
Fanny Grennerat – Publications & Communications

Thesis

- Thèse de l'Université de Grenoble (2011) :
Hétérogénéités de déformation au cours du fluage transitoire de la glace polycristalline.
Mesures par corrélation d'images numériques et modélisation.

Peer review journals

- Johan Hektor, Jean-Baptiste Marijon, Matti Ristinmaa, Stephen A. Hall, Håkan Hallberg, Srinivasan Iyengar, Jean-Sébastien Micha, Odile Robach, Fanny Grennerat, Olivier Castelnau. Evidence of 3D strain gradients associated with tin whisker growth. Scripta Materialia 144 (2018)
- S. Piazolo, M. Montagnat, F. Grennerat, H. Moulinec, J. Wheeler
Effect of local stress heterogeneities on dislocation fields: Examples from transient creep in polycrystalline ice. Acta Materialia (2015)
- M. Montagnat, O. Castelnau, P. D. Bons, S. H. Faria, O. Gagliardini, F. Gillet-Chaulet, F. Grennerat, A. Griera, R. A. Lebensohn, H. Moulinec, J. Roessiger, P. Suquet
Multiscale modeling of ice deformation behavior.
Journal of Structural Geology (2013)
- J. Donges, M. Montagnat, P. Bastie, F. Grennerat
3D Diffraction imaging and orientation mapping in deformed ice crystals.
Nucl. Inst. Meth. A (jan. 2013)
- F. Grennerat, M. Montagnat, O. Castelnau, P. Vacher, P. Duval
Experimental characterization of intragranular strain field in columnar ice during transient creep. Acta Materialia 60, 8 (2012)
- P. Suquet, H. Moulinec, O. Castelnau, M. Montagnat, N. Lahellec, F. Grennerat, P. Duval, R. Brenner
Multi-scale modeling of the mechanical behavior of polycrystalline ice under transient creep. Procedia IUTAM (2011)
- P. Duval, M. Montagnat, F. Grennerat, J. Weiss, J. Meyssonier, A. Philip
Creep and plasticity of glacier ice: a material science perspective.
Journal of Glaciology, Vol. 56, No. 200 (2010)

Conference proceedings

- Maurine Montagnat, Thomas Chauve, Fanny Grennerat, David Georges, Pierre Vacher, Olivier Castelnau. Hétérogénéités de déformation et mécanismes de recristallisation. Cas de la glace "2D-1/2".
Colloque national MECAMAT Aussois « Matériaux Numériques » (22 - 26 janvier 2018)

- F. Grennerat, M. Montagnat, O. Castelnau, P. Vacher, H. Moulinec, P. Suquet, P. Duval, Intragranular deformation heterogeneities during the creep of ice polycrystals: experimental measurements vs. modeling, *AGU Fall Meeting*, 5-9 dec. 2011, San Francisco (USA).
- F. Grennerat, M. Montagnat, O. Castelnau, P. Duval, P. Vacher, P. Suquet, H. Moulinec, An incremental homogenization method for non linear viscoelastic behaviour: Case of polycrystals, *2nd Int. Conf. on Mater. Model.*, Aug. 31-Sept. 2, 2011, Paris (France).
- C. Badulescu, R. Brenner, O. Castelnau, P. Duval, F. Grennerat, N. Lahellec, M. Montagnat, H. Moulinec, P. Suquet, Q.H. Vu, Multi-scale modeling of the mechanical behavior of polycrystalline ice (**keynote lecture**), *IUTAM Symposium, Linking Scales in Computations: From Microstructure to Macro-scale Properties*, may 17-19, 2011, Shalimar, FL (USA)
- F. Grennerat, S. Piazolo, M. Montagnat, O. Castelnau, P. Duval, Multi-scale characterization of strain heterogeneities and associated misorientations in laboratory deformed polycrystalline ice: Image Correlation techniques, EBSD observations and full-field modeling, *European Geosciences Union General Assembly*, 03 - 08 April 2011, Vienna (Autriche).
- O. Castelnau, C. Badulescu, R. Brenner, P. Duval, F. Grennerat, N. Lahellec, M. Montagnat, H. Moulinec, P. Suquet, Q. H. Vu, The transient creep of polycrystalline ice inferred from theoretical, numerical, and experimental micromechanical approaches, *TMS Annual Meeting*, February 27 - March 3, 2011, San Diego (USA)
- F. Grennerat, M. Montagnat, P. Duval, P. Vacher, O. Castelnau, Intragranular strain field evolution during the transient creep of 2-D columnar ice inferred from image correlation, Photomechanics 2011, 7-9 February, 2011, Brussel (Belgium)
- F. Grennerat, M. Montagnat, P. Duval, P. Vacher, O. Castelnau, Intragranular strain field in columnar ice during elasto-viscoplastic transient creep regime, AGU Fall Meeting, 13–17 December, 2010, San Francisco (USA)
- F. Grennerat, M. Montagnat, O. Castelnau, P. Vacher, P. Duval , Intragranular strain field in columnar ice during transient creep regime and relation with the local microstructure. EPJ Web of Conferences, Int. Conf. on Experimental Mechanics ICEM14, 4-9 juillet 2010, Poitiers (France), www.epj-conferences.org/articles

Oral communications

- F. Grennerat, M. Montagnat, O. Castelnau, P. Vacher, H. Moulinec, P. Suquet, P. Duval, International Conference "Ice deformation; from the model material to ice in natural environments", 7th – 9th of November 2011", In the frame of the ESF project "MicroDICE", Grenoble (France).
- F. Grennerat, M. Montagnat, O. Castelnau, Hétérogénéités de déformations lors du fluage transitoire de la glace polycristalline, *Atelier Mécanique et Géosciences - GDR MEGE*, 17-18 March, 2011, Paris (France)
- F. Grennerat, M. Montagnat, P. Duval, P. Vacher, O. Castelnau, Intragranular strain field evolution during the transient creep of 2-D columnar ice inferred from image correlation, Photomechanics 2011, 7-9 February, 2011, Brussel (Belgium)

- F. Grennerat, M. Montagnat, O. Castelnau, P. Vacher, P. Duval , Intragranular strain field in columnar ice during transient creep regime and relation with the local microstructure. EPJ Web of Conferences, Int. Conf. on Experimental Mechanics ICEM14, 4-9 juillet 2010, Poitiers (France)