



**Lionel Sonnette** Postdoctoral Fellow  
(2013-01-10 ~ 2016-07-31)

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Speciality : fold and thrust belts curvature using paleostress, anisotropy of magnetic susceptibility and paleomagnetism characterization.

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## Experience

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| 09/2010 - 08/2011 | ATER (course and research assistant for the earth science department) at the Nice-Sophia Antipolis University (France) |
| 10/2007 - 09/2010 | Moniteur (course assistant for the earth science department) at the Nice-Sophia Antipolis University (France)          |

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## Education

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| 2007 - 2012 | Ph.D in geosciences at Geoazur laboratory<br>University of Nice-Sophia Antipolis |
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### Structural and paleomagnetic study of the curvature of the fold and thrust belts of the arc of Nice-Castellane and the NE Taiwan

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| 2005 - 2007 | Master in geosciences (Mention good)<br>University of Nice-Sophia Antipolis (France)     |
| 2004 - 2005 | Licence in earth sciences (Mention good)<br>University of Nice-Sophia Antipolis (France) |
| 2002 - 2004 | DEUG in earth and universe sciences (Mention good)<br>University of Provence (France)    |

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## Publications

All following publications are available at <https://sites.google.com/site/lionelsonnette08/these/manuscripts-et-publications>

### *Articles in international journal*

1- Sage, F., Beslier, M.-O., Thinin, I., Larroque, C., Dessa, J.-X., Migeon, S., Angelier, J., Guennoc, P., Schreiber, D., Michaud, F., Stephan, J.-F., and Sonnette, L., 2011. Structure and evolution of a passive margin in a compressive environment: example of the south-western Alps-Ligurian basin junction during the Cenozoic. *Marine and Petroleum Geology*, **28**, 1263-1282.

2- Sonnette, L., Angelier, J., Villemin, T., and Bergerat, F., 2010. Faulting and fissuring in active oceanic rift: Surface expression, distribution and tectonic volcanic interaction in the

Thingvellir Fissure Swarm, Iceland. *Journal of Structural geology*, 32, 407-422, doi: 10.1016/j.jsg.2010.01.003.

#### *Posters at international congress*

- 1- Sonnette, L., 2011. Interpretation of salient shape from paleostress fields examples of Castellane, Nice (France) and North Taiwan salients. Poster at *Faults: Why? Where? How? Meeting in memory of Jacques Angelier*, Paris, 2011.
- 2- Sonnette, L., Angelier, J., Villemin, T., Bergerat, F., 2011. Surface expression, spatial distribution and temporal propagation of the faulting and fissuring in the Thingvellir fissure swarm. Oral at *EGU 2011 Congress*, Vienna.
- 3- Sonnette, L., Angelier, J., Sage, F., Larroque, C., Delouis, B., Stéphan, J.-F., 2011. Role of the structural inheritance in formation of the Nice subalpine chain, interpreted from paleostress inversion and structural observations. Poster at *EGU 2011 Congress*, Vienna.
- 4- Sonnette, L., Gattacceca, J., Larroque, C., Stéphan, J.-F., 2011. Paleomagnetism as a marker of synfolding rotation. Example of the dome de Barrôt (subalpine massif, SE France). Poster at *EGU 2011 Congress*, Vienna.
- 5- Sonnette, L., Angelier, J., Lee, T.-Q., and Stéphan, J.-F., 2010. *New paleomagnetic and shortening trend results for Taiwan, from Miaoli to Keelung area and Hengchun peninsula*. Oral and Poster at *GEEA 2010 congress*, Aix-en-Provence.
- 6- Sonnette, L., Plateaux R., Stéphan, J.-F., Angelier, J., and Gattacceca, J., 2010. Microtectonic and magnetic study of a cover-basement interaction, example of the 'Dôme de Barrot', (SE of France). Poster at *EGU 2010 congress*, Vienna.
- 7- Sonnette, L., Angelier, J., Stéphan, J.-F., Gattacceca, J., Plateaux, R. and Dussaux, J.-B., 2009. Magnetic and anisotropy of magnetic susceptibility of the sedimentary cover in thrust units compared with tectonic stress: the Nice and Castellane arcs, SE of France. Poster at *IGA 2009 Congress*, Sopron.
- 8- Sonnette, L., Angelier, J., Lee, T.-Q., Chang, C.-P. and Stawomir, J. G., 2009. New paleomagnetic and anisotropy of magnetic susceptibility results highlight the structural evolution of southern Taiwan within the frame of oblique collision. Poster at *IGA 2009 Congress*, Sopron.

#### *Academic memoir*

Sonnette, L., 2012. Structural and paleomagnetic study of the curvature of the folds and thrusts belts of Nice, Castellane and North-East Taiwan. Ph.D Thesis, University of Nice Sophia-Antipolis, in French, 352p.

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#### **Professional skills**

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| <i>Geosciences</i> | ✓ Geological mapping and building of balanced cross-sections                           |
|                    | ✓ Measuring of fractures on the field and by photogrammetry                            |
|                    | ✓ Stress directions calculation from a fault cluster using Prof. J. Angelier's method  |
|                    | ✓ Sampling for magnetic analysis, for microscope analysis and Ar/Ar and K/Ar datations |
|                    | ✓ Analyse and interpretation of anisotropy of magnetic susceptibility (AMS) of a rock  |

- ✓ Characterisation of the rock remanent magnetization and corresponding vertical axis rotation interpretation
- Teaching*
- ✓ Structural Geology (courses, practical work and field work - Licence and Master level)
  - ✓ Metamorphism (practical work - Licence level)
  - ✓ General Geology (courses and practical work - Licence level)
  - ✓ Supervision of Licence project on structural geology and AMS
- Informatics*
- ✓ Desktop: Microsoft Office, Open Office
  - ✓ CAD: Corel Draw
  - ✓ GIS: Autocad, ArcGIS
  - ✓ Specific software: Tector 94 (stress inversion), Paleomac (paleomagnetism and AMS), E Poivilliers (photogrammetry)



Photograph of a striated fault plane with beautiful calcite crystallization. Fault affects Liassic limestones. Outcrop along the road between Puget-Théniers and Léouvé (Alpes Maritimes - 06, France). Others personal photographs on <https://sites.google.com/site/lionelsonnette08/these/galerie-photos>.