The Combustion Institute



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Thierry Poinsot

Candidate, 2016 CI Board of Directors

Reasons for Nomination

I started working in the field of combustion in 1983 (PhD on combustion instabilities under the supervision of Pr S. Candel). I have been involved in this community both at the academic level and in the field of applications, working with industry over many years.

Combustion is the source of 85 % of the world's energy but our global action as a group and our capacities to influence research in this field remain limited compared to what it should be. Improving this situation means making the Combustion Institute more efficient and more powerful. Most technical societies (AIAA, SAE, ASME...) are larger than the Institute by orders of



T. Poinsot

magnitude, thereby bringing significant support to their members: even if the Institute does not have to grow to these sizes, I believe that it should increase its scope and power by a large amount.

I have become familiar with many of the outstanding problems in the field of combustion and with the global challenges the combustion community is facing today. I have also participated to the action of the Combustion Institute for a long time, helping in various positions (Chair of the San Francisco Symposium with Pr Chung, associate editor of Comb. Flame) in Europe. The future of the Institute is an important question to me and participating to the Board of Directors is a logical way to pursue this action.

See next page(s) for candidate's curriculum vitae.

Thierry POINSOT

PROFESSIONAL PREPARATION

• PhD Thesis 1987. Experimental and theoretical analysis of combustion instability in premixed turbulent combustors. Adviser: Pr S. Candel (Ecole Centrale Paris)

APPOINTMENTS

- Research director, Institut de Mécanique des Fluides de Toulouse (CNRS and Institut National Polytechnique de Toulouse). Head of the PSC group (Particle, Sprays and Combustion).
- Leader of the CFD team at CERFACS (Center for Research and Formation for Advanced Scientific Computations).
- Senior research scientist at CTR (Center for Turbulence Research, Stanford University and NASA Ames) during summer months since 1990.

RESEARCH INTEREST AND EXPERTISE

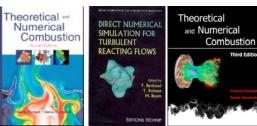
- Supervision of 65 PhD thesis, 30 post doctoral works and 100 Master thesis since 1983.
- Organized and managed more than 200 contracts for industry (PSA, Renault, Mercedes, Alstom, Ansaldo, Snecma, Turbomeca, Air Liquide, Airbus, Total, Snecma DMS, Siemens, Honeywell, Ferrari, PSA, Renault...) and for French organizations (DGA, ANR, DPAC) and European programs (FP 5, 6 and 7, Marie Curie programs, STREPS, IP) agencies.

TEACHING ACTIVITIES

• Courses taught on Computational Fluid Dynamics, numerical combustion, theoretical combustion at

Ecole Centrale Paris, Institut Supérieur de l'Aéronautique et de l'Espace, ENSEEIHT, INSA Toulouse, Stanford, Von Karmann Institute, CISM, Collège de Polytechnique, Princeton and Tsinghua (CEFREC program), Kanpur (GIAN program)...

• Author of "Theoretical and numerical combustion", textbook on combustion. Third edition available on elearning.cerfacs.fr.



AWARDS

- Médaille de bronze CNRS in 1988 and best DRET Scientist 1991 (French Army Research Organization)
- First Cray Prize (Scientific Computing) in 1993
- Prix Edmond Brun of Academie des Sciences in 1996 (Fluid Mechanics)
- First BMW prize as adviser for PhD of B. Caruelle in 2002.
- Grand Prix de l'Académie des Sciences, Paris, 2003.
- AIAA Associate Fellow in 2003.
- 'Prime d'excellence scientifique' of CNRS since 2009.
- ERC advanced grant in 2013 on thermoacoustics (http://intecocis.inp-toulouse.fr: 2.5 Meuros).

PROFESSIONAL ASSOCIATIONS MEMBERSHIPS

- Associate Editor of Combustion and Flame
- Program chair of the 35st Symp. (Int.) on Comb., San Francisco 2014 (with Pr S. Chung, KAUST)
- Member of the Scientific Steering Committee of *PRACE* (www.prace-project.eu). Member of the EESI (European ExaScale Initiative) in the Industrial and Engineering applications (www.eesi-project.eu).
- Expert for the French ministry of research (DSPT 8), National Science Foundation, ANR (Agence Nationale pour la Recherche), European Commission, ERC programs.
- Reviewer for Combustion and Flame, Journal of Computational Physics, Combustion Science and Technology, Combustion Theory and Modelling, Journal of Fluid Mechanics, Journal of Sound and Vibration, Journal of Propulsion and Power, AIAA Journal, J. Prop. Power, Journal de Physique, Flow Turbulence and Combustion, CR Académie des Sciences...