

Publications
Alain Vauchez

Thèses:

- 1974 - Etude tectonique et microtectonique d'un secteur de la chaîne hercynienne sud-ibérique; les nappes et plis couchés de la région de Fregenal - Oliva de la Frontera. Thèse 3ème cycle Montpellier, 92 p.
- 1987 – Mécanismes de déformation et cinématique des zones de mouvement ductiles. Thèse d'Etat - Université d'Aix-Marseille

Articles:

Publications ISI-IF > 1

- 1978 - Bossière G. & Vauchez A. Déformation naturelle par cisaillement ductile d'un granite de Grande Kabylie Occidentale (Algérie). *Tectonophysics*, 51 : 57-81.
- 1980 - Vauchez A. Ribbon texture and deformation mechanisms of quartz in a mylonitized granite of Great Kabylia. *Tectonophysics* 67 : 1-12.
- 1987a - Vauchez A. Maillet D. & Sougy J.- Strain and deformation mechanisms in the Variscan nappes of Vendée (South Brittany, France). *Journal of Structural Geology*, 9: 31-40.
- 1987a - Vauchez A.- The development of discrete shear zones in a granite : stress, strain and changes in deformation mechanisms. *Tectonophysics*, 133: 137-156.
- 1987b - Vauchez A. - Brevard fault zone, southern Appalachians: A medium-angle dextral Alleghanian shear zone. *Geology*, 15: 669-672.
- 1987 - Vauchez A., Kessler S., Lécorché J.P. & Villeneuve M.-. Southward extrusion tectonics during Carboniferous Africa-North America collision. *Tectonophysics*, 142: 317-322.
- 1988 - Vauchez A. & Bufalo M. - Charriage crustal, anatexie et décrochements ductiles dans les Maures orientales (Var, France) au cours de l'orogénèse varisque. *Geologisches Rundschau*, 77(1):45-62. .
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- 1991 - Vauchez & Nicolas A. - Mountain building: Strike-parallel displacements and mantle anisotropy. *Tectonophysics*, 185: 183-201.
- 1991 - Corsini M., Vauchez A., Archanjo C.J., & Jardim de Sá E.F. - Strain transfer at a continental scale from a transcurrent shear zone to a transpressional fold belt: The Patos-Serido belt system, (northeastern Brazil). *Geology*, 19: 586-589.
- 1992 - Vauchez, A. and Egydio-Silva, M. Termination of a continental-scale strike-slip fault in partially melted crust: The West-Pernambuco shear zone, northeast Brazil. *Geology*, 20: 1007-1010.
- 1993 - Nicolas, A., Freydier C., Godard, M. et Vauchez A. - Magma chambers at oceanic ridges: How large? *Geology*, 21: 53-56.

- 1993 - Vauchez, A., Babaie, H., and Babaei, A., , Orogen-parallel tangential motion in the late Devonian-early Carboniferous southern Appalachians internides: *Canadian Journal of Earth Sciences*, 30, 1297-1305.
- 1994 - Archanjo, C., Bouchez J.L., Corsini M. & Vauchez A. The Pombal granite pluton: magnetic fabric and relationships with the Brasiliano strike-slip tectonics of NE Brazil. *Journal of Structural Geology*, 16: 323-335.
- 1994 - Tommasi A., Vauchez A., Fernandes L.A.D & Porcher C.C. Magma-assisted strain localization in an orogen-parallel transcurrent shear zone of southern Brazil. *Tectonics*, 13:421-437
- 1994 - Vauchez, A., Tommasi, A. and Egydio-Silva, M. 1994. Self-indentation of continental lithosphere. *Geology*, 22: 967-970
- 1995 - Neves S. & Vauchez A. Successive mixing and mingling of magmas in a plutonic complex of northeast Brazil. *Lithos*, 34: 275-299.
- 1995 - Vauchez, A., Neves, S.P., Caby, R., Corsini, M., Egydio-Silva, M., Arthaud, M. & Amaro, V.E. The Borborema shear zone system. *Journal of South American Earth Sciences*, 8: 247-266
- 1995 - Tommasi, A., Vauchez, A. & Daudré, B. - Initiation and Propagation of Shear Zones in a Heterogeneous Continental Lithosphere. *Journal of Geophysical Research*, 100: 22083-22101
- 1996 - Corsini M., Vauchez A., Caby R. & Amaro, V. - Ductile duplexing at a bend of a continental-scale strike-slip fault. Example from NE Brazil. *Journal of Structural Geology*, 18: 385-394.
- 1996 - Neves, S. & Vauchez, A. - Shear zone controlled magma emplacement or magma-assisted nucleation of shear zones? Insights from Northeast Brazil. *Tectonophysics*, 262: 349-364
- 1996 - Tommasi, A., Vauchez, A. & Russo, R. - Seismic anisotropy in oceanic basins: Resistive drag of sublithospheric mantle? *Geophysical Research Letters*, 23: 2991-2994
- 1996 - Vauchez, A. & Barruol, G. - Shear wave splitting in the Appalachians and the Pyrenees: importance of the inherited tectonic fabric of the lithosphere. In: *Dynamics of the subcontinental mantle: From seismic anisotropy to mountain building*. Edited by D. Mainprice and A. Vauchez. *Physics of the Earth and Planetary Interiors*, 95:127-138
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- 1997 - Tommasi, A. & Vauchez, A. - Continental-scale rheological heterogeneity and complex intraplate tectono-metamorphic patterns: insights from a case study and numerical models. *Tectonophysics* 279:327-350
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- 1998 - Vauchez, A., Tommasi, A. and Barruol, G. 1998. Rheological heterogeneity, mechanical anisotropy, and tectonics of the continental lithosphere. *Tectonophysics*, 296: 61-86.
- 1999 - Braun, J., J. Chéry, A. Poliakov, D. Mainprice, A. Vauchez, A. Tommasi, and M. Daignières, A simple parameterization of strain localization in the ductile regime, *Journal of Geophysical Research*, 104, 25,167-25,182.
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- 1999 - Vauchez, A., Barruol, G. and Nicolas, A., 1999. Comment on "SKS splitting beneath rift zones". *Journal of Geophysical Research*, 104: 10787-10790.
- 2000 - Neves, S.P., Vauchez, A. and Feraud, G. Tectono-thermal evolution, magma emplacement, and shear zone development in the Caruaru area (Borborema Province, NE Brazil), *Precambrian Research* (99)1-2: 1-32
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- 2002 - Egydio-Silva, M., Vauchez, A., Bascou, J. and Hippert, J., in-press. High temperature deformation in the neoproterozoic transpressional Ribeira belt, Southeast Brazil). *Tectonophysics*. v. 352, p. 203-224.
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- 2003 - Vauchez, A., and A. Tommasi, Wrench faults down to the asthenosphere: Geological and geophysical evidence and thermo-mechanical effects, in: Storti, F., Holdsworth, R. E. and Salvini, F. eds Intraplate Strike-Slip Deformation Belts. *Geol. Soc. London Spec. Pub.* 210:15-34
- 2003 - Heintz, M., A. Vauchez, M. Assumpção, G. Barruol et M. Egydio-Silva : Shear Wave Splitting in SE Brazil : an Effect of Active or Frozen Upper Mantle Flow, or both ? *EPSL*, 6628: 1-17.
- 2005 - Egydio-Silva, M., Vauchez, A., Raposo, M. I. B., Bascou, J. & Uhlein, A. 2005. Variations in deformation regime in an arcuate transpressional orogen (Ribeira belt, SE Brazil) imaged by Anisotropy of Magnetic Susceptibility in granulites. *Journal of Structural Geology* 27: 1750-1764 doi:10.1016/j.jsg.2005.06.001
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- continent and neighboring oceans from surface wave tomography. *Tectonophysics* doi:10.1016/j.tecto.2005.05.006.
- 2005 - Vauchez, A., Dineur, F. & Rudnick, R. L. 2005. Microstructure, texture and seismic anisotropy of the lithospheric mantle above a mantle plume. Insights from the Labait volcano xenoliths (Tanzania). *Earth and Planetary Science Letters* **232**(3-4), 295-314.
- 2006 - Assumpcao, M., Heintz, M., Vauchez, A. and Silva, M.E., 2006. Upper mantle anisotropy in SE and Central Brazil from SKS splitting: Evidence of asthenospheric flow around a cratonic keel. *Earth and Planetary Science Letters*, 250(1-2): 224-240.
- 2006 - Bouilhol, P., Leyreloup, A.F., Delor, C., Vauchez, A. and Monie, P., 2006. Relationships between lower and upper crust tectonic during doming: the mylonitic southern edge of the Velay metamorphic core complex (Cevennes-French Massif Central). *Geodinamica Acta*, 19(3-4): 137-153.
- 2006 - Neves, S. P., Bruguier, O., Vauchez, A., Bosch, D., da Silva, J. M. R. & Mariano, G. 2006. Timing of crust formation, deposition of supracrustal sequences, and Transamazonian and Brasiliano metamorphism in the East Pernambuco belt (Borborema Province, NE Brazil): Implications for western Gondwana assembly. *Precambrian Research* **149**(3-4), 197-216.
- 2006 - Tommasi, A., Vauchez, A., Godard, M. and Belley, F., 2006. Deformation and melt transport in a highly depleted peridotite massif from the Canadian Cordillera: Implications to seismic anisotropy above subduction zones. *Earth and Planetary Science Letters*, 252(3-4): 245-259.
- 2007 - Le Roux, V., J.L. Bodinier, A. Tommasi, O. Allard, A. Vauchez - The Lherz spinel lherzolite: refertilized rather than pristine mantle – *Earth and Planetary Science Letter*
- 2007 - Vauchez, A., Egydio-Silva, M., Babinski, M., Tommasi, A., Uhlein, A. & Liu, D. 2007. Deformation of a pervasively molten middle-crust: Insights from the neoproterozoic Ribeira-Araçuaí orogen (SE Brazil). *Terra Nova* **19**, 278-286.
- 2008 - Bascou, J., Delpech, G., Vauchez, A., Moine, B. N., Cottin, J. Y. & Barruol, G. An integrated study of microstructural, geochemical and seismic properties of lithospheric mantle above the Kerguelen plume (Indian Ocean). *Geochemistry, Geophysics, Geosystems*.

Articles soumis:

- Neves, S. P., Tommasi, A. & Vauchez, A. Intraplate continental deformation: Influence of a heat-producing layer in the lithospheric mantle. *Earth and Planetary Science Letters*.
- Tommasi, A., Vauchez, A. & Ionov, D. Deformation, static recrystallization, and reactive melt transport in shallow subcontinental mantle xenoliths from Tok, SE Siberia. *Earth and Planetary Science Letters*.
- Le Roux, V., Tommasi, A. & Vauchez, A. submitted. Feedback processes between percolation and deformation in a frozen lithosphere-asthenosphere boundary. *Earth and Planetary Science Letters*.

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- 1975 - Vauchez A. Tectoniques tangentielles superposées dans le segment hercynien sud-ibérique : les nappes et plis couchés de la région d'Alconchel - Fregenal. *Bolletín Geol. y Min. Espana*, 86:13-20.
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- 1985 - Vauchez A. & Bufalo M.- La limite Maures occidentales - Maures orientales (Var, France): un décrochement ductile senestre majeur entre deux provinces structurales très contrastées. *C.R. Acad. Sc. Paris*, p. 1059-1062.
- 1988 - Corsini M., Cornée J.J., Muller J. & Vauchez A. - Cisaillement ductile synmétamorphe et déplacement tangentiel vers le SW dans les Rehamna (Maroc hercynien). *C. R. Acad Sci. Paris*.
- 1992- Corsini M., Vauchez A. & Amaro, V. - Relais de cisaillement ductiles transcurrents à l'échelle continentale: exemple de la Province de Borborema (NE Brésil). *C.R. Acad. Sc. Paris*, p. 845-850.

Participation à ouvrages collectifs :

- 1991 - Caby R., Sial A., Arthaud M. & Vauchez A. - Crustal evolution and the Brasiliano orogeny in Northeast Brazil. in "*The West African orogens and Circum Atlantic correlatives*", R.D. Dallmeyer and J.P. Lecorché (eds.), Springer- Verlag, p. 373-397.
- 1997 - Vauchez, A., Neves, S.P. & Tommasi, A. - Transcurrent shear zones and magma emplacement in neoproterozoic belts of brazil. In: J.L. Bouchez, D. Hutton and W.E. Stephens (Eds), *Granite: From melt segregation to emplacement fabrics.*, pp. 275-293. Dordrecht: Kluwer Academic Publishers.