

Curriculum vitae

Alain Merlen. "Exceptional class" Professor .Consultant ONERA
Institut d'électronique microélectronique et nanotechnologies UMR CNRS 8520
Born 29 Décembre 1953 à Boulogne sur mer (France)
Nationality French
Married, 3 children
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1 Diplomas

- 1979** Engineer in aeronautics - Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (ENSAE, sup aéro - Toulouse).
1988 Docteur ès sciences physiques (mechanics) - Thèse d'Etat Université des Sciences et Technologies de Lille (USTL)

2 Carreer

- 1979** Research engineer at "Institut de mécanique des fluides de Lille" (IMFL)
1983 IResearch engineer Office National d'Etudes et de Recherches Aérospatiales. (ONERA)
1991 Professor 2nd classe, USTL. Dept mechanics. UFR de Math. (1er octobre) and consultant at ONERA.
1999 Promotted first class professor by the "Commission Nationale des Universités" (CNU section 60).
2007 Promotted exceptionnal class Professor by CNU section 60.

3 Research

3.1 Topics

Gas Dynamics and Shock Waves essentially from 1981to 1991
Acoustiics and nonlinear wave propagation from 1991
Particle laden flows from 1993 with applications in **microfluidique**.
Flow control by microsystems from 1999 with ONERA .

3.2 Main scientific production

Peer reviewed internatinal Journals : 46 (JFM, Eur J. Mech, AIAA J., Phys Fluids, Appl Phys Let., Phys. Rev. Let, Phys. Rev. E, JASA, , Acta Ac., Shock Waves , J. Micromech-Microeng., Biomicrofluidics, J. Bionic eng., CRAS,...)
invited conferences : 7
Congresses : 58 international with proceedings ; 60 others
licences 3,
Reports : > 30
Supervized PHD : 15 (all have a job in universities, industries or research agencies). 2 in progress.

3.3 Expertizes

Revues : Acta Astronautica, Shock waves, Arab journal of mathematics, Journal de Physique III, computers and fluids, Powder and Technology, CRAS, Mécanique et Industries. SIAM J. of appl math, Congrès Français de mécanique, Langmuir..

Institutions MEN-DSPT8, Engineering and Physical Sciences Research Council (UK), AERES, MSTP, ANR.

Edition Member editorial board of "Mécanique et Industries"- EDP , and "Shock Waves"- Springer.

4 Teaching

level undergraduates, Masters, engineering schools

Thèmes : Fluid mechanics, continuous media, statistical physics, numerical methods

Responsabilités Head of Master "mécanique, génie mécanique et génie civil " of USTL(Lille 1) (2005-2007)

5 Main responsibilities

1984-1988 Member of the orientation board of IMFL

1984-1988 Member of the administration board of ONERA

1993-1997 Head of mechanics department of USTL

1995-2003 Member of the CNU (section 60)

1993-1997 Secretary of "Association Universitaire de Mécanique" (AUM)

1998-2001 Member of the board of "Association Française de Mécanique" (AFM)

2001-2005 Chairman of AUM

2003-2005 Member of "Conseil scientifique de l'AFM".

2005-.2006 Member of the scientific department "Engineering science" of ANR (Nat. Agency for Research)

2005-2007 Member of MSTP (DS8 - Engineering science) (Evaluation dept. French Ministry of research.

2007-2009 Scientific adviser AERES (French agency of research evaluation)