

**Dr. GUILLERMO BOOTH REA (abbreviated CV)**

Born in Pinos Genil (Granada, Spain) in 1972.

**Position:** Associate Professor (Profesor Contratado Doctor) in the Department of Geodynamics of the Granada University since 2010.

**Previous research and academic positions:** Juan de la Cierva researcher from 2004 to 2006 in the Geodynamics Dpt. of the Granada University (UGR). Assistant Professor in the Geodynamics Dpt. of the UGR from 2006 to 2010.



**Teaching experience:** General Geology, Active Tectonics, Field geology and Fault Rocks and Shear Zones.

**Pre-doctoral formation:** degree in Geological Sciences by the University of Granada in 1996. Post-graduate grant of the Junta de Andalucía for a period of four years (1997-2000) in the Dpt. of Geodynamics of the UGR. Ph.D. Thesis entitled “Tectónica Cenozoica en el Dominio Cortical de Alborán” presented in the University of Granada in 2001.

**Post-doctoral formation:** approximately two years research stage in the department of Dynamics of the Ocean Floor in IFM-GEOMAR in Kiel, Germany. During this stage I worked on the structure of the Cascadia accretionary prism offshore Washington with the aid of pre-stack depth migrated seismic lines and section balancing software, in collaboration with Dirk Klaeschen and other department colleagues. I have spent several months research stages in the Geology department of the Ecole Normale Supérieure in Paris working on the use of low-temperature thermobarometric tools with Olivier Vidal and Bruno Goffé; in the Geodynamics Department of GEOMAR processing deep reflection seismic lines of the Alboran basin with César Ranero, Dirk Klaeschen and Tim Reston, and in the Geology Department of the University of Rennes 1 modeling continental subduction processes with Frederic Gueydan.

**Present research fields of interest:** Structural Geology and Tectonics, Active Tectonics, Tectonic Geomorphology, Marine Geophysics and Regional Geology of the Betics and Rif.

**Participation in research projects:** 18 projects since 1997 financed by the Spanish Education and Science Ministry, the Spanish Agency for International Cooperation, the Regional Government of the Junta de Andalucía, the DFG and the European Community.

### Some relevant publications:

- Grevenmeyer, I., Helffrich, G., Faria, B., **Booth-Rea, G.**, Schnabel, M., Weinrebe, W., 2010. Seismic activity at Cadamosto seamount near Fogo Island, Cape Verdes - formation of a new ocean island? *Geophysical Journal International*, 180(2): 552-558.
- Pérez-Peña, V., Azañón, J.M., **Booth-Rea, G.**, Azor, A. and Delgado, J., 2009. Differentiating geology and tectonics using a spatial autocorrelation technique for the hypsometric integral. *Journal of Geophysical Research*, 114: F02018.
- Booth-Rea, G.**, Klaeschen, D., Grevenmeyer, I. and Reston, T.J., 2008. Heterogeneous deformation in the Cascadia convergent margin and its relation to thermal gradient (Washington, NW USA). *Tectonics*, 27: TC4005, doi: 10.1029/2007TC002209.
- Booth-Rea, G.**, Ranero, C., Martínez-Martínez, J.M. and Grevenmeyer, I., 2007. Crustal types and Tertiary tectonic evolution of the Alborán sea, western Mediterranean. *G-Cubed*, 8: Q10004, doi: 10.1029/2007GC001661.
- Reston, T.J., Leythaeuser, T., **Booth-Rea, G.**, Sawyer, D., Klaeschen, D., Long, C., 2007. Movement along a low-angle normal fault. The S reflector west of Spain. *Geochemistry, Geophysics and Geosystems*, 8: Q06002, doi:10.1029/2006GC001437.
- Booth-Rea, G.**, Simancas, J.F., Azor, A., Azañón, J.M., Gonzalez-Lodeiro, F., Fonseca, P., 2006. HP-LT Variscan metamorphism in the Cubito-Moura schists (Ossa-Morena Zone, southern Iberia). *Comptes Rendus Geoscience*, 338(16): 1260-1267.
- Martínez-Martínez, J.M., **Booth-Rea, G.**, Azañón, J.M. and Torcal, F., 2006. Active transfer fault zone linking a segmented extensional system (Betics, southern Spain): Insight into heterogeneous extension driven by edge delamination. *Tectonophysics*, 422: 159-173.
- Augier, R., **Booth-Rea, G.**, Agard, P., Martínez-Martínez, J.M., Jolivet, L., Azañón, J.M., 2005. Exhumation constraints for the lower Nevado-Filabride Complex (Betic Cordillera, SE Spain): a Raman thermometry and TWEEQ multiequilibrium thermobarometry approach. *Bull. Soc. Geol. Fr.*, 176(5): 419-432.
- Augier, R., Agard, P., Monié, P., Jolivet, L., Robin, C., **Booth-Rea, G.**, 2005. Exhumation, doming and slab retreat in the Betic Cordillera (SE Spain): In-situ  $^{40}\text{Ar}/^{39}\text{Ar}$  ages and P-T-t paths for the Nevado-Filabride complex. *J. Metamorphic. Petrol.*, 23(5): 357-382.
- Booth-Rea, G.**, Azañón, J.M., Martínez-Martínez, J.M., Vidal, O. and García-Dueñas, V., 2005. Contrasting structural and P-T evolutions of tectonic units in the southeastern Betics: key for understanding the exhumation of the Alboran Domain HP/LT crustal rocks (Western Mediterranean). *Tectonics*, 24: 10.1029/2004TC001640.
- Booth-Rea, G.**, Azañón, J.M., Azor, A. and García-Dueñas, V., 2004. Influence of strike-slip fault segmentation on drainage evolution and topography. A case study: the Palomares fault zone (southeastern Betics, Spain). *Journal of Structural Geology*, 26/9: 1615-1632.
- Booth-Rea, G.**, Azañón, J.M., Goffé, B., Vidal, O. and Martínez-Martínez, J.M., 2002. High-pressure, low-temperature metamorphism in the Alpujarride

- units outcropping in southeastern Betics (Spain). *C. R. Geoscience*, 334: 857-865.
- Azañón, J.M., Azor, A., **Booth-Rea, G.** and Torcal, F., 2004. Small-scale faulting, topographic steps and seismic risk in the Alhambra (Granada, SE Spain). *Journal of Quaternary Science*, 19(3): 219-227.
- Booth-Rea, G.**, Azañón, J.M. and García-Dueñas, V., 2004. Extensional tectonics in the northeastern Betics (SE Spain): case study of extension in a multilayered upper crust with contrasting rheologies. *Journal of Structural Geology*, 26: 2039-2058.
- Booth-Rea, G.**, Azañón, J.M., García-Dueñas, V. and Augier, R., 2003. Uppermost-Tortonian to present depocentre migration related with segmentation of the Palomares Fault Zone (PFZ), SE Betics, Spain. *C. R. Geosciences*, 335: 751-761.
- Booth-Rea, G.**, Azañón, J.M., García-Dueñas, V. and Sánchez-Gómez, M., 2003. A "core-complex-type structure" formed by superposed ductile and brittle extension followed by folding and high-angle normal faulting. The Santi Petri dome (western Betics, Spain). *C. R. Geosciences*, 335: 265-274.
- Booth-Rea, G.**, García-Dueñas, V. and Azañón, J.M., 2002. Extensional attenuation of the Malaguide and Alpujarride thrust sheets in a segment of the Alboran Basin folded during the Tortonian (Lorca area, Eastern Betics). *C. R. Geoscience*, 334: 557-563.