



Roger OHAYON

CV (2017)

NAME : Roger OHAYON

Current Position Title: Professor, Emeritus

Chair of Mechanics,

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Nationality: France

AWARDS - DISTINCTIONS:

1989: *French Academy of Science – Award for Mechanical and Numerical Modeling of Fluid-Structure Interaction Problems*

1992-1997: **President of French Computational Structural Mechanics Association (CSMA)**

1993: **Honorary Member of National Academy of Engineering of Brazil**

1998: **Fellow of the International Association of Computational Mechanics (IACM), Corresponding Member for France in the IACM Executive Council**

2001: **Member of Air and Space Academy, France**

2001: **Member of the Technical Committee of ASME/Adaptive Structure and Material Committee**

2004: *International Association of Computational Mechanics (IACM) Award*

2004: **Fellow ASME**

2007: *ASME Adaptive Structures and Materials Systems Prize (delivered at the 48th AIAA/ASME/AHS Conference, April 23-26, Honolulu, Hawaii)*

2008: *IACM Computational Mechanics Award 2008: EASD (European Association of Structural Dynamics) Senior Award*

2010: *Prandtl Award given in May 2010 at the European Conference on Computational Mechanics, ECCOMAS/ECCM, Paris*

2012: Fellow AIAA

2013: *Lifetime Achievement Award for Smart Materials and Structures, given at SPIE Conference, March 2013, San Diego*

2013: *Alexander von Humboldt Research Award/ Germany*

MEMBER OF EDITORIAL BOARD OF INTERNATIONAL JOURNALS (13):

- Engineering Computations
- Archives for Computational Mechanics
- International Journal of Computational Engineering Science
- Communications in Numerical Methods in Engineering
- Computational Mechanics
- Computers and Structures (term 2006)
- International Journal for Numerical Methods in Engineering (IJNME)
- Computer Methods in Applied Mechanics and Engineering (CMAME)
- ASME Journal of Vibration and Acoustics (Associate Editor, term 2007)
- Journal of Intelligent Material Systems and Structures (Associate Editor)
- International Journal of Smart Structures and Systems
- Ocean Systems Engineering
- AIAA Journal (Associate Editor)

PUBLICATIONS IN INTERNATIONAL REFEREED JOURNALS (more than 100)

BOOKS

- 1) **H. Morand, R. Ohayon. Interactions Fluides – Structures (Recherches en Mathematiques Appliquees, Collection P.G. Ciarlet and J.L. Lions), Masson Ed. , 1992**
- 2) **H. Morand, R. Ohayon. Fluid-Structure Interaction, Wiley, 1995**
- 3) **R. Ohayon, C. Soize. Structural Acoustics and Vibration, Academic Press, 1998**
- 4) **R. Ohayon, C. Soize . Advanced Computational Vibroacoustics. Cambridge University Press (2014).**

EXPERTISE (Summary)

After being Researcher at ONERA, the aerospace research laboratory in France, Roger Ohayon joined the Conservatoire National des Arts et Metiers (CNAM/Structural Mechanics and Coupled Systems Research Laboratory) as Professor Chair of Mechanics where he is now Emeritus Professor. He is Fellow of several associations (AIAA, ASME, IACM) and he is the recipient of Humboldt Research Award, Lifetime Achievement SPIE Award, ASMS/ASME/AIAA Award, Prandtl Award from Eccomas, IACM Awards, EASD Senior Prize, French Academy of Science Award. His expertise lies in Mechanical and Computational Modeling of Fluid-Structure and Structural Acoustics Interaction Problems and Smart Structural Systems. He is in the editorial board of thirteen international journals such as IJNME, CMAME, Computational Mechanics and associate editors of JIMSS and AIAA. He is the co-editors of several books, co-author of more than one hundred publications in refereed international journals.

Roger Ohayon is the author/co-author of 4 books (3 in English), of 5 chapters of books, is editor/co-editor of 6 books. He was guest editor of 4 special issues of International Journals (IJNME, CMAME, Comp. & Struct.). He published more than 100 articles in international refereed journals, more than 200 papers in proceedings of international conferences; he gave 8 invited plenary and semi-plenary lectures, 12 invited lectures. He has been or is the advisor of 38 PhD students.

Roger Ohayon has pioneered the development of mechanical and computational methods for prediction of fluid-structure vibrations of coupled systems, mainly for liquid-propelled launch vehicles (sloshing and hydroelastic vibrations) including the POGO effects and also in structural acoustics of complex systems. The methods developed by Roger Ohayon are not only research ideas but have effectively been applied in aerospace industry in France and in Europe.

He proposed original new symmetric formulations, reduced-order models and dissipative interface modeling for predictive computational models in fluid-structure interaction (hydroelasticity and sloshing) and in structural-acoustics (noise prediction).

In this context of fluid-structure interaction (attenuation for liquids in reservoirs) and of structural-acoustics (for noise reduction), he proposed to reduce vibrations using structural devices for smart adaptive intelligent thin systems and more recently, has proposed an original dissipative interface modeling using passive/active and hybrid treatments.