

CURRICULUM VITAE

Jean-François CARON

Born the 11th of October, 1964

Married, 3 children,

Nationality French

Position: Research Director, Senior Researcher and Professor in Ecole des Ponts ParisTech.
Paris-Est University, Navier Laboratory, Ecole des Ponts parisTech, 6-8 ave Blaise Pascal
77455 Marne la Vallée, France

Phone number: +33 (0)6 88 55 79 22

Jean-Francois.caron@enpc.fr



SKILLS

Mechanics of Materials, Structural Engineering, Composite materials

Team Manager of a 40 members research unit.

WORK EXPERIENCE

- ▶ 2010 Team manager of AMS, Architected Materials and Structures, Navier Laboratory
- ▶ 2006 Senior Researcher from MEDAD French Ministry
- ▶ 2003 Professor in ENPC
- ▶ 2000 Professor Research Habilitation, Paris-Est University, Marne la Vallée

- ▶ 1993 PhD from Ecole nationale des Ponts et Chaussées, Mechanics of Material
- ▶ 1987 Master of Science: ENPC/PARIS 6 Pierre et Marie Curie, Mechanics for Construction.

RESEARCH INTERESTS

My scientific contributions concern essentially the modelling of multilayered structures and composites, and the studies of innovating composite structures for construction.

I have developed several theoretical and numerical tools devoted to the calculation of interfaces, edge effects, delamination, bonding and anchoring. The models derive from layerwise proposals of Pagano, and many developments and publications were realised under my direction. Well adapted for aeronautical applications, they are also and more recently interesting for new and innovative multilayered structures as proposed today, wood/concrete, composite/concrete, glulam etcí .involving bonding and other connection systems.

I am also implicated in the development and the design of these kind of innovative multilayered structures and I have already proposed several new complexes involving composite materials, wood and concrete. Specific researches are focused on the connections and anchorage systems and I am the co-author of several patents. These innovations are experimentally tested and scale:1 prototypes have been built, connectors, beams, slabs, sandwiches panels and footbridges. I actively participate also to the development of all-composites structures for building, composite curtain walls and gridshells which offer an

important freedom of shape for the designer. Here also, prototypes have been realised by my team and I only cite the *Ephemeral cathedral of Creteil*, 2014, France, a GFRP gridshell, made with pultruded tubes. The covered surface is 350 m², 1775m of pultruded tubes were used and the weight of the structure is 5kg/m². (Contractor: Structural engineering company T.E.S.S.). For 2 years, I focus also my research on digital construction, 3D printing and robot for construction.

PUBLICATIONS

- 40 International Publications
- More than 50 international conferences
- 3 Patents

TEACHING

- Professor in ENPC, Department of mechanics
- Lecturer in Ecole Polytechnique, ENSTA, EIVP

OTHER ACTIVITIES

- Member of European Working Group 4, TC250, Composite Material Eurocode for new structures, since 2012
- Member of board meeting of *Orgagec, Organic Materials for Construction*, since 2006
- Member of board meeting of *AMAC, Association pour le développement des Matériaux Composites* since 99
- Expert for composite innovations and/or sinister, PhD reviewer , Journal reviewer (Composites structures, Composite Science and Technology, Int. Journal of Solid and Structures ...)

AWARDS

- TSUBOI best paper award, from international Association for Shell and Spatial Structures: C. DOUTHE, O. BAVEREL, J.F. CARON, Gridshell in composite materials : towards wide span shelters, Journal of the International Association for Shell and Spatial Structures, Vol. 48, pp. 175-180, 2007.
- JEC Award 2013: High-energy-efficiency façade panels based on composite profiles. Partners: Owens Corning, Ademe , Exel Composites, CSTB, Goyer, Compositec, Ecole des Ponts.