Co-Author of the paper: "ITER TF coil double pancake assembly: Laser welding numerical simulation"
Co-Author of the paper: "Limit analysis of narrow support elements in W7-X considering the serration effect of the stress-strain relation at 4 K"
Co-Author of the paper: "Engineering aspects of integration of ITER divertor diagnostics"

HOBBY

Reading
Writing novels (some of them have been published)
Playing guitar
Assembling and running (in races) radio-controlled car models, both on and off-road
Playing table tennis
Trekking/Hiking

PROFESSIONAL EXPERIENCES (Continued)

Dallara Automobili - Group Leader of the Structure Office

04.2004 – 10.2005

Responsible for the structural analyses of the whole group working on different sport vehicles.

Ferrari Gestione Sportiva (F1) - Senior Structural Engineer

06.2000 – 03.2004

Responsible for the structural design of all the **suspension** components.

AerMacchi (now Leonardo) - Senior Structural Engineer

01.1999 – 05.2000

In charge of the structural design of some Nacelle components for both **GE** and **Pratt & Whitney** engines.

Alenia Aerospazio (now Leonardo) - Structural Engineer

01.1998 – 12.1998

In charge of the structural design of some parts of the **Node 2** module of the **International Space Station**.

Firema Engineering - Structural Engineer

01.1994 – 12.1997

In charge of the structural design of **bogies** and **body shells** of **locomotives** and **trams**.

STUDIES

Politecnico di Milano

05.11.1987 - 23.10.1992

Master Degree in Mechanical Engineering - Final mark: 91/100

Dissertation topic: "**Cost optimisation in the design of the structure for a folding press**"; a resume of this job was published in PROGETTARE nr. 176, February 1995.

Liceo Scientifico Francesco Severi

09.1982 - 07.1987

Scientific High School Degree

OTHER COURSES

TBP I – Toyota Business Practice I

TBP II – Toyota Business Practice II

TPS – Toyota Production System

DRBFM – Design Review By Failure Mode

Communicative Competencies

Leadership