

Matthieu MAZIERE
39, rue de l'Orillon
75011 Paris, FRANCE

Born : 22.12.1981 in
Echirolles, France
Nationality : French

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DOCTOR IN MATERIAL SCIENCE AND ENGINEERING
ASSOCIATE PROFESSOR IN MECHANICAL ENGINEERING

EDUCATION

- | | |
|-----------|---|
| 2004–2007 | PhD in material science and engineering
Mines ParisTech |
| 2001–2004 | Master's Degree in mechanical engineering
E.N.S. Cachan |
| 2002–2003 | Agregation of mechanics
E.N.S. Cachan |
| 1998–2001 | Bachelor's Degree in mechanical engineering
E.N.S. Cachan |

RESEARCH

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|-----------|--|
| 2009–2013 | Research associate
Centre des Matériaux - Mines ParisTech - France
<i>Stability and strain localisation, Failure modelling and analysis</i> |
| 2008–2009 | Invited scientist - Post-doctoral internship
Federal Institute for Materials Research and Testing (BAM) - Berlin -
Germany
<i>Fatigue crack propagation, Crystal plasticity</i> |
| 2004–2007 | PhD thesis in material science and engineering : “Burst of turboengine disks”
Centre des Matériaux - Mines ParisTech - France
<i>Nickel-based superalloys, Stability of non-linear finite element simulations</i> |
| 2004 | Second Year Master's Thesis : “Fields' projection from a mesh to another”
C.E.A. - Saclay - France
<i>Concrete materials, Adaptive remeshing</i> |
| 2002 | First Year Master's Thesis : “Finite element model of a guitar top plate”
U.N.S.W - Sydney - Australia
<i>Music Acoustics, Vibration analysis</i> |

TEACHING

- 2009–2013 **Lectures - Materials for Nuclear Energy - Master II,**
ENPC - France
- 2009–2013 **Small Class - Continuum Mechanics - Master I,**
Mines ParisTech - France
- 2009–2013 **Projects - Continuum Mechanics 2 - Master I,**
Mines ParisTech - France
- 2010–2011 **Lectures - Material Science - Master I,**
Université d'Evry - France

ORGANIZING

- 2013 **11st CSMA conference on Computational Mechanics,**
Giens - France
- 2011 **2nd Internationnal Conference on Material Modeling,**
Paris - France
- 2011 **3nd National workshop on Strain Ageing,**
Paris - France

POSITIONS

- 2013–2016 **Member of the school teaching commitee**
Mines ParisTech
- 2009–2012 **Member of the school research commitee**
Mines ParisTech
- 2006–2007 **Member of the doctoral school committee**
Mines and ENSAM Paristech
- 2005–2007 **Member of the school governing board**
Mines Paristech
- 2004–2006 **Member of the laboratory governing board CNRS UMR 7633**
Centre des Matériaux - Mines Paristech

AWARDS

Adolf Martens Fellowship in : Federal Institute for Materials Research and Testing (BAM) -
2008

Special Mention for oral presentation in : 6th EUROMECH Solid Mechanics Conference.
Budapest, August 28th September 1st, 2006

LANGUAGES

French : native speaker
English : fluent, working knowledge
German : conversational

SOFTWARE

Microsoft Windows and Linux Environments
Abaqus, Castem, Zset, Catia, Solidworks
C++, Fortran, Python

SUPERVISING

PhDs

- 2010–2013 **Instabilités de Lüders et transition ductile-fragile**
ANTHONY MARAIS (*Centre des Matériaux - Mines ParisTech - France*)
- 2009–2012 **Simulation numérique de bifurcations de fissure dans les monocristaux de superalliage à base de nickel en mode mixte**
PRAJWAL SABNIS (*Centre des Matériaux - Mines ParisTech - France*)
- 2008–2011 **Endommagement des aciers TWIP pour application automobile**
JULIE LORTHIOS (*Centre des Matériaux - Mines ParisTech - France*)
- 2007–2010 **Comportement mécanique et rupture des aciers au C-Mn en présence de vieillissement dynamique sous déformation**
HUAIDONG WANG (*Centre des Matériaux - Mines ParisTech - France / MSSMAT - Ecole Centrale Paris*)

Masters

- 2012 **Modélisation du vieillissement dynamique du HA188 sous chargement complexe**
QUENTIN PUJOL D'ANDRÉBO (*Centre des Matériaux - Mines ParisTech - France*)
- 2010 **Simulation des Einflüsse von Überlasten auf die Rissausbreitung in metallischen Werkstoffen unter zyklischer Beanspruchung**
BARBEL ZEISE (*Federal Institute for Materials Research and Testing (BAM) - Berlin - Allemagne*)
- 2008 **Caractérisation du comportement à rupture des alliages de zirconium de la gaine du crayon combustible des centrales nucléaires dans la phase post-trempe d'un APRP (Accident de Perte de Réfrigérant Primaire)**
MI HE (*Centre des Matériaux - Mines ParisTech - France*)

Other Internships

- 2012 **Identification of the necking and strain aging behavior of a C-Mn steel under tensile loading at different temperatures and strain rates**
CARINA NISTERS, (*Centre des Matériaux - Mines ParisTech - France / Universität Duisburg-Essen*)
- 2012 **Simulation of the Portevin - Le Chatelier effect in metal matrix composites**
STEFFEN SPECHT (*Centre des Matériaux - Mines ParisTech - France / Universität Duisburg-Essen*)

PUBLICATIONS

Books (1)

Book of abstracts : 2nd International Conference on Material Modelling. August 31st - September 2nd, 2011 Paris, France. Incorporating the 12th European Mechanics of Materials Conference

JACQUES BESSON, MATTHIEU MAZIÈRE
ISBN-13 : 978-2911256615 (2011)

Refereed journal publications (10)

Viscoplastic constitutive equations of combustion chamber materials including cyclic hardening and dynamic strain aging

CHABOCHE, J.-L., GAUBERT, A., KANOUTÉ, P., LONGUET, A., AZZOUZ, F., MAZIÈRE, M.
International Journal of Plasticity 46 , pp. 1-22 (2013)

Identification of a strain-aging model accounting for Lüders behavior in a C-Mn steel

MARAIS, A., MAZIÈRE, M., FOREST, S., PARROT, A., LE DELLIU, P.
Philosophical Magazine 92 (28-30) , pp. 3589-3617 (2012)

Experimental and numerical study of dynamic strain ageing and its relation to ductile fracture of a C-Mn steel

WANG, H.D., BERDIN, C., MAZIÈRE, M., FOREST, S., PRIOUL, C., PARROT, A., LE-DELLIOU, P.
Materials Science and Engineering A 547 , pp. 19-31 (2012)

Investigations on the Portevin-Le Chatelier critical strain in an aluminum alloy

MAZIÈRE, M., DIERKE, H.
Computational Materials Science 52 (1) , pp. 68-72 (2012)

Effect of secondary orientation on notch-tip plasticity in superalloy single crystals

SABNIS, P.A., MAZIÈRE, M., FOREST, S., ARAKERE, N.K., EBRAHIMI, F.
International Journal of Plasticity 28 (1) , pp. 102-123 (2012)

Portevin-Le Chatelier (PLC) instabilities and slant fracture in C-Mn steel round tensile specimens

WANG, H., BERDIN, C., MAZIRE, M., FOREST, S., PRIOUL, C., PARROT, A., LE-DELLIOU, P.
Scripta Materialia 64 (5) , pp. 430-433 (2011)

Numerical aspects in the finite element simulation of the Portevin-Le Chatelier effect

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
Computer Methods in Applied Mechanics and Engineering 199 (9-12) , pp. 734-754 (2010)

Overspeed burst of elastoviscoplastic rotating disks : Part II - Burst of a superalloy turbine disk

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
European Journal of Mechanics, A/Solids 28 (3) , pp. 428-432 (2009)

Overspeed burst of elastoviscoplastic rotating disks - Part I : Analytical and numerical stability analyses

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
European Journal of Mechanics, A/Solids 28 (1) , pp. 36-44 (2009)

Numerical modelling of the Portevin-Le Chatelier effect

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
European Journal of Computational Mechanics, 17 (5-7) , pp. 761-772 (2008)

Conference proceedings and others publications (12)

Multi-scale approach of strain ageing in polycrystalline tantalum

COLAS, D., FINOT, E., FLOURIOT, S., FOREST, S., MAZIÈRE, M., PARIS, T.
ECCOMAS 2012 - European Congress on Computational Methods in Applied Sciences and Engineering, e-Book Full Papers , pp. 4175-4194 (2012)

Influence of dynamic strain ageing on ductile fracture of a C-MN steel

WANG, H.D., BERDIN, C., MAZIÈRE, M., FOREST, S., PRIOUL, C., PARROT, A.
18th European Conference on Fracture : Fracture of Materials and Structures from Micro to Macro Scale (2010)

Simulation of fatigue crack growth by crack tip plastic blunting using cohesive zone elements

MAZIÈRE, M., FEDELICH, B.
18th European Conference on Fracture (2010)

Simulation of fatigue crack growth by crack tip plastic blunting using cohesive zone elements

MAZIÈRE, M., FEDELICH, B.
Procedia Engineering 2 (1) , pp. 2055-2064 (2010)

Numerical simulation of the portevin - le chatelier effect in various material and at different scales

MAZIÈRE, M., FOREST, S., BESSON, J., WANG, H., BERDIN, C.
Materials Science Forum 638-642 , pp. 2670-2675 (2010)

Simulation of the Portevin - Le Chatelier effect in metal matrix composites

MAZIÈRE, M., MORTENSEN, A., MUELLER, R., FOREST, S.
4th European Conference on Computational Mechanics, Paris. (2010)

Numerical modeling of ductile fracture in presence of Portevin Le-Chatelier effect in a C-Mn steel

WANG, H.D., BERDIN, C., MAZIÈRE, M., FOREST, S., PRIOUL, C., PARROT, A.
4th European Conference on Computational Mechanics, Paris. (2010)

Simulation par éléments finis de l'effet Portevin - Le Chatelier dans divers alliages métalliques et à différentes échelles

MAZIÈRE, M., FOREST, S., BESSON, J., WANG, H., BERDIN, C.
9e Colloque National en Calcul de Structures, Giens. (2009)

Prévision de l'éclatement dans les disques de turbomachines

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
18ème Congrès Français de Mécanique, Grenoble. (2007)

Influence de la loi de comportement sur la prévision de l'éclatement d'un disque de turbomachine

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.

Colloque National MECAMAT, Aussois. (2007)

Influence of spin-softening and nonlinear material behavior on the stability of rotating disks

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
6th EUROMECH Solid Mechanics Conference, Budapest. (2006)

Stabilité d'un disque de turbomachine en rotation

MAZIÈRE, M., BESSON, J., FOREST, S., TANGUY, B., CHALONS, H., VOGEL, F.
Colloque National MECAMAT, Aussois. (2006)