

Katerina Alexiou Dip Arch Eng, PhD Researcher

UCL, Bartlett School of Graduate Studies, Centre for Advanced Spatial Analysis (CASA),
1-19 Torrington Place, London WC1E 6BT
Tel: + 207 679 5901

E-mail: a.alexiou@ucl.ac.uk

Web-site: www.casa.ucl.ac.uk/katerina
www.casa.ucl.ac.uk/people/Katerina.htm

Education

March 2000-present. PhD student in the Bartlett School of Graduate Studies, University College London, UK

May 1999. Professional Degree in Architectural Engineering from the Aristotle University of Thessaloniki, Greece
Grade 8.05/10.0

Research

2000-present London. In April 2000 I joined Bartlett and CASA to work on my Doctoral Thesis. My research involves the development of computational models for design and decision support in architecture and urban planning. I am particularly interested in the development of models to support coordination in collaborative, multi-participatory design projects. My research draws on theories and techniques coming from artificial intelligence, and especially learning control theory, neural networks, fuzzy logic and multi-agent systems. My research interests include: computer aided design and planning, artificial intelligence in design, interactive design models, knowledge based systems, cooperative design and planning, design and planning support systems.

1998-1999 Thessaloniki. For my dissertation submitted as part of my Dip Arch Eng requirements, I have conducted a research on the use of neural network and fuzzy logic techniques to create plans for the configuration of the built environment. The research culminated in the creation of a hybrid piece of software, called Fuzzy Adaptive Intervention Plan, that generates proposals in real-time by reproducing a weighed expression of users' demands. A case study was examined using observations and data from the regeneration area around Piraeus highway in Greece.

1994-1995 Thessaloniki. Voluntary participation in the project of intervention designed and realized at the campus of the 38th Elementary School of Thessaloniki. The project was based on the data initiated from a pilot research assignment having as subject the environmental understanding as perceived by pupils of this particular school. It was conducted under the guidance of Professor of the Department of Architecture K. Tsoukala and Professor of the Pedagogical Department of the University of Thessaloniki D. Germanos.

1993 Thessaloniki. Voluntary and initiative participation in the organization of a class for the introduction of spatial and architectural concepts to young children. The lesson was carried out with the participation of children in the first class of the 41st Elementary School of Thessaloniki and was culminated to the creation of conceptual maps of the city and the construction of a model.

Publications

Fully Reviewed

Zamenopoulos, T. and Alexiou, K. (2003) 'Computer-aided creativity and learning in distributed cooperative human-machine networks'. In *CAAD Futures 2003*, M-L. Chiu, T. Jin-Yeu, T. Kvan, M. Morozumi and T. Jeng (eds), Kluwer Academic Publishers: Dordrecht, The Netherlands, pp 191-201

Zamenopoulos, T. and Alexiou, K. (2002) 'Learning to be creative and the creative memory – a discussion motivated by a control-based coordination model'. In *Learning and Creativity Workshop notes, Seventh International Conference on Artificial Intelligence in Design (AID'02)*, Cambridge: UK. [Available from URL: http://www.cad.strath.ac.uk/AID02_workshop/Workshop_webpage.html]

Alexiou, K. and Zamenopoulos, T. (2002) 'A Control Based Approach to Artificial Design and Plan Generation'. In *Proceedings of the Conference Common Ground, Design Research Society International Conference*, D. Durling and J. Shackleton (eds), Staffordshire University Press: UK, pp 13

Reviewed

Zamenopoulos, T. and Alexiou, K. 2003 'Structuring the plan design process as a coordination problem: the paradigm of distributed learning control coordination'. In *Advanced Spatial Analysis: the CASA Book of GIS*, P.Longley and M. Batty (eds), ESRI Press: US, pp 407-426

Zamenopoulos, T. and Alexiou, K. (2002) 'Artificial Design and Plan Generation by Learning. A model of control-based coordination'. In *AID '02 Accepted Posters*. Available in CD-ROM.

Alexiou, K. and Zamenopoulos, T. (2002) 'Artificial Design and Planning Support: Interactive Plan Generation and Coordination in Distributed Decision-Making'. In *Design and Decision Support Systems in Urban Planning, Proceedings of the 6th International Conference*, Eindhoven University of Technology: The Netherlands, pp 1-11.

Alexiou, K. and Zamenopoulos, T. (2001) 'A Connectionist Paradigm in the Co-ordination and Control of Multiple Self-Interested Agents' in the *Proceedings of the 2nd National Conference Input 2001: Democracy and Technologies*, Tremiti Islands, Italy, 27-29 June 2001.

Reports

Zamenopoulos, T. and Alexiou, K. 2003 'Designers' secret cameras'. Report on the Symposium on Computational Models in Design and Planning held in CASA, 11 September 2002. [Available from URL: <http://www.casa.ucl.ac.uk/katerina/symposium/report.pdf>]

Alexiou, K. and Zamenopoulos, T. (2002) 'Designing Plans: A Control Based Coordination Model'. CASA Working Paper 48, University College London, Centre for Advanced Spatial Analysis. [Available from URL: http://www.casa.ucl.ac.uk/working_papers/paper48.pdf]

Alexiou, K. and Zamenopoulos, T. (2000) 'The morphogenesis of limits in the city', diploma dissertation, in *Architects* the official magazine of the Architects Association in Greece. (in Greek) [Report Available in English from URL: <http://www.casa.ucl.ac.uk/FAIP/FAIP.pdf>]

Other academic related activities

2002 London. Co-organisation of the symposium on 'Computational Models in Design and Planning', which took place in University College London on the 7th September 2002. The symposium was supported by the UCL Graduate School, the Bartlett School of Graduate Studies, and the Centre for Advanced Spatial Analysis (CASA). Symposium web-site: <http://www.casa.ucl.ac.uk/katerina/symposium>

Scholarships

September 2002. EPSRC Doctoral Training Account scholarship for the year 2002-2003.

April 2001. Travel fund for participating in the 2nd National Conference 'Input 2001: Democracy and Technologies', held in Tremiti Islands, Italy, 27-29 June 2001.

January 1996- July 1996. Scholarship from the Institute of National Scholarships for participating in the Erasmus program at the University of Architecture of Venice (I.U.A.V).

1994-1995. Participation in the short- term Erasmus program in Thessaloniki, where the Department of Architecture hosted students from European countries.

1993-1994. Beneficiary of scholarship (support grant) from the Institute of National Scholarships due to high grades achievement.

Professional Experience

2001-present London. Part-time administration officer at the London Regional Office of the Development Trusts Association.

1997 Thessaloniki. Part-time associate in the architectural office of Dr. E. Chrisafides. Architectural design.

Professional Qualifications

June 1999. Member of the Technical Chamber of Greece.

Languages

Greek (Mother tongue)

English (Fluent)

Italian (Fluent)

Technical Skills

Programs: MS Office (Word, Excel, Power Point, Access), PhotoShop, Dreamweaver, Director, Flash, CorelDraw, QuarkXpress, ArcView (Beginners level), MapInfo (Beginners level), AutoCAD 2000.

Programming languages: Java (Beginners level), Matlab-Simulink.