

Patrice Cartraud

Ecole Centrale de Nantes (ECN)
GeM Institute
1 Rue de la Noë, BP 92101
F-44321 Nantes, France

Phone: +33 2 40 37 25 85

Fax: +33 2 40 37 25 73

e-mail: patrice.cartraud@ec-nantes.fr

Current position

Assistant Professor of mechanical engineering, Ecole Centrale de Nantes

Education

Mechanical Engineering, Ecole Centrale de Nantes, (France) (1988)
Ph. D. Ecole Centrale de Nantes, (France) (1994)

Research Interests

Homogenization and multiscale methods
Modeling and computation in structural Mechanics
Dynamics of turbomachinery

Career

Assistant Professor of Mechanical Engineering, Ecole Centrale de Nantes, since 1994
Habilitation à diriger les recherches, Ecole Centrale de Nantes, 2003

Professional activities

Community services

Executive Council, French Computational Structural Mechanics Association, since 2001
Secretary General, French Computational Structural Mechanics Association, since 2003

University services

Recruiting board of the Ecole Centrale de Nantes since 1996
Head of the Computational Structural Mechanics speciality at Ecole Centrale de Nantes since 2000
Vice-head of Mechanical, Civil and Material Science Engineering Department, Ecole Centrale de Nantes, since 2003
Head of the computational structural mechanics speciality, Master of applied mechanics, Ecole Centrale de Nantes, since 2003

Summary of journal publications

| Journal | Impact factor | Number of papers |
|--|----------------------|-------------------------|
| International Journal of Solids and Structures | 1,327 | 3 |
| Other indexed journals | | 4 |
| Other papers in refereed journals | | 2 |

Selected publications (max. 5)

Buannic N., Cartraud P., "Higher-order effective modelling of periodic heterogeneous beams – Part I : Asymptotic expansion method", Int. J. of Solids and Structures, 38, p 7139-7161, 2001.

Buannic N., Cartraud P., "Higher-order effective modelling of periodic heterogeneous beams – Part II : Derivation of the proper boundary conditions for the interior asymptotic solution", Int. J. of Solids and Structures, 38, p 7163-7180, 2001.

Buannic N., Cartraud P., Quesnel T., "Homogenization of corrugated core sandwiches", Composite Structures, 59(3), p 298-311, 2003.

Moës N., Cloirec M., Cartraud P., Remacle J.-F., "A computational approach to handle complex microstructure geometries", Comput. Meth. in Applied Mech. and Engrg., 192, p 3163-3177, 2003.

Cartraud P., Messenger T., "Computational Homogenization of Periodic Beam-Like Structures", Int. J. of Solids and Structures, in press

Other relevant information

Workshop and conference committees :

Scientific Committee

- 6th et 7 th colloque national en calcul des structures, 2003 and 2005

Organizing committee

- 1st Int. Conf. on Integrated Design and Manufacturing in Mechanical Engineering 1996
- 3rd colloque national en calcul des structures, 1997