

AGILE PhD Students

The first survey



This document summarizes the data collected on the first survey aiming to characterize the PhD students of AGILE's laboratories. Although information from several labs is missing, the available data clearly give an overview of the activity of our association.



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The first survey

The Association for Geographic Information Laboratories of Europe (AGILE) recently launched a survey to obtain information of the students carrying out a PhD in its member laboratories. This is the first time that AGILE collected such information in an integrated manner and the effort was coordinated by Maribel Yasmina Santos of the University of Minho, Portugal. The survey collected information on both works that have been recently completed and that are still in progress.

The survey was available from February 1, 2012, to May, 31, 2012. In this period, 83 researchers from different countries and integrated in AGILE's associated labs completed the survey. The number of PhDs by nationality is shown in Figure 1. Twenty two are Germans, 10 are Austrian, 8 are French and 6 are Chinese, only to mention a few.

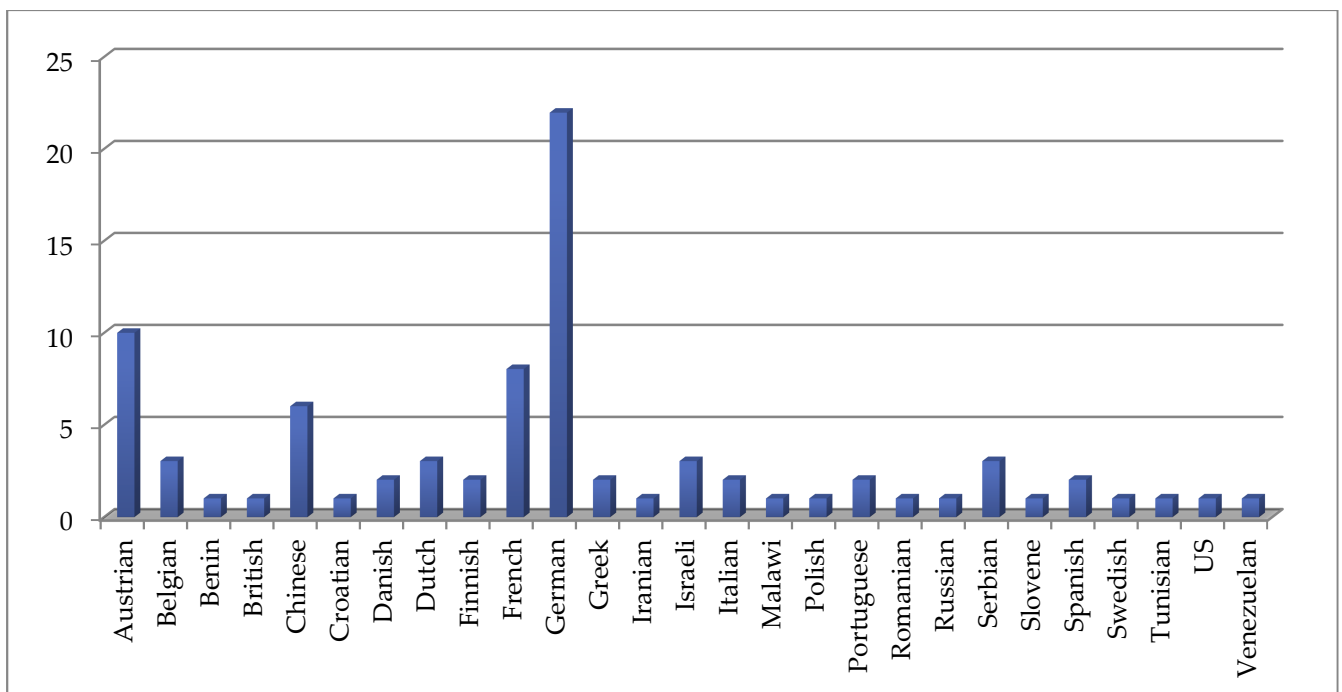


Figure 1. Students' Nationality

PhD students from 33 laboratories representing 18 different countries (Figure 2) have completed the survey. As AGILE has 89 member laboratories from 23 countries, the analysis of these data must take into consideration that not all the students were able to participate. As consequence, not all the laboratories and countries are represented, or properly represented, in this sample.

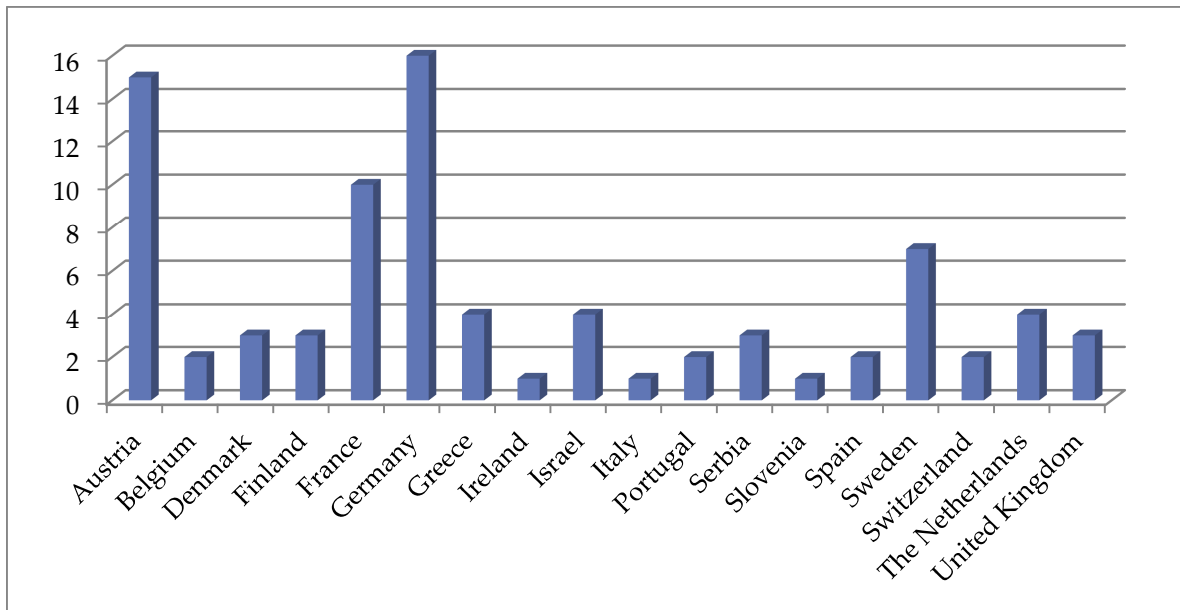


Figure 2. Number of respondents by the country the academic institution is located

The several participants of the survey were asked to classify their area of research in eight predefined categories (Figure 3). “Spatial Analysis, Geostatistics, Data Mining, Network Analysis, Geocomputation” is the area with most attention (28 out of the 83 respondents). Twenty per cent (20%) of the respondents identify as their research area the category “Other” (17 out of the 83 respondents), an indication that there might be a need for a further refinement of the research areas in future surveys.

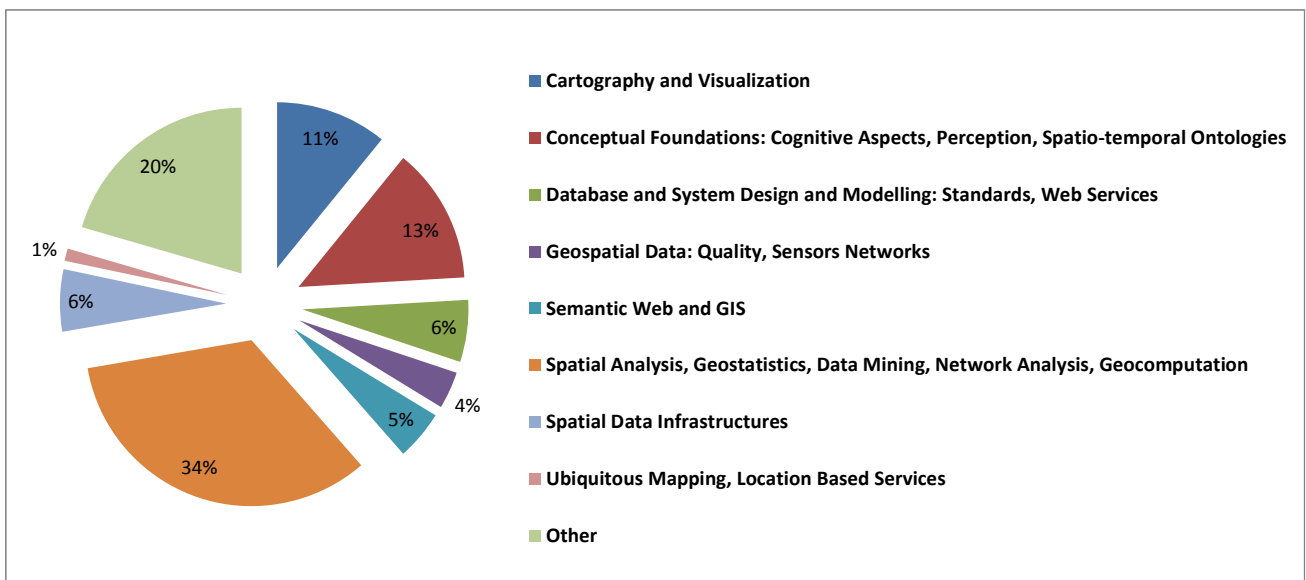


Figure 3. Research Area



With respect the application area of the research, the results show that “*Environmental/Ecological and Urban/Regional Modelling*” is the area with most applications (with 31% of the respondents), although the class “*Other*” integrates again a significant number of works (Figure 4). The applications areas must also be further explored in a future survey.

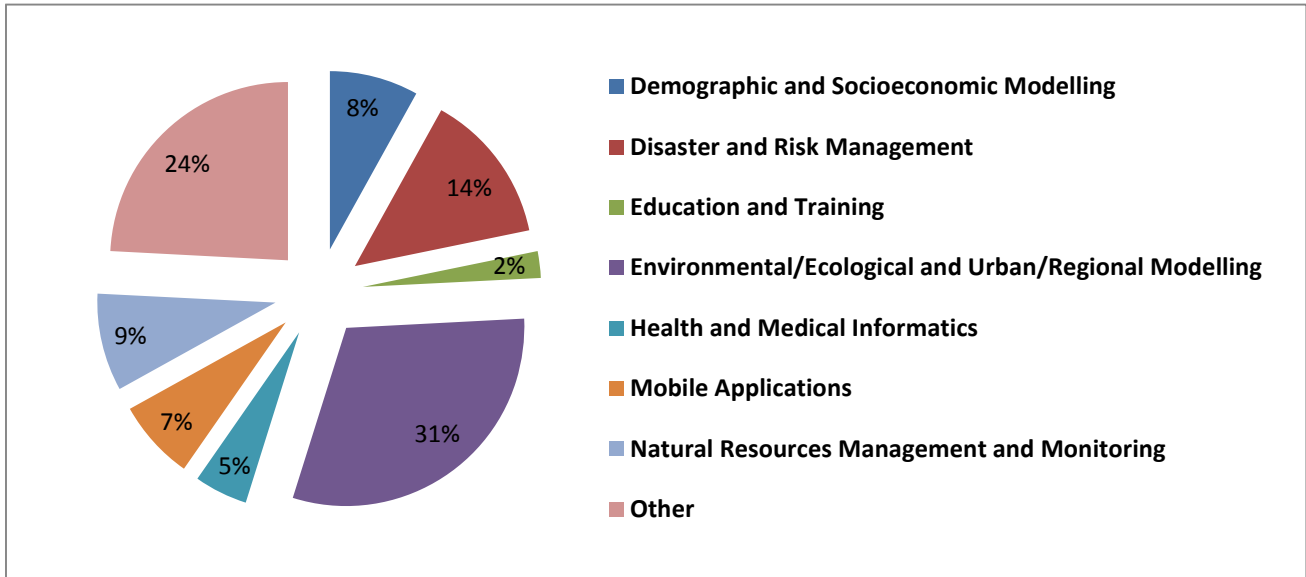


Figure 4. Application Areas

The survey was intended to characterize the PhD works that started between 2005 and 2012, and that are currently in progress or that were finished between 2009 and 2012. From the 83 respondents, 38 mentioned (46%) that already concluded or that the conclusion will be achieved during the current year (Figure 5). Forty five works are still in progress (54%). The collected data point out that an average of 3,5 years was needed to carried out a PhD.

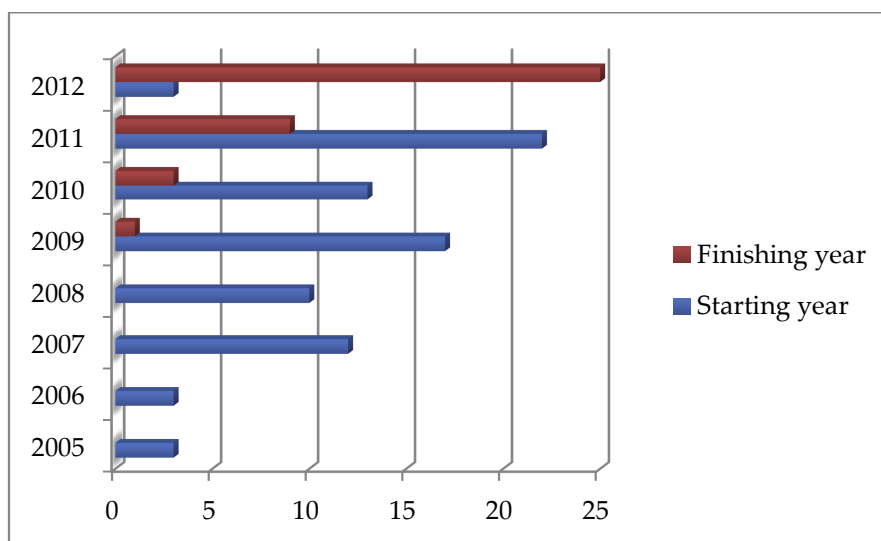


Figure 5. Starting and Finishing Years



Each respondent was also asked to indicate up to 3 publications related to his/her PhD work. The collected data showed that there is a wide range of venues where works are published. The 83 respondents indicated a total of 124 publications. From this list, 37 publications were grouped in a set of 8 venues, including conferences and journals, each one with 3 or more published papers (Figure 6).

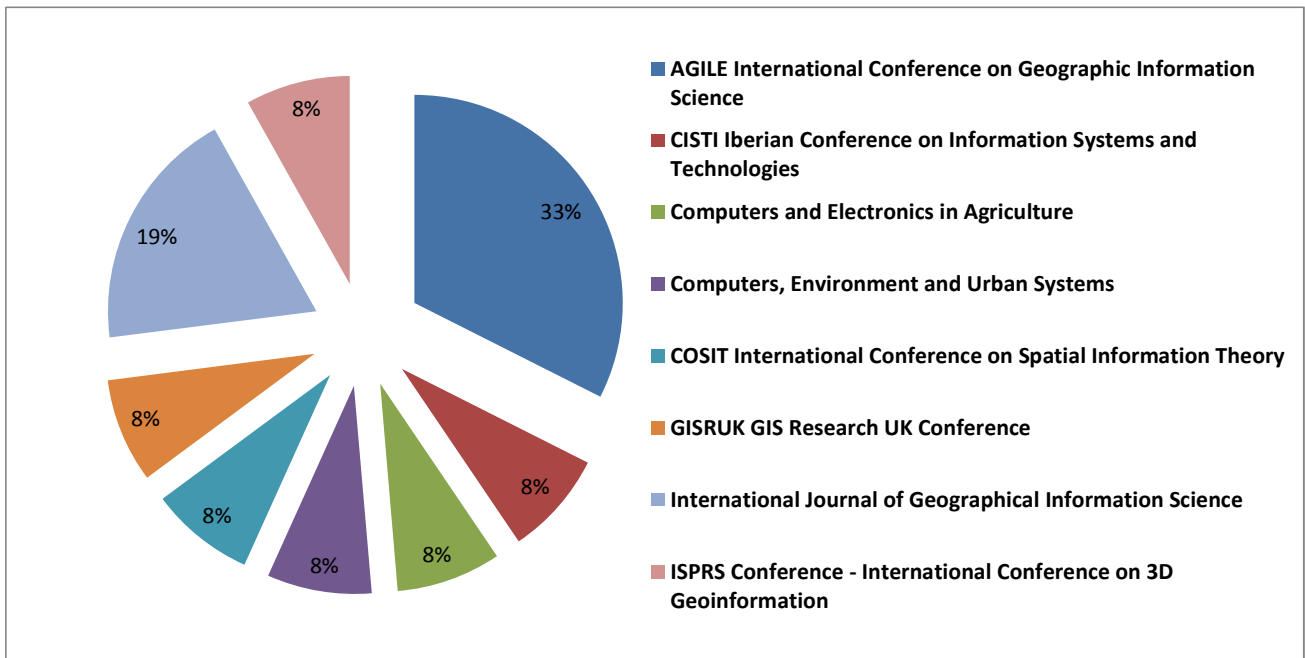


Figure 6. Venues with 3 or more published works

Regarding the future, the majority of the respondents indicated that will continue in the academia, as teacher, post-doc or researcher. Thirteen respondents mentioned that want to proceed their professional live in industry.

For an overall overview of the themes and research areas, Annex I lists the titles (or tentative titles) of the works characterized in this first PhD survey.

Thank you for your participation and cooperation!

Association for Geographic Information Laboratories of Europe

August, 10, 2012.



Annex I

PhD (Tentative) Titles

1. *The Minoan funerary landscape. A study of spatial relationships between the world of the dead and the living in Bronze Age Crete (ca. 3100-1450 BC)*
2. *The Principle of Scaling of Geographic Space and its Application in Urban Studies*
3. *Assessing the Relevance of Context for Visualizations of Movement Trajectories*
4. *Geographic data mining and knowledge discovery: A complex system perspective*
5. *Visualisation and Generalisation of 3D City Models*
6. *Développement d'un entrepôt de données géographiques exploité au moyen d'un serveur SOLAP pour la Police Fédérale Belge*
7. *Web-based Architecture for On-demand Maps: Integrating Meaningful Generalization Processing*
8. *Grounding geographic information in perceptual operations*
9. *Untersuchungen räumlicher Dienststandards zur Umsetzung einer Geodateninfrastruktur eines sensorbasierten Frühwarnsystems*
10. *Spatial-Temporal Patterns of Urban Growth in China: Monitoring, Analysis, and Simulation*
11. *Historical Map Collections on the Web*
12. *A hierarchical system for multi-scale and object-based landform classification*
13. *Semantic Support for Precision Agriculture Services with Ontologies and Rules*
14. *Multisensor satellite data for urbanization monitoring and environmental impact assessment in China*
15. *GIS-based Backcasting: An innovative method for parameterisation of sustainable spatial planning and resource management*
16. *Population Decline and Social Well-Being*
17. *Individuazione e ricostruzione di siti archeologici attraverso l'uso integrato di tecniche di remote sensing*
18. *Integrating object based image analysis and GIS for multi-scale information handling*
19. *Spatio-Temporal Analyses of LIVE Sensor Data: Examples of Environmental and Social Dynamics for Integrated Monitoring*
20. *Distributed geographic information processing services applied to forest management*
21. *Online Analysis of Movement Data: An Approach Based in Spatio-Temporal OLAP*
22. *Integration of Building Information Modelling into GIS environments*
23. *Natural language control of data mining in geospatially referenced information*
24. *Semi-automated mapping of geomorphological process domains – towards a geomorphological map of the European Alps*
25. *Social Simulation of Urban Processes*
26. *LiDARscapes and OBIA*
27. *A Computational Model for Sketch Map Alignment*
28. *Volunteered Geographic Information*
29. *Spatial Modelling for Health Applications*
30. *Affordance-Based Integration of Sensory Information Sources in Agent-Environment Systems*
31. *Detection and Proactive Redistribution of Traffic Events Information in Mobile Information Systems Supporting Navigation and Transport*
32. *Mobile Intention Recognition*
33. *Modeling and analysis of migration movement of pre-colonial cultures in the Amazon basin*
34. *Personalized visualization of geo-information from integrated information sources based on semantics and Web technologies*
35. *On the consistency of spatial semantic integrity constraints*



36. *Modeling Walkability*
37. *Semantic integration of geospatial information sources in information integration platforms based on ontologies*
38. *Approaches in implementing an interoperable architecture for marine environmental data*
39. *Simulation of Urban Growth using fuzzy cellular automata*
40. *Zur kontextbasierten Visualisierung von Geodaten auf Basis von standardisierten Webdiensten*
41. *Dynamic model-based validation of crowd-sourced data*
42. *Geospatial Ontology Harmonization*
43. *Understanding the impact of space quantisation on movement prediction*
44. *Ad-hoc-Geoprocessing in Spatial Data Infrastructures – Formalizations for Geooperators*
45. *Spatial and Temporal Resolution of Sensor Observations*
46. *Usability of GI applications*
47. *Development of a method to identify "Urban Corridors" using TerraSAR-X data*
48. *Quantifying Post-Storm Dune Recovery using Ground-Based LiDAR in Dingle Bay, Co. Kerry*
49. *Accessibility and urbanisation*
50. *Le Modèle CollaGen : Collaboration de processus automatiques pour la généralisation cartographique de paysage hétérogènes*
51. *Interactions of the dynamics between animal species and space*
52. *Automatic evaluation and improvement of map readability*
53. *Aide à l'exploration des propriétés structurelles d'un réseau de transport*
54. *The map content: from texts to cartographic representations*
55. *A reconciliation approach based on formal specifications for collaborative edition of geographic data*
56. *Modelling geographical space in studies on animal movements*
57. *Use of urban regulation for 3D urban simulation*
58. *Understanding patterns in urban traffic trajectories*
59. *3D City Models: Use and Integration in Urban Planning Processes*
60. *Semi-automated delineation of geomorphological process domains – towards a geomorphological map of the European Alps*
61. *Approaching climate change and disaster risk: workflow and methodology for the integrated assessment of disaster risk hotspots and its contributing factors in eastern Africa*
62. *3D Modeling and simulation of sediment structures in over deepened alpine basins and implications for hydro(geo)logical modeling*
63. *Analysis of user-generated geodata quality for the implementation of accessible routing services*
64. *Aide à la conception de légendes personnalisées et originales: proposition d'une méthode coopérative pour le choix des couleurs*
65. *Spatial Analysis of Volunteered Geographic Information*
66. *Semantic Linkage of the Invisible Geospatial Web*
67. *Usability in geoportals and geo search interfaces*
68. *Combination of criteria with constraints for Geographic Information Retrieval*
69. *On site environmental modeling*
70. *Complex Networks and Spatial Analysis: an Integrated Approach for Community Detection*
71. *Has not been decided*
72. *Methods for Identifying, Describing and Reducing Mismatches in Interactive Conceptual Schema Mapping*
73. *Rediscovering landscape*
74. *Spatio-Temporal Dynamics of the Fringe Landscapes*



75. *Evaluating and visualizing the uncertainty of the high resolution digital terrain model based on airborne laser scanning data*
76. *Knowledge Visualization in Spatial Analysis*
77. *High-Resolution Modeling of Vehicle-Pedestrian Interactions for Estimating Pedestrian Risk*
78. *Traffic infrastructure and the needs of children as autonomous road users*
79. *Eating behaviour and physical activity of school children*
80. *Sustainable urban development in a climate change perspective*
81. *Noise maps for public participation - Analysis and improvement of cartographic presentation*
82. *The Impact of Urbanization and Land Use Changes on Biodiversity at Urban Edges*
83. *Dynamics of polycentric urban structure*