

EXTENDED CURRICULUM VITAE

Jean-Baptiste Leblond

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Personal data

- Name : Leblond, Jean-Baptiste Maurice.
- Birth : May 21, 1957, French citizen.
- Professional address : Sorbonne Universités, Université Pierre et Marie Curie (Paris VI), Institut Jean Le Rond d'Alembert, Tour 55-65, 4 place Jussieu, 75252 Paris Cedex 05, France - Phone +33 1 44 27 39 24, fax +33 1 44 27 52 59, e-mail jbl@lmm.jussieu.fr.
- Web page : <http://www.dalembert.upmc.fr/home/leblond/index.php>.

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Studies and diploma

- Baccalauréat, option: mathematics, grade: Très Bien (1974).
- Admitted in Ecole Polytechnique, rank: 3, option: mathematics, resigned (1976).
- Admitted in Ecole Normale Supérieure, rank: 2, option: mathematics (1976).
- Studies at Ecole Normale Supérieure and Université Paris VI :
 - * Maîtrise de physique (1977) (equivalent of Bachelor).
 - * DEA de physique atomique et statistique (1978) (equivalent of Master).
 - * Admitted in Corps National des Mines (1979).
 - * Thèse de 3ème cycle, speciality: molecular physics (1980).
 - * Doctorat d'Etat ès sciences physiques, speciality: mechanics and materials science (1984) (equivalent of Ph.D.).

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Past and present positions

- Career with Corps des Mines :
 - * Ingénieur des mines, Laboratoire de Mécanique des Solides (LMS), Ecole Polytechnique (1982 to 1985).
 - * On secondment from Corps des Mines with Ecole Polytechnique (1985 to 1988).
 - * Ingénieur en chef des mines (on secondment with Ecole Polytechnique) (1988).
- Career with Ecole Polytechnique :
 - * Full-time lecturer, Department of Mechanics (1985 to 1988).
 - * Part-time lecturer, Department of Mechanics (1988 to 1996).
- Career with Université Paris VI :
 - * Professeur de 2ème classe (1988 to 1991), Laboratoire de Modélisation en Mécanique (LMM). This lab merged some years later with other ones to form the new Institut Jean Le Rond d'Alembert.
 - * Professeur de 1ère classe (1992 to 2003).
 - * Professeur de classe exceptionnelle (since 2003).
- Scientific advisor with ESI Group (Engineering Systems International) (formerly Centre de Calcul de Framatome, then Framasoft + CSI, then Systus International) (since 1980).

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Prizes and distinctions

- 3rd prize, International Olympiads of Mathematics (East Germany, 1974).
- 3rd prize, International Olympiads of Mathematics (Bulgaria, 1975).
- “Jeune Chercheur” Prize of Direction des Etudes et Recherches (1987).
- Jean Mandel Prize, Ecole des Mines de Paris (1989).
- Fourneyron Prize, French Academy of Sciences (1993).
- Junior member of the Institut Universitaire de France (1993 to 1998).
- Corresponding member of the French Academy of Sciences, Division of Mechanical and Computer Sciences (1997 to 2005).
- Member of the French Academy of Technologies (since 2000).
- Member of the French Academy of Sciences, Division of Mechanical and Computer Sciences (since 2005).
- Senior member of the Institut Universitaire de France (since 2007).
- Chevalier de l’Ordre des Palmes Académiques (since 2011).
- Fellow of the European Mechanics Society (since 2012).

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Scientific publications and reports

Remark: A full list of contributions of the first and third categories below is given in another document.

- 110 papers in international scientific journals.
- 3 papers in national technical journals.
- 1 book and 3 chapters of books.
- 64 papers in conference proceedings (including 25 invited talks).
- 2 theses.
- 37 contract reports.

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Invited talks and courses given abroad

Remark: This section does not include invited talks in regular conferences and symposia.

- *Numerical simulations of welding processes*, Oak Ridge National Laboratories, Oak Ridge (USA) (July 1990).
- *Bifurcations in porous ductile solids with non-local damage*, Göteborg University (Sweden) (April 1991).
- *The hollow porous plastic sphere problem - Applications to ductile fracture*, Technical University of Denmark, Lynby (Denmark) (May 1993).
- *Crack front segmentation under mixed mode (I+III) loading*, Sheffield University (GB) (April 1995).
- *Modelling of strain hardening effects in porous ductile solids*, Sheffield University (GB) (April 1995).
- *Recent extensions of Gurson's model for porous ductile metals*, International Center for Mechanical Sciences, Udine (Italy) (August 1996). (Because of unexpected circumstances, this course was given by my Ph.D. student M. Gologanu).
- *Ductile rupture at low triaxialities: influence of inclusions upon void growth and coalescence*, GKSS, Geesthacht (Germany) (April 2000).
- *Crack front rotation and segmentation in brittle solids loaded in mixed mode I+III or I+II+III*, GKSS, Geesthacht (Germany) (April 2001).
- *Geometrical disorder of the front of a tensile tunnel-crack slightly perturbed within its plane*, University of Pennsylvania, Philadelphia (USA) (April 2003).
- Same title, Harvard University, Cambridge (USA) (April 2003).
- *Void coalescence, shear bands and their interactions in porous ductile solids*, Brown University, Providence (USA) (April 2005).
- *Problems of coplanar crack growth in three-dimensional elastic solids*, Texas A&M University, College Station (USA) (June 2005).

- *Une théorie de la localisation de la déformation en minces couches planes dans les solides poreux ductiles*, Université de Louvain-la-Neuve (Belgium) (November 2006).
- *Deformation of the front of an interface crack propagating in an elastic medium with random fracture properties*, Liverpool University (GB) (January 2007).
- *Modern approaches of fracture and damage of solids*, Claude Bernard Conference 2007, Royal Society, London (GB) (January 2008).
- Same title, Yokohama University (Japan) (October 2008).
- *A new approach of strain localization within thin planar bands in porous ductile solids*, Cambridge University (GB) (January 2008).
- Same title, Kyoto University (Japan) (October 2008).
- *Slight in-plane perturbation of a system of two coplanar parallel tensile slit-cracks*, Kyoto University (Japan) (October 2008).
- *Introduction to the mechanics of brittle fracture*, Yokohama University (Japan) (October 2008).
- *Strain localization in porous ductile solids*, Hong-Kong Polytechnic University (China) (February 2009).
- *Void growth and dilatant plasticity*, Université de Louvain-la-Neuve (Belgium) (January 2010).
- *In-plane coalescence of cracks*, Technical University of Denmark, Lyngby (Denmark) (February 2010).
- *Crack front instability in mode I+III: experimental and theoretical approaches*, Cambridge University (GB) (February 2011).
- Same title, Brescia University (Italy) (November 2011).
- *Micromechanically-based models of ductile fracture*, Antalya University (Turkey) (May 2013).

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Supervision of extended training periods and theses

- Training period of Ecole Polytechnique of O. Torlai (May 1988 to July 1988).
- Training period of Corps des Mines of G. Perrin (July 1988 to August 1989).
- Ph.D. thesis of G. Perrin (defended on July 8, 1992). G. Perrin is now a research engineer with Areva.
- Ph.D. thesis of S.E. Mouchrif (defended on July 5, 1994). S.E. Mouchrif is now an engineer with Interfaces.
- Ph.D. thesis of P. Autesserre (defended on June 1, 1995). P. Autesserre is now a research engineer with Arcelor-Mittal.
- Ph.D. thesis of M. Costantini (defended on June 26, 1996). M. Costantini is now an engineer with Délégation Générale pour l'Armement.
- Ph.D. thesis of V. Lazarus (defended on September 18, 1997). V. Lazarus is now an assistant professor at Université d'Orsay (Paris XI).
- Ph.D. thesis of M. Gologanu (defended on December 8, 1997). M. Gologanu is now an engineer with Honeywell.
- Ph.D. thesis of K. Siruguet (defended on January 19, 2000). K. Siruguet is now an engineer with Unilog.
- Training period of Ecole Polytechnique of P. Mouro (April 1998 to September 1998).
- Ph.D. thesis of P.B. Badel (defended on July 5, 2001). P.B. Badel is now a research engineer with EdF.
- Ph.D. thesis of L. Flandi (defended on June 11, 2004; this thesis was co-supervised by J. Frelat). L. Flandi is now a research engineer with EdF.
- Ph.D. thesis of F. Faure (defended on June 9, 2004; this thesis was co-supervised by J.M. Bergheau). F. Faure is now an engineer with Areva.

- Ph.D. thesis of E. Favier (defended on October 13, 2005; this thesis was co-supervised by V. Lazarus). E. Favier is now an assistant professor at Université de Marne-la-Vallée.
- Ph.D. thesis of V. Godard (defended on January 21, 2005). V. Godard is now a research engineer with EdF.
- Ph.D. thesis of K. Enakoutsa (defended on January 15, 2007; this thesis was co-supervised by B. Audoly). K. Enakoutsa is now working in the industry in the USA.
- Ph.D. thesis of J.B. Brunac (defended on October 20, 2006). J.B. Brunac is now an engineer with BNP in London.
- Ph.D. thesis of Y. Duan (defended on December 14, 2007; this thesis was co-supervised by J.M. Bergheau). Y. Duan is now an engineer with ESI Group.
- Ph.D. thesis of N. Pindra (defended on July 10, 2009; this thesis was co-supervised by V. Lazarus). N. Pindra is now an assistant professor at the University of Lomé (Togo).
- Ph.D. thesis of A. Jardin (defended on November 2, 2009). A. Jardin is now an engineer with Safran.
- Ph.D. thesis of T. Heuzé (defended on 20 mai 2011; this thesis was co-supervised by J.M. Bergheau). T. Heuzé is now an assistant professor at Ecole Centrale de Nantes.
- Ph.D. thesis of L. Legrand (defended on 12 décembre 2011; this thesis was co-supervised by V. Lazarus). L. Legrand is now an ATER (temporary teaching and research assistant) at Université Pierre et Marie Curie (Paris VI).
- Ph.D. thesis of K. Madou (defended on 14 septembre 2012). K. Madou is now an engineer with ESI Group.
- Ph.D. thesis of H. Amin El Sayed (beginning of the thesis in September 2010; the thesis is co-supervised by J.M. Bergheau).
- Ph.D. thesis of M. Vasoya (beginning of the thesis in November 2011; the thesis is co-supervised by V. Lazarus and L. Ponson).
- Ph.D. thesis of L. Morin (beginning of the thesis in September 2012; the thesis is co-supervised by D. Kondo).

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Editorial responsibilities

- Associate editor of **Continuum Mechanics and Thermodynamics** (1994 to 1998).
- Member of the Editorial Board of the series **Etudes en Mécanique des Matériaux et des Structures**, directed by P. Ladevèze and published by Hermès (since 1994).
- Associate editor of **European Journal of Mechanics A/Solids** (1997 to 2007).
- Editor-in-chief of **Comptes-Rendus Mécanique** (since 2008).
- Member of the Editorial Board of the **Rumanian Journal of Technical Sciences - Applied Mechanics** of the Rumanian Academy of Sciences (since 2011).
- Member of the Editorial Board of **International Journal of Fracture** (since 2013).

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Teaching activities

- At Ecole des Mines de Paris :
 - * Introduction to plasticity (1982/3 to 1987/8).
 - * Rational mechanics (1982/3).
 - * Continuum mechanics and elasticity (1983/4 and 1984/5).
- At Ecole Polytechnique :
 - * Continuum mechanics and elasticity (1986/7 to 1990/1, 1995/6).
 - * Fluid mechanics and mechanics of discrete systems (1985/6 and 1986/7).
 - * Materials science (1987/8 and 1991/2 to 1994/5).
 - * Mechanics of brittle fracture (1992/3 to 1994/5).
 - * Damage of materials and structures (1995/6).
- At Université Paris VI :
 - * Mechanics of rigid bodies (1989/90 to 1992/3, 2001/2 to 2006/7).
 - * Theories of beams and plates (1988/9 to 2000/1).
 - * Introduction to the theory of generalized functions (1998/9).
 - * Vibrations of elastic systems (2000/1).
 - * Modelling in mechanics of solids (2001/2 to 2012/3).
 - * Introduction to Hill-Mandel's theory of homogenization (1988/9).
 - * Mechanics of brittle fracture (1989/90 to 1993/4, 2000/1 ...).
 - * Mechanics of ductile fracture (1994/5 to 1999/2000).
 - * Composite materials (1998/9 and 1999/2000).
 - * Plasticity theory (2000/1 to 2006/7, 2013/4 ...).

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Miscellaneous

- * Member of the Scientific Council of Laboratoire de Mécanique des Sols, Structures et Matériaux, Ecole Centrale de Paris (1992 to 1994).
- * Foreign expert for the appointment of a professor of mechanics at Lulea University (Sweden) (1993).
- * Vice-President of the Comité Français de Mécanique (2004 to 2008).
- * Member of the Solid Mechanics Panel of IUTAM (2006 to 2010).
- * Member of the Scientific Council of SUPMECA (since 2008).
- * Member of the Scientific Council of INPG (since 2008).
- * Member of the Scientific Council of CEA-DAM (2008 to 2014).
- * Member of the Board of Ecole Centrale de Paris (since 2009).
- * Member of the Congress Committee of IUTAM (2010-2014).