Modeling in Applied Mechanics

A symposium to honour Patrick Le Tallec

Thursday **December 11th** 2025

Amphitheater Building 104
École Polytechnique

Patrick Le Tallec

Patrick Le Tallec obtained his Ph.D. from the University of Texas at Austin and his Doctorat d'État from Université Pierre et Marie Curie. He started his career as a scientist at Laboratoire Central des Ponts et chaussées before joining the University of Paris Dauphine in 1988 and École Polytechnique in 1999. There, as Professor of Mechanics, he has played a leading role in the development of computational mechanics. From 1999 to 2004, he served as Vice President overseeing academic affairs, and from 2020 to 2024, he was Dean of the Bachelor of Science program. He also directed the **Laboratoire de Mécanique des Solides** at École Polytechnique for eight years, leading it with dedication and vision.

His research has made significant contributions to nonlinear numerical methods, including augmented Lagrangian and domain decomposition techniques, to nonlinear mechanics including contact and large deformation analysis, and to fluid-structure interaction, multiscale modeling, and, more recently, the mechanical behavior of biological materials and structures. He held the André-Citroën chair established from 2011 to 2017. Throughout his career, he has received numerous distinctions, including the **Prix Blaise Pascal** of the French Academy of Sciences, the **Prix CISI Ingénierie**, and the **Fellow Award of the International Association for Computational Mechanics (IACM)**, and he served as president of SMAI (French Society of Applied and Industrial Mathematics) from 1999 to 2001. He is the author of a broad range of influential papers published in leading international journals. Over the course of his career, he has supervised **41 Ph.D. students**, a remarkable testament to his commitment to mentoring new generations of researchers and to the lasting impact of his guidance within the mechanics community.

Free registration by email at alexandra.joly@polytechnique.edu by December, 1st
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Laboratoire de Mécanique des Solides - https://lms.ip-paris.fr

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08:45 – 09:00	***Welcome*** – **Andrei Constantinescu**, Director of LMS
09:00 - 09:45	**Sanjay Govindjee**, University of California, Berkeley, USA *Modeling of microstructural ordering in liquid crystal elastomers*
09:45 - 10:15	**Céline Grandmont**, INRIA, France *Development and analysis of numerical methods for simulating slender elastic structures immersed in a fluid*
10h15 - 10:45	**Philippe Moireau**, École Polytechnique, France *Observer mechanics for mechanics*
10:45 - 11:15	***Coffee Break***
11:15 - 11:45	**Patrice Hauret**, **Christophe Rahier**, **Joachim Guilie**, Michelin, France *Patrick & Michelin, a long story in elastomer modelling*
11:45 - 12:15	**Michel Ravachol**, Dassault Aviation, France *Design space exploration for conceptual/preliminary aircraft design*
12:15 - 12:45	**Anne-Virgine Salsac**, UTC, France *Journey in biomechanics modeling non-linear fluid structure interactions and buckling effects*
12:45 - 13:45	***Lunch***
13:45 - 14:30	**Leszek Demkowicz**, University of Texas, Austin, USA *Analysis of signal loss in bent optical fibers*
14:30 - 15:00	**Benoît Perthame**, Sorbonne Universtité, France *Boltzmann equations for cell movement*
15:00 - 15:30	**Frédéric Hecht**, Sorbonne Université, France *Une petite histoire de FreeFEM de 1992 à 2025*
15:30 - 16:00	***Coffee Break***
16:00 - 16:30	**Ustim Khristenko**, Safran, France *Uncertainty analysis for mechanical properties in stochastic materials*
16:30 - 17:00	**Gabriel Barrenechea**, University of Strathclyde, United Kingdom *A structure-preserving finite element method for a problem in non-Newtonian fluid mechanics*
17:00 - 17:30	**Ferdinando Auricchio**, Universita di Pavia, Italy *Additive Manufacturing: some theoretical and computational unresolved issues*
17:30	**Closing Address** by **Laura Chaubard**, *(IGA) President of École Polytechnique, Director General*

Please join us for a reception following the symposium.