

Short cv

Pedro J. M. Costa

Employment

2013 to Present – Post-Doctoral Research Fellow and Invited Lecturer - University of Lisbon.

2012-2013 - Post-Doctoral Research Fellow and Invited Lecturer - University of Dundee.

2008-2012 – PhD student – University of Lisbon.

2002-2008 – Research assistant @ Faculdade de Ciências, Instituto Superior Técnico, Brunel University (UK)
and Secondary School Science Teacher

- o 3 year experience as Invited Lecturer at the Dep. de Geologia da Fac. de Ciências da Univ. Lisboa.
- o 2 year experience as Part-time Lecturer at the Dep. Geography and Earth Sciences, School for the Environment, Brunel University, United Kingdom.

From 2002 to 2012, I participated in 8 EU or nationally funded R&D projects and worked as research assistant in Universities in Portugal and the United Kingdom

Main area of research

Sedimentology, Natural hazards, tsunami and storm deposits, heavy minerals, microtextures, Holocene

Education

2012- University of Lisbon, Lisbon, Portugal – PhD in Geology (Cum Laude) - Sedimentological signatures of extreme marine inundations

2006 - Brunel University, London, England – MPhil (Master) in Geography and Earth Sciences (Sedimentology)

2002 - Universidade de Coimbra, Portugal –BSc Geology (“Licenciatura” - 5 year degree)

Selected Publications

- Costa, P.J. M., Costas, S., Oliveira, M.A., González-Villanueva, R., Roelvink, D., Andrade, C., Freitas, M.C., Cunha, P.P., Martins, A., Buylaert, J.P. and Murray, A. (2016). The AD 1755 tsunami impact in sand barriers. *Geomorphology*, Volume 268, 296-311, <http://dx.doi.org/10.1016/j.geomorph.2016.06.019>.
- Costa, P. J., Andrade, C., Cascalho, J., Dawson, A. G., Freitas, M. C., Paris, R. and Dawson, S., (2015). Onshore tsunami sediment transport mechanisms inferred from heavy mineral assemblages. *The Holocene*. Volume 25, no. 5, 795-809 doi: 10.1177/0959683615569322.
- Costa, P. J. M., Andrade, C., Mahaney, W. C., da Silva, F. M., Freire, P., Freitas, M. C., Janardo, C., Oliveira, M. A., Silva, T. and Lopes, V., (2013). Aeolian microtextures in silica spheres induced in a wind tunnel experiment: Comparison with aeolian quartz. *Geomorphology*, 180, 120-129. doi: 10.1016/j.geomorph.2012.09.011.
- Costa, P. J. M., Andrade, C., Dawson, A. G., Mahaney, W. C., Freitas, M. C., Paris, R. and Taborda, R., (2012). Microtextural characteristics of quartz grains transported and deposited by tsunamis and storms. *Sedimentary Geology*, 275, 55-69. doi: 10.1016/j.sedgeo.2012.07.013. issn: 0037-0738.
- Costa, P. J. M., Andrade, C., Freitas, M. C., Oliveira, M. A., Lopes, V., Dawson, A. G., Moreno, J., Fatela, F. and Jouanneau, J. M., (2012). A tsunami record in the sedimentary archive of the central Algarve coast, Portugal: Characterizing sediment, reconstructing sources and inundation paths. *The Holocene*, 22, 8, 899-914. doi: 10.1177/0959683611434227. issn: 0959-6836.
- Costa, P. J. M., Andrade, C., Freitas, M. C., Oliveira, M. A., da Silva, C. M., Omira, R., Taborda, R., Baptista, M. A. and Dawson, A. G., (2011). Boulder deposition during major tsunami events. *Earth Surface Processes and Landforms*, 36, 15, 2054-2068. issn: 0197-9337.
- Mahaney, W., Allen, C., Pentlavalli, P., Kulakova, A., Young, J., Dirszowsky, R., West, A., Kelleher, B., Jordan, S., Pulleyblank, C., O'Reilly, S., Lasberg, K., Somelar, P., Garneau, M., Kalm, V., Costa, P., Hancock, R., Hart, K., Tricart, P., Barendregt, R., Bunch, T., Milner, M. (2016). Biostratigraphic Evidence relating to the Age-Old Question of Hannibal's Invasion of Italy: I, History and Geological Reconstruction. *Archaeometry*. <http://dx.doi.org/10.1111/arc.12231>. Online ISSN: 1475-4754.
- Mahaney, W. C., Dohm, J. M., Costa, P. and Krinsley, D. H., (2010). Tsunamis on Mars: Earth analogues of projected Martian sediment. *Journal of Planetary and Space Science*, 58, 14–15, 1823-1831. doi: <http://dx.doi.org/10.1016/j.pss.2010.08.010>. issn: 0032-0633.
- Costa, P.J.M., Gelfenbaum, G., Dawson, S., La Selle, S., Milne, F., Cascalho, J., Ponte Lira, C., Andrade, C., Freitas, M. C. and Jaffe, B. (Accepted – invited paper). The application of microtextural and heavy mineral analysis to discriminate storm and tsunami deposits. Invited paper. Submitted to the *Journal of the Geological Society of London* – SP in January 2016; Accepted in June 2016.

- Cascalho, J., Costa, P.J.M., Dawson, S., Milne, F. and Rocha, A. (2016). Heavy mineral assemblages of the Storegga tsunami deposit. *Sedimentary Geology*, Volume 334, 21-33, <http://dx.doi.org/10.1016/j.sedgeo.2016.01.007>.
- Quintela, M., Costa, P. J. M., Fatela, F., Drago, T., Hoska, N., Andrade, C. and Freitas, M. C. (2016). The AD 1755 tsunami deposits onshore and offshore of Algarve (south Portugal): Sediment transport interpretations based on the study of Foraminifera assemblages. *Quaternary International*. Volume 408, Part A, 123–138. <http://dx.doi.org/10.1016/j.quaint.2015.12.029>.
- Dohm, J. M., Miyamoto, H., Ori, G. G., Fairén, A. G., Davila, A. F., Komatsu, G., Mahaney, W. C., Williams, J.-P., Joye, S. B., Di Achille, G., Oehler, D. Z., Marzo, G. A., Schulze-Makuch, D., Acocella, V., Glamoclija, M., Pondrelli, M., Boston, P., Hart, K. M., Anderson, R. C., Baker, V. R., Fink, W., Kelleher, B. P., Furfaro, R., Gross, C., Hare, T. M., Frazer, A. R., Ip, F., Allen, C. C. R., Kim, K. J., Maruyama, S., McGuire, P. C., Netoff, D., Parnell, J., Wendt, L., Wheelock, S. J., Steele, A., Hancock, R. G. V., Havics, R. A., Costa, P. and Krinsley, D., (2011). An inventory of potentially habitable environments on Mars: Geological and biological perspectives. *Geological Society of America Special Papers*, 483, 317-347. doi: 10.1130/2011.2483(21).
- Mahaney, W. C., Hart, K. M., Dohm, J. M., Hancock, R. G. V., Costa, P., O'Reilly, S. S., Kelleher, B. P., Schwartz, S. and Lanson, B., (2011). Aluminum extracts in Antarctic paleosols: Proxy data for organic compounds and bacteria and implications for Martian paleosols. *Sedimentary Geology*, 237, 1–2, 84-94. doi: <http://dx.doi.org/10.1016/j.sedgeo.2011.02.007>. issn: 0037-0738.