

LIST OF PUBLICATIONS - Helena Martins

2016-08-01

Publications in peer-reviewed journals:

- 1) Rafael, S.; **Martins, H.**; Sá, E.; Carvalho, D.; Borrego, C. and Lopes, M., 2016. Influence of urban resilience measures in the magnitude and behaviour of energy fluxes in the city of Porto (Portugal) under a climate change scenario. *Sci Total Environ*, doi:10.1016/j.scitotenv.2016.06.037, in press.
- 2) Morán, M; Ferreira, J.; **Martins, H.**; Monteiro, A.; Borrego, C. and González, J.A., 2016. Ammonia agriculture emissions: From EMEP to a high resolution inventory. *Atmos Pollut Res*, doi:10.1016/j.apr.2016.04.001, in press.
- 3) Sá, E.; **Martins, H.**; Ferreira, J.; Marta-Almeida, M.; Rocha, A.; Carvalho, A.; Freitas, S. and Borrego, C., 2016. Climate change and pollutant emissions impacts on air quality in 2050 over Portugal. *Atmos Env*, 131, 209-224. doi:10.1016/j.atmosenv.2016.01.040
- 4) Borrego, C.; Monteiro, A.; **Martins, H.**; Ferreira, J.; Fernandes, A.P.; Rafael, S.; Miranda, A. I.; Guevara, M. and Baldasano, J.M., 2015. Air quality plan for ozone: an urgent need for North Portugal. *Air Quality, Atmosphere & Health*, 9 (5), 447-460. doi: 10.1007/s11869-015-0352-5
- 5) **Martins, H.**; Monteiro, A.; Ferreira, J.; Gama, C.; Ribeiro, I.; Borrego, C. and Miranda, A.I., 2015. The role of ammonia on particulate matter pollution over Portugal. *Int J Environ Pollut*, 57 (3/4), 215-226. doi: /10.1504/IJEP.2015.074505
- 6) Ribeiro, I.; Monteiro, A.; **Martins, H.**; Freitas, S.; Borrego, C. and Lopes, M., 2015. How does the use of biodiesel affect urban air quality? *Int J Environ Pollut*, 58 (1/2), 79-88. doi: 10.1504/IJEP.2015.076585
- 7) Monteiro, A.; Ferreira, J.; Ribeiro, I.; Fernandes, A.P.; **Martins, H.**; Gama, C. and Miranda, A.I., 2015. Air quality over Portugal in 2020. *Atmos Pollut Res*, 6 (5), 788-796. doi: 10.5094/APR.2015.087
- 8) Borrego, C. ; Coutinho, M.; Costa, A.M. ; Ginja, J.; Ribeiro, C.; Monteiro, A.; Ribeiro, I.; Valente, J.; Amorim, J.H. ; **Martins, H.**; Lopes, D. and Miranda, A.I., 2015. Challenges for a New Air Quality Directive: The role of monitoring and modelling techniques. *Urban Climate*, 14 (3), 328-341. doi:10.1016/j.uclim.2014.06.007
- 9) Russo, A.; Trigo, R.M.; **Martins, H.** and Mendes, M.T., 2014. NO₂, PM₁₀ and O₃ urban concentrations and its association with circulation weather types in Portugal. *Atmos Env*, 89, 11-18. doi:10.1016/j.atmosenv.2014.02.010
- 10) Monteiro, A.; Ribeiro, I.; Tchepel, O.; Carvalho, A.; **Martins, H.**; Sá, E.; Ferreira, J.; Martins, V.; Galmarini, S.; Miranda, A.I. and Borrego, C., 2013. Ensemble techniques to improve air quality assessment: focus on O₃ and PM. *Environ Model Assess*, 19 (3), 249-257. doi:10.1007/s10666-012-9344-0
- 11) **Martins, H.**, 2012. Urban compaction or dispersion? An air quality modelling study. *Atmos Env*, 54, 60-72. DOI:10.1016/j.atmosenv.2012.02.075

- 12) Carvalho, A. C.; Carvalho, A.; **Martins, H.**; Marques, C.; Rocha, A.; Borrego, C.; Viegas, D. X. and Miranda, A. I., 2011. Fire weather risk assessment under climate change using a dynamical downscaling approach. *Environ Modell Softw*, 26 (9), 1123-1133. doi: 10.1016/j.envsoft.2011.03.012
- 13) Tchepel, O.; Costa, A.M.; **Martins, H.**; Ferreira, J.; Monteiro, A.; Miranda, A.I. and Borrego, C., 2010. Determination of background concentrations for air quality models using spectral analysis of monitoring data. *Atmos Env*, 44 (1), 106-114. doi: 10.1016/j.atmosenv.2009.08.038
- 14) Borrego, C.; Tchepel, O.; Costa, A.M.; **Martins, H.**; Ferreira, J. and Miranda, A.I., 2006. Traffic-related particulate air pollution exposure in urban areas. *Atmos Env*, 40, 7205-7214. doi: 10.1016/j.atmosenv.2006.06.020
- 15) Borrego, C.; **Martins, H.**; Tchepel, O.; Salmim, L.; Monteiro, A. and Miranda, A.I., 2006. How urban structure can affect city sustainability from an air quality perspective. *Env Modell Softw*, 21, 461-467. Doi: 10.1016/j.envsoft.2004.07.009

International Conferences and proceedings (submitted in italics):

- 1) Sá, E., Monteiro, A., Fernandes, A.P., Valente, J., Carvalho, D., Ferreira, J., Freitas, S., Rafael, S., **Martins, H.**, Miranda, A.I. and Borrego, C., 2016. *Modelling resilient measures to climate change impacts on urban air quality. 35th International Technical Meeting on Air Pollution Modelling and its Application, Crete, Greece 3-7 October 2016.*
- 2) Rafael, S., **Martins, H.** Borrego, C. and Lopes, M., 2015. Urban vulnerability and resilience to climate change. 23rd International Conference on Modelling, Monitoring and Management of Air Pollution, Valencia, Spain 1-3 June 2015.
- 3) **Martins, H.**, Monteiro, A., Ferreira, J., Gama, C., Ribeiro, I., Miranda, A.I. and Borrego, C. 2014. Source apportionment study on the role of NH₃ on PM pollution over Portugal. 25th GLOREAM Workshop - Tropospheric Chemical Transport Modelling, Aveiro, Portugal, 6-7 November 2014.
- 4) Borrego, C., **Martins, H.** and Amorim, J.H., 2014. Urban future – the case for atmospheric sustainability. IARU Sustainability Science Congress Global Challenges: Achieving Sustainability, Copenhagen, Denmark 22-24 October 2014.
- 5) Borrego, C., **Martins, H.**, Amorim, J.H., Freitas, S., and Miranda, A.I., 2014. Air quality, climate change and resilience in the Porto urban area. 22nd International Conference on Modelling, Monitoring and Management of Air Pollution, Opatija, Croatia 7-9 July 2014.
- 6) Miranda, A.I., Monteiro, A., **Martins, H.**, Ferreira, J., Gama, C., Ribeiro, I. and Borrego, C., 2014. The role of NH₃ on the particulate matter pollution over Portugal. 16th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Varna, Bulgaria 8-11 September 2014.
- 7) Ribeiro, I., Monteiro, A., **Martins, H.**, Miranda, A.I., Borrego, C. and Lopes, M., 2014. How does biodiesel use affect the urban air quality? 16th International Conference on

Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, Varna, Bulgaria 8-11 September 2014.

- 8) Tchepel O., Ferreira J., **Martins H.**, Silveira C., Miranda A.I. and Borrego C., 2013. Investigating the contribution of biogenic emissions to the formation of secondary pollutants in Portugal. 33rd International Technical Meeting on Air Pollution Modelling and its Application, Miami, USA 26-30 August 2013.
- 9) Ferreira, J., Tchepel, O., **Martins, H.**, Fernandes, A.P., Silveira, C., Miranda, A.I. and Borrego, C., 2012. Integrated Process Analysis of air pollution levels in Portugal. ACCENT/GLOREAM Workshop on Tropospheric Chemical Transport Modelling, Barcelona, Spain 17-19 October 2012.
- 10) Sá, E., **Martins, H.**, Carvalho, A., Lopes, M., Miranda, A.I. and Borrego, C., 2012. WRF-CAMx application over an urban area: parameterizations sensitivity study for air quality purposes. Air Quality Management 4th International Symposium, Istanbul, Turkey 10-13 September 2012.
- 11) Borrego, C., Maché, M., Amorim, J.H., Sini, J.F., **Martins, H.**, Calmet, I., Valente, J., Rodrigues, V., Miranda, A.I., Maro, D., Rosant, J.M. and Pimentel, C., 2012. Merging the gap between meso and micro scales: enhanced inflow boundary conditions for CFD modeling of urban air quality. 32nd NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, Utrecht, The Netherlands 7-11 May 2012.
- 12) **Martins, H.**, Miranda, A.I. and Borrego, C.B., 2010. Atmospheric modelling under urban land use changes: meteorological and air quality consequences. 31st NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, Torino, Italy 27 Set - 1 Out 2010.
- 13) Ferreira, J., Tchepel, O., **Martins, H.**, Silva, P., Miranda, A.I. and Borrego, C., 2009. Biogenic emissions modelling: sensitivity analysis to input data. GEIA-ACCENT Conference Emissions of Gases and Aerosols - Progress, Modeling Needs, and Emerging Issues, Oslo, Norway 26-28 October 2009.
- 14) **Martins, H.**, Miranda, A.I. and Borrego, C.B., 2009. Urban structure and air quality: a modelling approach. 22nd ACCENT – GLOREAM Workshop on Tropospheric chemical transport modelling, Brescia, Italy 26-27 November 2009.
- 15) Tchepel O., Costa, A.M., **Martins, H.** and Borrego, C., 2008. Determination of background Concentrations Using Spectrum Analysis of Monitoring Data. 12th International Conference on Harmonization within Atmospheric Dispersion Modelling for Regulatory Purposes, Cavtat, Croatia 6-10 October 2008.
- 16) **Martins, H.**, Miranda, A.I., Borrego, C., 2007. Linking urban structure and air quality. 4th Conference on Transportation Land Use, Planning, and Air Quality, Orlando, USA 9-11 July 2007.
- 17) Borrego, C., Lopes, M., Valente, J., Santos, J., Nunes, T., **Martins, H.**, Miranda, A.I., Neuparth, N., 2007. Air Pollution and child respiratory diseases: the Viseu case-study, Portugal. International Conference on Modelling, Monitoring and Management of Air Pollution 2007, Algarve, Portugal 23-25 April 2007.

- 18) Borrego, C., Monteiro, A., Costa, A.M., **Martins, H.**, Miranda, A.I., Bultjes, P. and Lutz, M., 2007. Estimation of modelling uncertainty for air quality assessment: Berlin case. 6th International Conference Urban Air Quality, Limassol, Cyprus 27-30 March 2007.
- 19) Ferreira, J., **Martins, H.**, Monteiro, A., Miranda, A.I. and Borrego, C., 2006. Air Quality Modelling Application to Evaluate Effects of PM Air Concentrations on Urban Population Exposure. International Conference on Environmental Epidemiology & Exposure, Paris, France 2-6 September 2006.
- 20) Miranda, A.I., Carvalho, A. C., **Martins, H.**, Carvalho, A., Rocha, A. and Borrego, C., 2005. Climate change impacts on air quality over Portugal. 5th International Conference Urban Air Quality, Valencia, Spain 29 March -1April 2005.
- 21) Miranda, A.I., **Martins, H.**, Carvalho, A. and Borrego, C., 2005. Modeling smoke effects in Lisbon air quality. 6th Fire and Forest Meteorology Symposium, Canmore, Canada 25-27 October 2005.
- 22) Borrego, C., **Martins, H.**, Carvalho, A., Carvalho, A.C., Lopes, M., Valente, J. and Miranda A.I., 2004. Portuguese power plants impact on air quality. 12th International Conference on Modelling, Monitoring and Management of Air Pollution, Rhodes, Greece, 30 June – 2 July 2004.
- 23) Miranda, A.I., Viegas, D.X., Rocha, A., **Martins, H.**, Carvalho, A.C., Marques, C. And Borrego, C., 2004. Climate Change and Forest Fire Weather Risk. IV Congrès International Environment et Identité en Méditerranée, Corte, Corse 19-25 July 2004.
- 24) Borrego, C., Tchepel, O., Costa, A.M., **Martins, H.** and Ferreira, J., 2004. Urban population exposure to particulate air pollution induced by road transport. 17th NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, Banf, Canada, 25-29 October 2004.
- 25) Ferreira, J., Carvalho, A., Carvalho, A.C., Monteiro, A., **Martins, H.**, Miranda, A.I. and Borrego, C., 2003. Chemical Mechanisms in two photochemical modelling systems: a comparison procedure. 16th NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, Istanbul, Turkey 26-30 May 2003.
- 26) Borrego, C., **Martins, H.**, Tchepel, O., Salmim, L., Monteiro, A. and Miranda, A.I., 2003. How urban structure can affect city sustainability from an air quality perspective. 4th International Conference on Urban Air Quality, Prague, Czech Republic 25-27 March 2003.
- 27) Borrego, C., Miranda, A.I., Costa, A.M., Tchepel, O., Amorim, J.H. and **Martins, H.**, 2002. Air Quality Modelling in European Cities: a local scale perspective. 8th International Conference on Harmonization within Atmospheric Dispersion Modelling for Regulatory Purposes, Sofia, Bulgaria, 14-17 October 2002.
- 28) Miranda, A.I., **Martins, H.**, Monteiro, A., Ferreira, J., Carvalho, A.C. and Borrego, C., 2002. Evaluation of two mesoscale modeling systems using different chemical mechanisms. 4th Symposium on the Urban Environment, Boston, USA 20 - 24 May 2002.

Books and book chapters

- 1) Borrego, C., Lopes M., Cascão, P., Amorim, J.H., **Martins, H.**, Tavares, R., Miranda, A.I., Tallis, M.J. and Freer-Smith P.H., 2015. Urban Air Quality Models. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (eds.). *Understanding Urban Metabolism: A Tool for Urban Planning*. London. Taylor & Francis. 79-90. ISBN: 9780415835114.
- 2) Lopes, M., Borrego, C., **Martins, H.** and Amorim, J.H., 2015. Guidelines for Urban Sustainable Development. In: Chrysoulakis, N., Castro, E. A. and Moors, E. J. (eds.), *Understanding Urban Metabolism: A Tool for Urban Planning*. London. Taylor & Francis. 197-205. ISBN: 9780415835114.
- 3) Miranda, A.I., Monteiro, A., **Martins, H.**, Baklanov, A. and Schlünzen, H. (eds.), 2014. *Eumetchem Young Scientist Summer School – Online Integrated Modeling of Meteorological and Chemical Transport Processes*. Cost Office. ISBN:978-989-98673-3-8.
- 4) **Martins, H.**, Miranda, A.I. and Borrego, C., 2012. Urban Structure and Air Quality. In: *Air Pollution - A Comprehensive Perspective*. InTech. 978-953-51-0705-7.
- 5) Borrego, C., Lopes, M., Valente, J., Neuparth, N., Martins, P., Amorim, J.H., Costa, A.M., Silva, J., **Martins, H.**, Tavares, R., Nunes ,T., Miranda, A.I., Cascão, P. and Ribeiro, I., 2009. The Importance of urban planning on air quality and human health (Chapter 2). In: *Urban Planning in the 21st Century*. New York. Nova Science Publishers, Inc. 978-1-60692-975-9.
- 6) Miranda, A.I., Borrego, C., **Martins, H.**, Martins, V., Amorim, J. H., Valente, J. and Carvalho, A., 2009. Forest Fire Emissions and Air Pollution in Southern Europe. In: *Earth Observation of Wildland Fires in Mediterranean Ecosystems*. Berlin. Springer. 978-3-642-01753-7 (Print) 978-3-642-01754-4 (Online). Doi: 10.1007/978-3-642-01754-4
- 7) Odegaard, V., Miranda, A.I., Monteiro, A., **Martins, H.** and Borrego, C., 2008. Model quality indicators. In: GAW Report (eds.), *Overview of Existing Integrated (off-line and on-line) Mesoscale Meteorological and Chemical Transport Modelling systems in Europe*. 17, ISBN: 978-1-905313-59-4.