

## Personal Information

Claudio Gianini

Born in Milan (Italy) on Jan. 22<sup>nd</sup> 1968

Living in Viale Carlo Pereda 5 - 6828 Balerna (Switzerland)

Tel.: +41763094555

+393383662534

e-mail: [claudio.gianini@cgcae.com](mailto:claudio.gianini@cgcae.com)

Linkedin Profile: <https://www.linkedin.com/in/claudio-gianini-7677796/>



## Companies

- From January 2014 as founder and owner of the company CG CAE Sagl, specialized in the numerical simulation of the thermo-structural behaviour of complex mechanical assemblies - [www.cgcae.com](http://www.cgcae.com). CG CAE's main Clients are:
  - **Marengo Swisshelicopter (now Kopter AG)**: CG CAE has collaborated with the team of designers to the realization of the first helicopter made out of carbon fibers
  - **Picasso Automotive Creations SA**: CG CAE contributes to the design of parts made out of carbon fibers
  - **Scheurer Design & Engineering**: CG CAE supports the Company in designing carbon blades for fans installed into wind tunnels
  - **Porsche AG**: CG CAE has taken part to the development of the LMP1 project (Le Mans Prototype category 1) and it has contributed to the victory of the legendary 24 Hours of Le Mans and of the World Endurance Championship (WEC) - 2015 & 2016 Editions
  - **Swisside**: CG CAE contributes to the design of bicycle wheels, both made out of metallic materials and carbon fibres
  - **RUAG AG**: CG CAE collaborates to the structural sizing and verification of satellites components
  - **Italian Gasket**: CG CAE collaborates to the development of new solutions with elastomeric materials, taking care about their highly non-linear structural behavior
  - **Caterham Composites**: CG CAE has supported the design team in actualizing their carbon fibres products
  - **Sauber Motorsport AG**
- July 2012 - December 2013 at Sauber Motorsport AG as Senior Structural Engineer
- October 2009 - June 2012 as co-founder and responsible for the thermo-structural activities (contracts, simulations, employees management) at LTC Engineering, a company offering consulting services in numerical simulations (CFD, Electromagnetic and Thermo-Structural): main customer is the ITER (International Thermonuclear Experimental Reactor) project ([www.iter.org](http://www.iter.org))
- November 2005 - September 2009 at Toyota Motorsport GmbH as a Senior Structural Engineer in the chassis environment (monocoque, wings, suspension). **From January 2007 as the Group Leader for the structural design department (7 engineers in total)**
- April 2004 - October 2005 at Dallara Automobili, as the responsible of the structural design department
- 2000 - March 2004 at Ferrari Gestione Sportiva S.p.A. - Maranello (MO)
- 1999 - 2000 at AerMacchi S.p.A. - Venegono Superiore (VA)
- 1998 - 1999 at Alenia Aerospazio - Divisione Spazio - Torino (one year contract)
- 1994 - 1998 at Firema Engineering S.r.l. - Sesto. S. Giovanni (MI). The Company designs and produces rolling stock.

## Acquired Knowledge

As a **Stress Engineer** my job concerns the mechanical design from the point of view of the structural behaviour and the resistance of mechanical parts, assemblies and he related connecting systems. In particular my experiences involve the following aspects.

Execution of a complete structural analysis cycle: determination of the forces loading the structures, construction of **finite element models**, interpretation of the results for both **static and fatigue analyses**,

execution of [modal and buckling analyses](#), frequent interactions with the design office in order to achieve the [structural optimisation](#). Non-linear analyses are often needed in order to take into account big deformations, contact phenomena and material plastic behaviour. Moreover in these years I had the possibility to gain experience in the behaviour of advanced materials, such as [carbon fibre composites](#) (both high resistance and high modulus for stiffness) and [metal matrix composites](#). Previous experiences in the aerospace field (at Alenia and AerMacchi) gave me the knowledge on the classical materials: cast iron, steel, aluminium, titanium, magnesium.

- Writing of Technical Reports, which contain the description of the model and the calculation results, in conformity with the company procedures, certified by the [ISO 9001](#) normative
- Writing of Test Specifications, which contain all the necessary information (loads to be applied, positions of strain gauges and rosettes, when necessary) based on the finite element calculations
- Support in the execution of static stress tests, in order to evaluate the structural behaviour of the tested structures.
- Writing of Test Reports, in order to correlate the calculation results and the experimental data to validate the calculation model
- Checking Activity of those analyses which are sometimes performed by external people (job shoppers)
- Responsibility for the Chassis Structural Design of Toyota Motorsport GmbH (Cologne): experience in managing people (3 juniors and 3 seniors), their activity and the appraisal of their performance related to their personal targets and the Company targets respectively

## Other Professional Experiences

- As a free lancer I taught for one week (40 hours) [structural analysis basics and CAE](#) (Finite Element theory, modelling and pre-processing techniques) in a course organised by GENESIS association on behalf of Regione Lazio.
- I am co-author of the book “Temi d'esame di Costruzione di Macchine”, published by CUSL at Politecnico di Milano.
- I am the author of some articles (concerning the Finite Element Method and its practical use in the industrial environment) published in the technical magazines PROGETTARE and IL PROGETTISTA INDUSTRIALE.
- I am the author of the book “[Computer Aided Structural Design](#) – Guidelines in the automatic calculation of structures” (CG CAE Sagl, Balerna 2016).
- I am the author of the book “[Advanced Techniques in Structural Design](#) – Composites materials, instability, dynamics and non linearities”, (CG CAE Sagl, Balerna 2020).
- In 2021 I have completely reviewed and renewed the two books above by adding new topics and new examples and by combining them into the unique volume “[Computational Structural Engineering](#) – Automatic calculation of mechanical structures”, (CG CAE Sagl, Balerna 2021)

## CAE Knowledge

Besides a good knowledge in the Finite Element Method theory I can use the following computer codes:

- FEM in Windows 95/98/NT/2000/XP/7 environment:  
[NASTRAN 2012](#), [ANSYS 14.5](#), [ABAQUS 6.14](#), [I-DEAS Master Series 8.0](#), [ALGOR](#), [FEMAP 8.0](#), [HYPERWORKS 2017](#), [ANSA/META](#)
- Multi Body System in Windows environment:  
[ADAMS 12](#), for dynamic systems, both with rigid and flexible bodies.

## CAD Knowledge

In 3D environment, mainly for the construction of finite element models:

- [I-DEAS Master Series 8.0](#);
- [Solid Edge 7.0](#);
- [One Space Designer](#);
- [CATIA V5](#).

## General Computer Science Knowledge

During my studies I had occasion to work with the FORTRAN 77 programming language.

Moreover I can use the following software in the MS Windows 95/98/2000/NT/XP/7 environment:

- EXCEL, WORD, PowerPoint, MATLAB, MathCad.
- Basics in the UNIX/LINUX Operating System.
- Basics in the Hyper Text Markup Language (HTML), used to build web pages.

## Studies

- Scientific High School certificate (Diploma di Maturità Scientifica) achieved in 1987;
- [University degree \(5 years\) in Mechanical Engineering \(Laurea in Ingegneria Meccanica\)](#) achieved on Oct. 23<sup>rd</sup> 1992, obtaining 91/100; the subject I discussed was: “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.

## 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

## Languages

- Very good knowledge in both spoken and written [English](#), improved by some stays in Great Britain.
- Good knowledge in [French](#), both written and spoken.
- During the period I spent in Germany I have studied [German](#).

## Hobbies

- Reading
- Writing novels (some of them have been published)
- Playing guitar
- Assembling and flying radio-controlled helicopter models
- Playing tennis
- Trekking/Hiking