

Marco Painho  
Full Professor, Researcher  
NOVA Information Management School (NOVA IMS)  
NOVA IMS Research and Development Center (MagIC)



## Research interests

Marco **Painho** was born in Elvas, Portugal, in October 9, 1960 and is currently a Full Professor at the NOVA Information Management School (NOVA IMS of the Nova University of Lisbon (UNL)).

Research interests include Geographical Information Systems and Science, (Spatial) Decision Support Systems, Data Integration, Spatial Analysis, Geographic User Generated Content, Information Infrastructures, New Technology Implementation GIS Education and Distance Learning (e-learning).

He has a degree in Environmental Engineering from the College of Science and Technology of the Nova University of Lisbon, a Master of Regional Planning (MRP) from the University of Massachusetts and a Doctor of Philosophy in Geography (Ph.D.) from the University of California. He obtained his habilitation from the Nova University of Lisbon

Besides his teaching activities, Marco **Painho** was NOVA IMS's Director (2000 -2010), as well as the Coordinator of Master's programme in Geographic Information Systems and Science via e-learning (2001 – 2008 and 2013 - ). He is the coordinator of the Master of Science in Geospatial Technologies (Erasmus Mundus).

He is author and editor of several publications (over 200) including books, chapters in books and articles. He has published in several national and international journals and conference proceedings.

He participates on a regular basis in national and international conferences and seminars as a paper author, session moderator, as well as in organising and programme committees of which ECIS'96, JEC'97 GISPIaNET'98, AGILE2002 – 2007 and CISTI 2013 are examples.

He has acted as a referee in scientific journals such as the International Journal of Geographical Information Science, Transactions in GIS, Photogrammetric Engineering and Remote Sensing, Environmental Modelling and Software, in the European Conference on Information Systems, in the Conference on Geographic Information Science (AGILE) and also in the Meetings of the Portuguese Association of GIS Users (USIG), the Portuguese Information Systems Association (APSI) and the Portuguese Association of Environmental Engineers (APEA). He was an evaluator for the European Programme INFO2000 (multimedia and geographic content) and a consultant for the European Programme FORM-AMI.

Marco **Painho** is the scientific co-ordinator of several funded research & development projects (25 projects) as well as community consulting (60 projects) within the New Technology Laboratory (LabNT). Sample projects include the Digital Environmental Atlas for the General Directorate for the Environment, the Spatial Geo-referenced Database for the National Statistics Institute, the Digital Map of European Ecological Regions for the National Museum of National History in Paris, the implementation of a GIS for resource management in a natural park in Brazil, SuGIK - Sustainable Geographic Information Knowledge Transfer for Postgraduate Education in Cape Verde and Mozambique (EDULINK), the Geographic Information System for Bus route Management (SIGGESC) for the Institute of Mobility and Transportation, and the Digital Sports Atlas of Mozambique.

He regularly advises graduate students (Masters and PhD) at NOVA IMS and other schools in the GIS area. He is also called as external committee member to Master and Phd dissertation defences and habilitation committees at other institutions.

He has served scientific and professional bodies of which the followings are examples: Member of the Scientific Committee of the European Environment Agency; Portuguese representative of the Thematic Cooperation Group: Earth Observation and Monitoring (within the IV Framework Programme – environment and Climate); President of the General Assembly of USIG (Association of Geographic Information Systems Users); President of the General Assembly of APEA (Portuguese Association of Environmental Engineers); Member of the Editorial Council of EDINOVA; Member of the Management Board e Steering Committee do European Topic Centre for Nature Conservation, Paris; Founding member of APEA (Portuguese Association of Environmental Engineers).

## Employment

### Full Professor

NOVA Information Management School (NOVA IMS)  
Universidade NOVA de Lisboa  
Lisboa, Portugal  
11 Aug 1973 → present

### Researcher

NOVA IMS Research and Development Center (MagIC)  
Universidade NOVA de Lisboa  
1 Jan 2013 → present

## Research output

- A multivariate approach to assess the structural determinants of large wildfires: Evidence from a Mediterranean country**  
Sousa, D., Cruz-Jesus, F., Sousa, A. & Painho, M., 4 Feb 2021, In : International Journal Of Wildland Fire. 14 p.
- Reliability evaluation of the data acquisition potential of a low-cost climatic network for applications in agriculture**  
Trilles, S., Juan, P., Díaz-Avalos, C., Ribeiro, S. & Painho, M., 18 Nov 2020, In : Sensors (Switzerland). 20, 22, p. 1-27 27 p., 6597.
- Remote estimation of target height from unmanned aerial vehicle (Uav) images**  
Tonini, A., Redweik, P., Painho, M. & Castelli, M., 2 Nov 2020, In : Remote Sensing. 12, 21, p. 1-24 24 p., 3602.
- Open Geospatial Data Contribution Towards Sentiment Analysis Within the Human Dimension of Smart Cities**  
Oliveira, T. H. M. D. & Painho, M., 8 Sep 2020, *Open Source Geospatial Science for Urban Studies: The Value of Open Geospatial Data*. Mobasher, A. (ed.). Gewerbestrasse 11, 6330 Cham, Switzerland: Springer, p. 75-95 20 p. (Lecture Notes in Intelligent Transportation and Infrastructure).
- Remotely sensed data fusion for spatiotemporal geostatistical analysis of forest fire hazard**  
Sakellariou, S., Cabral, P., Caetano, M., Pla, F., Painho, M., Christopoulou, O., Sfougaris, A., Dalezios, N. & Vasilakos, C., 3 Sep 2020, In : Sensors (Switzerland). 20, 17, p. 1-20 20 p., 5014.
- Geointelligence against illegal deforestation and timber laundering in the Brazilian Amazon**  
Perazzoni, F., Bacelar-Nicolau, P. & Painho, M., Jun 2020, In : ISPRS International Journal of Geo-Information. 9, 6, p. 1-29 29 p., 398.
- Understanding the determinants of GIT post-adoption: perspectives from Mozambican institutions**  
Amade, N., Oliveira, T. & Painho, M., May 2020, In : Heliyon. 6, 5, 11 p., e03879.
- Addressing geospatial preparedness inequity: A sustainable bottom-up approach for Non-Governmental development organizations**  
Martin, R. S., Painho, M. & Cruz-Jesus, F., 1 Dec 2019, In : Sustainability (Switzerland). 11, 23, 6634.
- Corrigendum to "Place and city: toward a geography of engagement" (Heliyon (2019) 5(8), (S2405844019359213), (10.1016/j.heliyon.2019.e02261))**  
Acedo, A., Oliveira, T., Naranjo-Zolotov, M. & Painho, M., 1 Sep 2019, In : Heliyon. 5, 9, 1 p., e02413.
- Place and city: toward a geography of engagement**  
Acedo, A., Oliveira, T., Naranjo-Zolotov, M. & Painho, M., 16 Aug 2019, In : Heliyon. 5, 8, 14 p., e02261.
- Geospatial preparedness: empirical study of the joint effort to provide geospatial support to disaster response**  
San Martin, R. & Painho, M., 26 Jun 2019, In : Transactions in GIS. 23, 3, p. 481-494

12. **Geographical patterns of the incidence and mortality of colorectal cancer in mainland Portugal municipalities (2007-2011)**  
Roquette, R., Painho, M. & Nunes, B., 29 May 2019, In : BMC Cancer. 19, 1, 512.
13. **Geospatial Preparedness: Empirical Study of Alternative Sources of Information for the Humanitarian Community**  
San Martin, R. & Painho, M., 29 May 2019, In : Journal of Homeland Security and Emergency Management. 16, 3
14. **A geographically weighted regression approach to investigate air pollution effect on lung cancer: A case study in Portugal**  
Cardoso, D., Painho, M. & Roquette, R., 13 May 2019, In : Geospatial Health. 14, 1, p. 35-45 11 p., 701.
15. **A Dashboard for Security Forces Data Visualization and Storytelling**  
Neto, M. D. C., Nascimento, M., Sarmiento, P., Ribeiro, S., Rodrigues, T. & Painho, M., 1 Jan 2019, *Information Systems for Industry 4.0: Proceedings of the 18th Conference of the Portuguese Association for Information Systems*. Ramos, I., Quaresma, R., Silva, P. R. D. & Oliveira, T. (eds.). Springer International Publishing, p. 47-62 16 p. (Lecture Notes in Information Systems and Organisation; vol. 31).
16. **Gamification: a key determinant of massive open online course (MOOC) success**  
Aparicio, M., Oliveira, T., Bação, F. & Painho, M., Jan 2019, In : Information and Management. 56, 1, p. 39-54 15 p.
17. **10 years of Master of Science in Geospatial Technologies: Development of a Web App with GeoTech students Data.**  
Kivrak, B., Oliveira, T. H. M. D. & Painho, M., 8 Dec 2018.
18. **giCASES: Case based learning in the field of Geographical Information**  
Painho, M., Baptista, A., Oliveira, T. H. M. D. & Carbonaro, M., 8 Dec 2018.
19. **Sustainability policies and practices in public sector organisations: The case of the Portuguese Central Public Administration**  
Figueira, I., Domingues, A. R., Caeiro, S., Painho, M., Antunes, P., Santos, R., Videira, N., Walker, R. M., Huisingsh, D. & Ramos, T. B., 20 Nov 2018, In : Journal of Cleaner Production. 202, p. 616-630 15 p.
20. **Emotion & Stress Mapping based on social media content using ArcGIS Online: "Citizens as Sensors" revisited**  
Oliveira, T. H. M. D. & Painho, M., 25 Oct 2018.
21. **giCASES: uma abordagem inovadora no campo da Informação Geográfica**  
Painho, M., Baptista, A., Oliveira, T. H. M. D. & Carbonaro, M., 25 Oct 2018.
22. **Master of Science in Geospatial Technologies: Using Esri Web App Builder to create Student Diagnosis**  
Kivrak, B., Oliveira, T. H. M. D. & Painho, M., 25 Oct 2018.
23. **Geographic information technology usage in developing countries: a case study in Mozambique**  
Amade, N., Painho, M. & Oliveira, T., 2 Oct 2018, In : Geo-Spatial Information Science. 21, 4, p. 331-345 15 p.
24. **Implementation of a dashboard for security forces data visualization**  
Neto, M. D. C., Nascimento, M., Sarmiento, P., Ribeiro, S., Rodrigues, T. & Painho, M., 1 Oct 2018, *Atas da 18ª Conferência da Associação Portuguesa de Sistemas de Informação: a indústria 4.0 e os sistemas de informação*. Silva, P., Quaresma, R. & Oliveira, T. (eds.). Associação Portuguesa de Sistemas de Informação, Vol. 2018-October. 37 p. (Atas da Conferencia da Associacao Portuguesa de Sistemas de Informacao).
25. **Modelos preditivos e segurança pública**  
Rodrigues, T. & Painho, M., 1 Oct 2018, Porto: Fronteira do Caos. 320 p.
26. **Place and city: toward urban intelligence**  
Acedo, A., Painho, M., Casteleyn, S. & Roche, S., 23 Aug 2018, In : ISPRS International Journal of Geo-Information. 7, 9, 21 p., 346.
27. **Design for geospatially enabled climate modeling and alert system (CLIMSYS): A position paper**  
Bhattacharya, D. & Painho, M., 1 Aug 2018, *10th International Conference on Geographic Information Science, GIScience 2018*. Schloss Dagstuhl- Leibniz-Zentrum fur Informatik GmbH, Dagstuhl Publishing, Vol. 114.
28. **GEO-C: Enabling open cities and the open city toolkit**  
Granell, C., Bhattacharya, D., Casteleyn, S., Degbelo, A., Gould, M., Kray, C., Painho, M. & Trilles, S., 11 Jul 2018, In : International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives. 42, 4W8, p. 61-68 8 p.
29. **Mapping and modelling malaria risk areas using climate, socio-demographic and clinical variables in Chimoio, Mozambique**  
Ferrão, J. L., Niquisse, S., Mendes, J. M. & Painho, M., 19 Apr 2018, In : International Journal of Environmental Research and Public Health. 15, 4, 795.
30. **The relevance of spatial aggregation level and of applied methods in the analysis of geographical distribution of cancer mortality in mainland Portugal (2009-2013)**  
Roquette, R., Nunes, B. & Painho, M., 27 Mar 2018, In : Population Health Metrics. 16, 1, 6.
31. **Gestural interaction with 3D objects shown on public displays: An elicitation study**  
Du, G., Degbelo, A., Kray, C. & Painho, M., 1 Jan 2018, In : Interaction Design and Architecture(s). 2018, 38, p. 184-202 19 p.

32. **Location intelligence for augmented smart cities integrating sensor web and spatial data infrastructure (SmaCiSENS)**  
Bhattacharya, D. & Painho, M., 1 Jan 2018, *GISTAM 2018 - Proceedings of the 4th International Conference on Geographical Information Systems Theory, Applications and Management*. SciTePress, Vol. 2018-March. p. 282-289 8 p.
33. **Análise espacial avançada no contexto da segurança interna**  
Cabral, P., Ribeiro, S., Ferreira, J. R. D. C. & Painho, M., 2018, *Modelos preditivos e segurança pública*. Rodrigues, T. & Painho, M. (eds.). Fronteira do Caos, p. 231-251
34. **Employee-Driven Sustainability Performance Assessment in Public Organisations**  
Coutinho, V., Domingues, A. R., Caeiro, S., Painho, M., Antunes, P., Santos, R., Videira, N., Walker, R. M., Huisingh, D. & Ramos, T. B., 2018, In : *Corporate Social Responsibility and Environmental Management*. 25, 1, p. 29-46 18 p.
35. **Modelação do crescimento urbano para a distribuição eficaz das forças de segurança: o caso português**  
Ribeiro, S., Cabral, P., Henriques, R., Bravo, J., Rodrigues, T. & Painho, M., 2018, In : *PROELIUM – Revista da Academia Militar*. 7, 14, p. 45-68
36. **O projecto SIM4SECURITY: um exemplo de aplicação de tecnologias diferenciadas em sede de políticas públicas**  
Painho, M. & Ribeiro, S., 2018, *Modelos preditivos e segurança pública*. Rodrigues, T. & Painho, M. (eds.). Fronteira do Caos, p. 157-167 10 p.
37. **Utilizzo di software geografico open source per l'istruzione e co-creazione di conoscenza nel settore dell'Informazione Geografica: il progetto giCASES**  
Minghini, M., Brovelli, M. A., Carbonaro, M., Östman, A., Frigne, D., Martirano, G., Painho, M., Prüller, S., Saio, G. & Vandenbroucke, D., 2018, p. 40-41. 2 p.
38. **Mobile traffic alert and tourist route guidance system design using geospatial data**  
Bhattacharya, D., Painho, M., Mishra, S. & Gupta, A., 25 Sep 2017, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*. Vol. 42. p. 11-18 8 p. (ISPRS Archives; vol. 42, no. 4W3).
39. **Smart Cities Intelligence System (SMACiSYS) Integrating Sensor Web with Spatial Data Infrastructures (sensdi)**  
Bhattacharya, D. & Painho, M., 25 Sep 2017, *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*. Vol. 4. p. 21-28 8 p.
40. **FOSS4G as a key building block for case-based learning in geographic information education**  
Minghini, M., Brovelli, M. A., Vandenbroucke, D., Carbonaro, M., Prüller, S., Painho, M., Martirano, G. & Frigne, D., 5 Jul 2017, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (ISPRS Archives): FOSS4G-Europe 2017 – Academic Track*. Vol. 42. p. 129-135 7 p.
41. **Place and city: Operationalizing sense of place and social capital in the urban context**  
Acedo, A., Painho, M. & Casteleyn, S., 1 Jun 2017, In : *Transactions in GIS*. 21, 3, p. 503-520 18 p.
42. **Modelling the influence of climate on malaria occurrence in Chimoio Municipality, Mozambique**  
Ferrão, J. L., Mendes, J. M. & Painho, M., 25 May 2017, In : *Parasites and Vectors*. 10, 1, p. 1-12 12 p.
43. **Malaria mortality characterization and the relationship between malaria mortality and climate in Chimoio, Mozambique**  
Ferrão, J. L., Mendes, J. M., Painho, M. & Zacarias, S., 22 May 2017, In : *Malaria Journal*. 16, 1, 212.
44. **Beyond digital human body atlases: Segmenting an integrated 3d topological model of the human body**  
Barbeito, A., Painho, M., Cabral, P. & Goyri O'Neill, J., 1 Jan 2017, In : *International Journal of E-Health and Medical Communications*. 8, 1, p. 19-36 18 p.
45. **Blended learning education on precision farming in developing countries: The example of Cape Verde and Mozambique**  
Painho, M., Baptista, A., Atumane, A. & Simões, E., 2017, *International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM*. Vol. 17. p. 9-16 8 p.
46. **Determinants of Geographic Information Technologies Intention and Adoption and Mozambique Institutions' Perspectives**  
Amade, N., Painho, M. & Oliveira, T., 2017, In : *Research Journal of Information Technology*. 2, 9, p. 64-73
47. **One tool to spatialize all: sense of place, social capital and civic engagement**  
Acedo, A., Mendoza, G., Painho, M. & Casteleyn, S., 2017, *Societal Geo-innovation: short papers, posters and poster abstracts of the 20th AGILE Conference on Geographic Information Science*. Bregt, A., Sarjakoski, T., Lammeren, R. V. & Rip, F. (eds.). Wageningen, the Netherlands: Wageningen University & Research, p. 1-5 5 p. (AGILE: The Annual International Conference on Geographic Information Science; no. 2017).
48. **Spatial epidemiology of cancer: A review of data sources, methods and risk factors**  
Roquette, R., Painho, M. & Nunes, B., 2017, In : *Geospatial Health*. 12, 1, 504.
49. **Urban Agent Based Model of Urban SlumDharavi, Mumbai,India**  
Padmanaban, R., Jerome, J., Asok V, S., Dasgupta, P. & Painho, M., 2017, In : *International Journal of Earth Sciences and Engineering*. 10, 6, p. 1110-1117

50. **User generated spatial content-integrator: Conceptual model to integrate data from diverse sources of user generated spatial content**  
Estima, J. & Painho, M., 1 Oct 2016, In : ISPRS International Journal of Geo-Information. 5, 10, 183.
51. **SIM4SECURITY: A forecast and spatial model for homeland security: PORTUGAL 2030**  
Rodrigues, T. M. F., Inácio, A. A., Araújo, D., Painho, M., Henriques, R., Cabral, P. D. C. B., Oliveira, T. H. M. D. & Neto, M. D. C., Oct 2016, *Atas do V Congresso Português de Demografia*. p. 326-335 10 p.
52. **Land cover monitoring for water resources management in Angola**  
Miguel, I., Navarro, A., Rolim, J., Catalão, J., Silva, J., Painho, M. & Vekerdy, Z., 1 Aug 2016, *Proceedings of Living Planet Symposium 2016*. European Space Agency, Vol. SP-740.
53. **Crop monitoring based on SPOT-5 Take-5 and sentinel-1A data for the estimation of crop water requirements**  
Navarro, A., Rolim, J., Miguel, I., Catalão, J., Silva, J., Painho, M. & Vekerdy, Z., 22 Jun 2016, In : Remote Sensing. 8, 6, 525.
54. **Spatio-temporal variation and socio-demographic characters of malaria in Chimoio municipality, Mozambique**  
Ferrão, J. L., Mendes, J. M., Painho, M. & João, S. Z., 21 Jun 2016, In : Malaria Journal. 15, 1, 329.
55. **Design for connecting spatial data infrastructures with Sensor Web (SENSDI)**  
Bhattacharya, D. & Painho, M., 3 Jun 2016, In : ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences. 3, p. 33-39 7 p.
56. **Crowdsourcing, citizen science or volunteered geographic information? The current state of crowdsourced geographic information**  
See, L., Mooney, P., Foody, G., Bastin, L., Comber, A., Estima, J., Fritz, S., Kerle, N., Jiang, B., Laakso, M., Liu, H. Y., Milènski, G., Nikšić, M., Painho, M., Podör, A., Olteanu-Raimond, A. M. R. & Rutzinger, M., 1 May 2016, In : ISPRS International Journal of Geo-Information. 5, 5, 55.
57. **Exploring the human body space: A geographical information system based anatomical atlas**  
Barbeito, A., Painho, M., Cabral, P. & O'Neill, J. G., 1 Jan 2016, In : Journal of Spatial Information Science. 12, 2016, p. 87-111 25 p.
58. **Including geospatial tools for agriculture education in developing countries: a case for Cape Verde and Mozambique**  
Painho, M., Baptista, A., Atumane, A. & Simoes, E., 2016, *6th International Conference on Cartography and GIS*. p. 167-175 (International Conference on Cartography and GIS).
59. **Emotion & stress mapping: Assembling an ambient geographic information-based methodology in order to understand smart cities**  
Oliveira, T. H. M. D. & Painho, M., 28 Jul 2015, *2015 10th Iberian Conference on Information Systems and Technologies, CISTI 2015*. Institute of Electrical and Electronics Engineers Inc., 7170469
60. **TecGEO: Desenho e implementação do primeiro Massive Open Online Course (MOOC) em língua portuguesa no domínio da Ciências e Sistemas de Informação Geográfica**  
Oliveira, T. H. M. D. & Painho, M., 3 Jul 2015, *Experiências de Inovação Didática no Ensino Superior*. Portugal: Ministério da Educação e Ciência, p. 299-314
61. **Linking Agricultural Policies with Decision-Making: A Spatial Approach**  
Vaz, E., Painho, M. & Nijkamp, P., 3 Apr 2015, In : European Planning Studies. 23, 4, p. 733-745 13 p.
62. **Investigating the potential of OpenStreetMap for land use/land cover production: A case study for continental Portugal**  
Estima, J. & Painho, M., 1 Jan 2015, In : Lecture Notes in Geoinformation and Cartography. 9783319142791, p. 273-293 21 p.
63. **Is the heritage really important? A theoretical framework for heritage reputation using citizen sensing**  
Monteiro, V., Painho, M. & Vaz, E., 1 Jan 2015, In : Habitat International. 45, P2, p. 156-162 7 p.
64. **Spatial analysis of sustainability of urban habitats, introduction**  
Painho, M. O. T., Vaz, E., Kourtit, K. & Nijkamp, P., 1 Jan 2015, In : Habitat International. 45, NA, p. 71 1 p.
65. **AGILE 2015: Geographic information science as an enabler of smarter cities and communities**  
Bação, F., Santos, M. Y. & Painho, M., 2015, Kluwer Academic Publishers. 375 p. (Lecture Notes in Geoinformation and Cartography)
66. **AgIM: ensino pós-graduado em gestão de informação agrícola e agricultura de precisão em Cabo Verde e Moçambique**  
Painho, M., Baptista, A., Nascimento, J. & Atumane, A., 2015, *Atas das I Jornadas Lusófonas de Ciências e Tecnologias de Informação Geográfica*. Santos, J. G. D., Fonte, C., Figueiredo, R. F. D., Cardoso, A., Gonçalves, G., Almeida, J. P. & Baptista, S. (eds.). Imprensa da Universidade de Coimbra, p. 890-909 24 p.
67. **A topological multilayer model of the human body**  
Barbeito, A., Painho, M., Cabral, P. & O'Neill, J., 2015, In : Geospatial Health. 10, 2, p. 199-204 5 p., 375.

68. **Collaborative Governance in Marine Protected Areas: the Eco-Social Dialogue in the Empowerment of Changing Agents for the Sustainability of the Oceans**  
Vasconcelos, L. M. T. D., Oliveira, T. H. M. D. & Painho, M., 2015, *Sustainability in the 21st century: The Power of Dialogue*. Lisboa: Cafileisa, p. 23-32
69. **Detection of exogenous floating marine debris: An overview of techniques associated with remote sensing**  
Paige, M. & Painho, M., 2015, *Water Resources Management VIII*. Vol. 196. p. 537 - 548 (WIT Transactions on Ecology and the Environment).
70. **PPGIS: a collaborative governance of marine protected areas and public experience by using participation geographic information systems (PPGIS)**  
Painho, M., Oliveira, T. M. D., Calbet, Ó. V. & Dias, F., 2015, *Sustainability in the 21st Century: The Power of Dialogue*. Vasconcelos, L. & Silva, F. (eds.). Lisboa: MARGov, p. 70-81 12 p.
71. **Preface**  
Baçã, F., Santos, M. Y. & Painho, M., 2015, *AGILE 2015 - Geographic Information Science as an Enabler of Smarter Cities and Communities*. Kluwer Academic Publishers, Vol. 217.
72. **Spatial data infrastructure for the Zambezi valley (Mozambique)**  
Painho, M., Almeida, L. M., Martins, H., Adelino, A. & Oliveira, P., 2015, *SGEM 2015: 15th International Multidisciplinary Scientific GeoConference*. Vol. 2. p. 1079-1086 8 p.
73. **TecGEO: Desenho e implementação do primeiro Massive Open Online Course (MOOC) em língua portuguesa no domínio da Ciências e Sistemas de Informação Geográfica**  
Oliveira, T. H. M. D. & Painho, M., 2015, *CNaPPES 2015: Congresso Nacional de Práticas Pedagógicas no Ensino Superior*.
74. **The emotion-aware city: Development of a framework based on social media towards emotion & stress mapping**  
Oliveira, T. & Painho, M., 2015, *CAPSI 2015 - 15ª Conferência da Associação Portuguesa de Sistemas de Informação*.
75. **Using Ambient Geographic Information (AGI) in Order to Understand Emotion & Stress within Smart Cities**  
Oliveira, T. H. & Painho, M., 2015, *AGILE 2015 : 18th AGILE International Conference on Geographic Information Science*.
76. **Photo based volunteered geographic information initiatives: A comparative study of their suitability for helping quality control of corine land cover**  
Estima, J. & Painho, M., 1 Jul 2014, In : *International Journal of Agricultural and Environmental Information Systems*. 5, 3, p. 73-89 17 p.
77. **An Open Participatory Conceptual Framework to Support State of the Environment and Sustainability Reports**  
Ramos, T. A. B., Martins, I. P., Martinho, A. P., Douglas, C. H., Painho, M. O. T. & Caeiro, S., 1 Feb 2014, In : *Journal of Cleaner Production*. 64, p. 158-172
78. **An integrated model of the human body**  
Barbeito, A., Painho, M., Cabral, P. & O'Neill, J. G., 1 Jan 2014, *Atas da Conferencia da Associação Portuguesa de Sistemas de Informação*. Vol. 14. p. 30-45 16 p. (Atas da Conferencia da Associação Portuguesa de Sistemas de Informação).
79. **Atlas Desportivo de Moçambique**  
Oliveira, T. H. M. D., Painho, M., Batista, L. & Batista, A., 1 Jan 2014, Maputo: Ministério da Juventude e Desportos do Governo de Moçambique.
80. **Exogenous floating marine debris: Filling search and detection gaps using remote sensing**  
Paige, M. & Painho, M., 1 Jan 2014, *9th Iberian Conference on Information Systems and Technologies, CISTI 2014*. IEEE Computer Society, 6876887. (Iberian Conference on Information Systems and Technologies, CISTI).
81. **Análise e Projeção Multi-decenal das Alterações de Uso e Ocupação do Solo em Portugal Continental**  
Cabral, P., Santos, S., Zamyatin, A. & Painho, M., 2014, *Uso e Ocupação do Solo em Portugal Continental: Avaliação e Cenário Futuros*. Direção Geral do Território, p. 109-116
82. **Development of an agricultural management information system based on Open-Source solutions**  
Oliveira, T. H., Painho, M., Santos, V., Sian, O. & Barriguinha, A., 2014, *CENTERIS 2014 - Conference on ENTERprise Information Systems / ProjMAN 2014 - International Conference on Project MANagement / HCIST 2014 - International Conference on Health and Social Care Information Systems and Technologies*. Varajão, J., Cunha, M., Bjørn-Andersen, N., Turner, R., Wijesekera, D., Martinho, R. & Rijo, R. (eds.). Vol. 16. p. 342-354 (Procedia Technology; vol. 16).
83. **Sensing world heritage: An exploratory study of Twitter as a tool for assessing reputation**  
Monteiro, V., Henriques, R., Painho, M. & Vaz, E., 2014, *Computational Science and Its Applications, ICCSA 2014 - 14th International Conference, Proceedings*. PART 2 ed. Springer-Verlag, Vol. 8580 LNCS. p. 404-419 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 8580 LNCS, no. PART 2).
84. **The use of gis in the study of bus lines the case of Lisbon and Oporto metropolitan areas**  
Painho, M., Oliveira, T. H., Almeida, L. M., Boieiro, I., Roxo, M. & Seabra, I., 2014, p. 989-999. 11 p.

85. **Flickr geotagged and publicly available photos: Preliminary study of its adequacy for helping quality control of Corine Land Cover**  
Estima, J. & Painho, M., 1 Aug 2013, *Computational Science and Its Applications, ICCSA 2013 - 13th International Conference, Proceedings*. PART 4 ed. p. 205-220 16 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 7974 LNCS, no. PART 4).
86. **Public Participation Geographic Information Systems (PPGIS)**  
Painho, M., Dias, F., Calbet, O. V., Curvelo, P. & Oliveira, T. H. M. D., 1 Jul 2013, *An Ocean of people: citizen scientists and scientist citizens*. Vasconcelos, L. (ed.). Vírgula, p. 25-28 4 p.
87. **A Framework for a Spatial Analysis Model for Homeland Security (Quadro de referência de Análise Espacial Aplicado à Segurança Interna)**  
Painho, M., Rodrigues, T., Oliveira, T. H., Coimbra, A. A., Fernandes, L. F., Cabral, P. D. C. B., Henriques, R. A. P., Neto, M. D. C. S. F. & Alves, F., 1 Jan 2013, *Congresso da ADEH - Associação de Demografia Histórica*. p. 1-26
88. **CISTI 2013, Atas da 8ª Conferência Ibérica de Sistemas e Tecnologias de Informação**  
Neto, M. D. C. & Painho, M., 1 Jan 2013, Lisboa, Portugal: AISTI.
89. **Exploratory analysis of OpenStreetMap for land use classification**  
Estima, J. & Painho, M., 1 Jan 2013, *GEOCROWD 2013 - Proceedings of the 2nd ACM SIGSPATIAL International Workshop on Crowdsourced and Volunteered Geographic Information*. Association for Computing Machinery, p. 39-46 8 p. (GEOCROWD 2013 - Proceedings of the 2nd ACM SIGSPATIAL International Workshop on Crowdsourced and Volunteered Geographic Information).
90. **Google Earth como Ferramenta Didáctica - Um estudo de caso numa Escola Secundária. 1 (2013): Cooperação Internacional e Desenvolvimento em Moçambique**  
Painho, M. & Amade, N., 1 Jan 2013, In : *Revista Eletrónica de Investigação e Desenvolvimento*. 1, NA, p. 1-14
91. **Governance of Marine Protected Areas: An Approach Using Public Participation Geographic Information Systems – The MARGov Project**  
Painho, M. & Oliveira, T. H., 1 Jan 2013, In : *Journal of Environmental Science and Engineering B*. 2, 1, p. 25-35
92. **Is it the “outstanding universal value” of heritage really global? Measuring reputation using social media**  
Monteiro, V., Painho, M. & Vaz, E., 1 Jan 2013, *Sistemas e Tecnologias de Informação: Atas da 8ª Conferência Ibérica de Sistemas e Tecnologias de Informação Lisboa, Portugal*. APPACDM. Associação Portuguesa de Pais e Amigos do Cidadão Deficiente Mental, p. 1-4
93. **The Evolution of Population Distribution on the Iberian Peninsula: A Transnational Approach (1877-2001)**  
Silveira, L. N. E., Alves, D. R., Painho, M., Costa, A. C. M. D. & Alcântara, A., 1 Jan 2013, In : *Historical Methods*. 46, 3, p. 157-174
94. **The invisible cities - can PPGIS connect citizens to urban policies?**  
Painho, M. & Pina, I., 1 Jan 2013, In : *Geofocus*. 13, 1, p. 1-4
95. **A spatial decision support system for the Portuguese public transportation sector**  
Oliveira, T. H. M. D., Painho, M. & Henriques, R., 1 Dec 2012, *Proceedings of the ACM SIGSPATIAL International Workshop on GeoStreaming, IWGS 2012*. p. 84-90 7 p. (Proceedings of the ACM SIGSPATIAL International Workshop on GeoStreaming, IWGS 2012).
96. **Building Dynamic, Ontology-Based Alternative Paths for GIS&T Curricula**  
Painho, M. & Curvelo, P., 10 Feb 2012, *Teaching Geographic Information Science and Technology in Higher Education*. Wiley/Blackwell, p. 97-115 19 p.
97. **A multi-scenario forecast of urban change: A study on urban growth in the Algarve**  
Vaz, E. D. N., Nijkamp, P., Painho, M. & Caetano, M., 1 Feb 2012, In : *Landscape And Urban Planning*. 104, 2, p. 201-211 11 p.
98. **Governância colaborativa de áreas marinhas protegidas: sistema de informação geográfica de participação pública (PPSIG) no Parque Marinho Luiz Saldanha - o projecto MarGov**  
Painho, M. O. T. & Oliveira, T. H., 1 Jan 2012, *Jornadas do Mar*. p. 1-17
99. **Outputs from SIGGESC: Bus Lines Management Geographic Information System**  
Henriques, R. A. P., Oliveira, T. H. & Painho, M., 1 Jan 2012, *ESRI Map Book*. {ISEG/IUL-ISCTE}, pages = {1-16}, abstract = {SIGGESC is a Geographic Information System (GIS) directed towards the public transportation sector. This GIS contributes to a paradigm shift at IMTT in terms of the process of registering and granting concessio, p. 109
100. **Participação pública activa no plano de gestão da região hidrográfica do Tejo**  
Painho, M. O. T., 1 Jan 2012, *Congresso da Água*. p. 1-17
101. **Participação pública e sistemas de informação geográfica (PPGIS): novos caminhos de cidadania**  
Painho, M. O. T., 1 Jan 2012, *Conferência da Associação Portuguesa de Sistemas de Informação*. p. 1-10
102. **Planear equipamentos em tempos de crise: o caso do futuro hospital de Sintra**  
Painho, M. O. T., 1 Jan 2012, *Coloqui Ibérico de Geografia*. Ryé, D., Vásquez, JAA., Otón, MP., Mantiñan, MJP. & Díaz, MV. (eds.). p. 514-524

103. **Space-time patterns of temperature in Sweden and Europe**  
Sulçe, A., Drate, P., Costa, A. C. & Painho, M., 1 Jan 2012, *Multidisciplinary Research on Geographical Information in Europe and Beyond: Proceedings of the AGILE'2012 International Conference on Geographic Information Science, Avignon, France, 24-27 April*. Jérôme Gensel DJ, DV. (ed.). Avignon: AGILE, p. 343-344
104. **SUGIK - fortalecimento da capacitação institucional em ciência e sistemas de informação geográfica (C&SIG) em Moçambique e Cabo Verde**  
Painho, M. O. T., Curvelo, P. & Martins, M. D. R. F. D. O., 1 Jan 2012, *COOPEDU Cooperation and Education: Africa and the world*. p. 16-17
105. **Urban heritage endangerment at the interface of future cities and past heritage: A spatial vulnerability assessment**  
Vaz, E. D. N., Cabral, P., Caetano, M., Nijkamp, P. & Painho, M., 1 Jan 2012, In : *Habitat International*. 36, 2, p. 287-294 8 p.
106. **The influence of landscape variation on landform categorization**  
Williams, M., Kuhn, W. & Painho, M., 2012, In : *Journal of Spatial Information Science*. 5, 2012, p. 51-73 23 p.
107. **A Decision Support System for the Public Transportation Sector: the SIGGESC Project**  
Oliveira, T. H. M. D., Painho, M. & Henriques, R., 21 Oct 2011, *proceedings of CAPSI 2011. 11ª Conferência da Associação Portuguesa de Sistemas de Informação*.
108. **Collaborative governance of marine protected areas and Public Participation Geographic Information Systems (PPGIS) in MARGov**  
Oliveira, T. H. M. D., Painho, M., Vidal, O. & Vasconcelos, L., 8 Sep 2011, *CoastGIS 2011 Book of Abstracts-10th International Symposium on GIS and Computer Mapping for Coastal Management "CoastGIS 2011*. Oostende, Belgium
109. **Crossroads of tourism: A complex spatial systems analysis of tourism and urban sprawl in the Algarve**  
Vaz, E. D. N., Nainggolan, D., Nijkamp, P. & Painho, M., 1 Aug 2011, In : *International Journal Of Sustainable Development*. 14, 3-4, p. 225-241 17 p.
110. **Evaluation of Stochastic Geographical Matters: Morphologic Geostatistics, Conditional Sequential Simulation and Geographical Weighted Regression**  
Negreiros, J., Costa, A. C. & Painho, M., 1 Jan 2011, In : *Trends in Applied Science Research*. 6, 3, p. 237-255
111. **Human body modeling in geographic information systems: Application to Acupuncture**  
Barbeito, A., Cabral, P. & Painho, M., 2011, *Proceedings of the 6th Iberian Conference on Information Systems and Technologies, CISTI 2011*. 5974289
112. **Preface**  
Painho, M., Santos, M. Y. & Pundt, H., 1 Dec 2010, *Lecture Notes in Geoinformation and Cartography*. Springer, (Lecture Notes in Geoinformation and Cartography).
113. **Risk assessment: The global confidence uncertainty plume of SAKweb ©**  
Negreiros, J., Painho, M., Aguilar, M. & Aguilar, F., 1 Dec 2010, *Risk Analysis VII*. Vol. 43 PART I. (WIT Transactions on Information and Communication Technologies).
114. **A comprehensive framework for exploratory spatial data analysis: Moran location and variance scatterplots**  
Negreiros, J. G., Painho, M., Aguilar, F. J. & Aguilar, M. A., 1 Jun 2010, In : *International Journal Of Digital Earth*. 3, 2, p. 157-186 30 p.
115. **An assessment of Public Participation GIS and Web 2.0 technologies in urban planning practice in Canela, Brazil**  
Bugs, G., Granell, C., Fonts, O., Huerta, J. & Painho, M., 1 Jun 2010, In : *Cities*. 27, 3, p. 172-181 10 p.
116. **Geographical information systems principles of ordinary kriging interpolator**  
Negreiros, J., Painho, M., Aguilar, F. & Aguilar, M., 1 Jan 2010, In : *Journal Of Applied Sciences*. 10, 11, p. 852-867 16 p.
117. **Tiger capacity building facility: Growing from projects to professional community**  
Vekerdy, Z., Su, B., Menenti, M., Swinnen, E., Painho, M. & Fernandez, D., 1 Jan 2010, In : *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*. 38, p. 92-95 4 p.
118. **Comparison of different interpolation techniques to map temperature in the southern region of Eritrea**  
Tewelde, M. G., Beza, T. A., Costa, A. C. & Painho, M., 2010, *Geospatial Thinking: Proceedings of the 13th AGILE International Conference on Geographic Information Science*. M., P., M. Y., S. & H., P. (eds.). Association of Geographic Information Laboratories for Europe (AGILE), p. 1-5 5 p.
119. **GIS day activities and the ConTIG project: Using geographical information technologies in middle and high school**  
Mota, M. & Painho, M., 21 Jul 2009, *CSEDU 2009 - Proceedings of the 1st International Conference on Computer Supported Education*. p. 242-247 6 p. (CSEDU 2009 - Proceedings of the 1st International Conference on Computer Supported Education; vol. 1).
120. **Ecological risk assessment of sediment management areas: application to Sado Estuary, Portugal**  
Costa, M. H. F. R. D., Gonçalves, M. M. B. P., Ramos, T. A. B. & Painho, M. O. T., 1 Jan 2009, In : *Ecotoxicology*. 18, 8, p. 1165-1175
121. **Inner View of Spatial Autoregression Residuals with LADS and Join-Count Statistics**  
Negreiros, J. G. M. & Painho, M. O. T., 1 Jan 2009, *Conference of the International Statistic Institute*. p. 1-5



122. **Interactivity with Static Images in a Web Environment**  
Negreiros, J. G. M. & Painho, M. O. T., 1 Jan 2009, *InterTIC International Conference*. Acosta P, C. (ed.). p. 169-170
123. **Spatial patterns of daily precipitation intensity in southern Portugal, 1940–1999**  
Costa, A. C., Oliveira, T., Painho, M. & Dias, S., 1 Jan 2009, *Advances in GIScience: 12th AGILE International Conference on Geographic Information Science 2009* . p. 1-4
124. **Synopsis of an Internet Spatial Decision Support Prototype**  
Negreiros, J. G. M. & Painho, M. O. T., 1 Jan 2009, *Handbook of Research on Social Dimensions of Semantic Technologies and Web Services*. Hershey: IGI-Global, p. 42
125. **The Blended Kriging Version of SAKWeb©**  
Negreiros, J. G. M. & Painho, M. O. T., 1 Jan 2009, *Jornadas de Classificação e Análise de Dados*. p. 1-
126. **The Local and Global Confidence Uncertainty Plumes of SAKWeb©**  
Negreiros, J. G. M., Painho, M., Aguilar, M. & Aguilar, F., 1 Jan 2009, *The 12th AGILE International Conference on Geographic Information Science: Advances in GIScience*. Haunert, J., Kieler, B. & Milde, J. (eds.). Association of Geographic Information Laboratories for Europe (AGILE), p. 81-90 10 p.
127. **Applications of Different Self-Organizing Map Variants to Geographical Information Science Problems**  
Bação, F., Lobo, V. & Painho, M., 1 Jan 2008, *Self-Organising Maps: Applications in Geographic Information Science*. Agarwal, P. & Skupin, A. (eds.). Wiley, p. 21-44 24 p.
128. **Distância Física Vs Distância Social: Caso de Estudo com os Alunos da 7ª Edição do Curso de Mestrado em Ciência & Sistemas de Informação Geográfica do ISEGI-UNL**  
Peixoto de Almeida, M., Painho, M., Henriques, R., Neto, M. & Correia, A. M., 2008, *ESIG2008 - X Encontro de Utilizadores de Informação Geográfica*. Geográfica, USIG. . A. D. U. D. S. D. I. (ed.).
129. **Grasshopper outbreaks in colorado: A spatial decision support with SAKWeb©**  
Negreiros, J., Damásio, M., Painho, M., Oliveira, T., Aguilar, F. & Aguilar, M., 2008, *3rd Iberian Conference on Information Systems and Technologies, CISTI 2008*.
130. **Synopsis of an internet spatial (decision support) prototype**  
Negreiros, J., Painho, M., Oliveira, T., Aguilar, M. A. & Aguilar, F. J., 2008, *Proceedings of the 2008 International Conference on e-Learning, e-Business, Enterprise Information Systems, and e-Government, EEE 2008*. p. 83-88 6 p.
131. **The local confidence uncertainty plume of SAKWeb**  
Negreiros, J., Painho, M., Costa, A. C., Cabral, P. & Aguilar, F., 2008, *Risk Analysis IV - Simulation and Hazard Mitigation*. Vol. 39. p. 81-90 10 p.
132. **The nugget-effect approaches of SAKWeb for environmental modelling**  
Negreiros, J., Painho, M., Costa, A. C., Cabral, P. & Oliveira, T., 2008, *Geo-Environment and Landscape Evolution III: Evolution, Monitoring, Simulation, Management and Remediation of the Geological Environment and Landscape*. Vol. 100. p. 47-56 10 p.
133. **An ontological-based approach to geographic information science curricula design**  
Painho, M., Curvelo, P. & Jovani, I., 1 Dec 2007, *The European Information Society: Leading the Way with Geo-Information*. p. 15-34 20 p.
134. **Geostatistical Analysis: Software Flashpoint**  
Negreiros, J. G. M., Painho, M., Costa, A. C., Santos, J. & Lopes, I., 2007, .), *Proceedings of the 9th International Conference on Geocomputation, National University of Ireland, Maynooth, Ireland, 3-5 September*. 12 p.
135. **E-learning curricula search in geographical information systems and science**  
Painho, M., Jovani, I. & Curvelo, P., 1 Dec 2006, *Proceedings 2006 - The 9th AGILE International Conference on Geographic Information Science: "Shaping the Future of Geographic Information Science in Europe"*, AGILE 2006. p. 309-316 8 p.
136. **Accuracy 2006 report**  
Caetano, M. & Painho, M., 1 Jan 2006, Instituto Geografica Portugues. (Proceedings of ACCURACY 2006 - 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences)
137. **Linux® vs Windows®: Um benchmark com algoritmos de ordenação**  
Negreiros, J., Painho, M., Lopes, I. & Malta, P., 1 Jan 2006, *CISTI 2006 - Actas da 1a Conferencia Iberica de Sistemas e Tecnologias de Informacao*. Cunha, M. M. & Rocha, A. (eds.). Associacao Iberica de Sistemas e Tecnologias de Informacao, Vol. 2. p. 473-484 12 p.
138. **Preface**  
Caetano, M. & Painho, M., 1 Jan 2006, *Proceedings of ACCURACY 2006: 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*. p. XI (Proceedings of ACCURACY 2006 - 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences).

139. **SAKWeb<sup>®</sup> - Spatial autocorrelation and kriging web service**  
Negreiros, J. & Painho, M., 1 Jan 2006, *Geo-Environment and Landscape Evolution II: Monitoring, Simulation, Management and Remediation*. WITPress, Vol. 89. p. 79-89 11 p. (WIT Transactions on Ecology and the Environment).
140. **A stratified sampling approach to the spatial accuracy assessment of digital cartography: An application to the Portuguese Ecological Reserve**  
Peixoto, M., Costa, A. C., Painho, M. & Bartoschek, T., 2006, *Proceedings of ACCURACY 2006 - 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*. Instituto Geografica Portugues, p. 99-108 10 p.
141. **Geostatistical approach for controlling bus movements in Greater Lisbon using GPS**  
Painho, M., Bartoschek, T. & Henriques, R., 2006, *Proceedings 2006 - The 9th AGILE International Conference on Geographic Information Science: "Shaping the Future of Geographic Information Science in Europe", AGILE 2006*. p. 319-324 6 p.
142. **Managing spatial data quality in the Portuguese National Ecological Reserve**  
Peixoto, M., Painho, M., Costa, A. C. & Bartoschek, T., 2006, *Proceedings of the 26th Annual ESRI International User Conference, 7-11 August, San Diego, California*.
143. **RENalyzer: A tool to facilitate the spatial accuracy assessment of digital cartography**  
Bartoschek, T., Painho, M., Henriques, R., Peixoto, M. & Costa, A. C., 2006, *Proceedings of ACCURACY 2006 - 7th International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences*. Instituto Geografica Portugues, p. 379-385 7 p.
144. **Measuring semantic differences between conceptualisations: The Portuguese water bodies case - Does education matter?**  
Pires, P., Painho, M. & Kuhn, W., 1 Dec 2005, *On the Move to Meaningful Internet Systems 2005: OTM Workshops - OTM Confederated Int. Workshops and Posters, AWeSOMe, CAMS, GADA, MIOS+INTEROP, ORM, PhDS, SeBGIS, SWWS, and WOSE 2005, Proceedings*. p. 1020-1026 7 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); vol. 3762 LNCS).
145. **Alterações da ocupação do espaço do solo em Portugal Continental: 1985-2000**  
Caetano, M., Carrao, H. & Painho, M., Sep 2005, Lisboa: Instituto do Ambiente. 40 p.
146. **Assessing heavy metal contamination in Sado Estuary sediment an index analysis approach**  
Caeiro, S., Costa, M. H., Ramos, T. B., Fernandes, F. B., Silveira, N., Coimbra, A., Medeiros, G. & Painho, M., 1 May 2005, In : *Ecological Indicators*. 5, 2, p. 151-169 19 p.
147. **Editorial for the special issue: Soft computing for spatial data analysis**  
Painho, M. & Lois, V., 1 May 2005, In : *Soft Computing*. 9, 5, 1 p.
148. **Applying genetic algorithms to zone design**  
Bação, F., Lobo, V. & Painho, M., May 2005, In : *Soft Computing*. 9, 5, p. 341-348 8 p.
149. **Exploring spatial data through computational intelligence: A joint perspective**  
Painho, M., Vasilakos, A., Bação, F. & Pedrycz, W., May 2005, In : *Soft Computing*. 9, 5, p. 326-331 6 p.
150. **The self-organizing map, the Geo-SOM, and relevant variants for geosciences**  
Bação, F., Lobo, V. & Painho, M., Mar 2005, In : *Computers and Geosciences*. 31, 2, p. 155-163 9 p.
151. **Analysis and modeling of land-use and land-cover change in Sintra-Cascais area**  
Cabral, P., Geroyannis, H., Gilg, J. P. & Painho, M., 2005, *Proceedings 2005 - The 8th AGILE International Conference on Geographic Information Science, AGILE 2005*. p. 1-10 10 p.
152. **Delineation of estuarine management units: Evaluation of an automatic procedure**  
Bação, F., Caeiro, S., Painho, M., Goovaerts, P. & Costa, M. H., 2005, *GEOSTATISTICS FOR ENVIRONMENTAL APPLICATIONS, PROCEEDINGS*. p. 429-441
153. **GEO-SOM and ITS integration with geographic information systems**  
Bação, F., Lobo, V. & Painho, M., 2005, *WSOM 2005 - 5th Workshop on Self-Organizing Maps*. p. 505-512 8 p.
154. **Monitoring urban growth using remote sensing, GIS and spatial metrics**  
Cabral, P., Gilg, J. P. & Painho, M., 2005, *Proceedings of SPIE - The International Society for Optical Engineering 5884: Remote Sensing and Modeling of Ecosystems for Sustainability II*. Vol. 5884. p. 1-9 9 p. 588404
155. **Self-organizing Maps as substitutes for K-means clustering**  
Bação, F., Lobo, V. & Painho, M., 2005, *Computational Science - ICCS 2005 : 5th International Conference, Atlanta, GA, USA*. Springer, Vol. 3516. p. 476-483 8 p.
156. **Geo-self-organizing map (Geo-SOM) for building and exploring homogeneous regions**  
Bação, F., Lobo, V. & Painho, M., 2004, *Geographic Information Science: Third International Conference, GIScience 2004 Adelphi, MD, USA, October 20-23, 2004 Proceedings*. Vol. 3234. p. 22-37 16 p. (Lecture Notes in Computer Science; vol. 3234).
157. **Delineation of estuarine management areas using multivariate geostatistics the case of Sado Estuary**  
Caeiro, S., Goovaerts, P., Painho, M. & Costa, M. H., 15 Sep 2003, In : *Environmental Science and Technology*. 37, 18, p. 4052-4059 8 p.

158. **Spatial sampling design for sediment quality assessment in estuaries**  
Caeiro, S., Painho, M., Goovaerts, P., Costa, H. & Sousa, S., 2003, In : Environmental Modelling & Software. 18, 10, p. 853-859 7 p.
159. **Modelação da Equação Universal de Perda de Solo em Sistemas de Informação Geográfica**  
Neto, M. D. C., Augusto, G. & Painho, M., 1999.
160. **A reciclagem de resíduos na perspectiva das ciências sociais: Revisão bibliográfica das variáveis situacionais**  
Gonçalves, G. & Painho, M., 1 Jan 1998, In : Análise Social. 33, 146-147, p. 591-610 20 p.
161. **The effects of generalization on attribute accuracy in natural resource maps**  
Painho, M., 1 Jan 1995, *GIS and generalization: methodology and practice*. p. 194-206 13 p. (GISDATA; vol. 1).