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## EDUCATION

**Ph.D** in Computer Science, Computer Science Department, University of Cyprus, Thesis Title: *"Data-Driven Techniques for Simulating and Evaluating Crowds"*, April 2014

**M.Sc** in Advanced Computer Systems, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, GPA: 8.56/10, Master Thesis: *"Lightmap Generation Using Photon Mapping"* (Grade: 10/10), 2005

**B.Sc** in Informatics and Telecommunications, Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, GPA: 7.65/10, Thesis: *"Geometric Polygon Clipping Algorithms"* (Grade: 10/10)

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## RESEARCH EXPERIENCE

**Post-Doctoral Fellow** (06/2014 – Present) at INRIA Rennes Bretagne-Atlantique, France where I am working on novel Crowd Simulation and Synthesis algorithms in the Mimetic Team.

**Research Associate** (01/2007- 05/2014) at the Computer Graphics Lab at the Computer Science Department, UCY for various research projects:

- **RecoNLife**: Reconstructing Life in Nicosia of the 19<sup>th</sup> Century. Funded by the Cyprus Research Promotion Foundation (RPF), July 2012 – December 2013
- **MobileAR**: Mobile AR Assisted Maintenance. Funded by the Cyprus Research Promotion Foundation (RPF), September 2010 – June 2012
- **SCOLIOSIS 2**: Experimental photogrammetric system for diagnosis of scoliosis. Funded by the Cyprus Research Promotion Foundation (RPF), January 2008 – December 2010.
- **SCOLIOSIS**: Automatic photogrammetry methods for diagnosis and follow-up of scoliosis". Funded by the Cyprus Research Promotion Foundation (RPF), November 2005 - October 2007.
- **KIKIPEZ**: Dense Crowd Navigation and Animation" funded by the Cyprus Research Promotion Foundation (RPF), 2007.

**Research Associate** (07/2005 -01/2007) at the Xi-Group Computer Architecture Lab at the Computer Science Department, UCY. Developed simulation tools for power and thermal characteristics of CPUs.

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## RESEARCH INTERESTS

Crowd Simulation and Evaluation, Machine Learning for Computer Graphics, Virtual Humans, Computer Animation, Artificial Intelligence for Computer Games, Artificial Life, Dynamic Data Structures, Real Time Ray Tracing, GPU Architectures, CPU Power and Temperature Modeling.

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## PROFESSIONAL ACTIVITIES

**Member of Local Organizing Committees** of the following international conferences:

EGSR 2006: Eurographics Symposium on Rendering 2006

ANS: Aya Napa Seminar-Recent Results in Rendering and Modeling in Computer Graphics

**Reviewer** for international conferences and journals including:

Transactions on Graphics Journal (TOG), Computer Animation and Virtual Worlds Journal (CAVW), Eurographics (2007, 2008, 2010, 2011, 2013), Siggraph Asia, Visual Computing, Eurographics Symposium on Rendering 2007 (EGSR07), VRST, Pacific Graphics (2009, 2010), Motion in Games (MIG), CGI 2013, IEEE/RSJ International Conference on Intelligent Robots and Systems (2014)

### Member of Professional Associations

European Association of Computer Graphics (2007-2009, 2014)

International Institute of Electrical and Electronics Engineers (IEEE) (2008-2010)

## Participation/Attendance at International Conferences/Seminars

Eurographics (2007, 2008, 2014), Pacific Graphics 2014, Motion in Games (2013), CASA 2010, EuroMed 2012, Eurographics Symposium on Rendering 2006 (EGSR 2006), Ayia Napa Seminar (ANS06)

## TEACHING EXPERIENCE

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**Teaching Assistant** at Computer Science Department, University of Cyprus

### Master Courses:

- Computer Graphics, Modelling and Realism – CS656, Spring Semester 2007 – 2008
- Graphical and Image Processing – CS607, Fall Semester 2008 – 2009

### Undergraduate Courses:

- Computer Graphics – CS426, Fall Semesters 2007 – 2009
- Data Structures and Algorithms – CS231, Fall Semesters 2008-2012
- Numerical Analysis – CS497, Fall Semester 2007 – 2008
- Introduction to Programming for Engineers - CS034, Spring Semester 2007-2008
- Introduction to Programming and Problem Solving - CS032, Spring Semester 2007-2008

## TECHNICAL EXPERIENCE

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**Programming Languages:** C, C++, C#, Python, Java, Pascal, Basic, and Prolog.

**Programming Tools:** Unity3D, Visual Studio (from version 6 up to 2013), gcc, g++, flex, bison, eclipse IDE, NetBeans IDE, Borland JBuilder 9, Turbo Pascal, Matlab.

**Operating Systems:** MS-DOS, Microsoft Windows 3.1, 95, 98, 2000, XP, 7, 8, Multiple Linux Distributions, Unix.

**Other:** OpenGL, GLUT, MFC, AWT, Swing, doxygen, Matlab, UML, Design Patterns, OOP, SQL, TCP/IP Programming, Unix System Programming (including Shell Scripting in bash, tcsh), scikit-learn Machine Learning Toolkit, scipy.

## AWARDS/ DISTINCTIONS

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Distinction in the Nicosia Mathematics Competition organized by the Cyprus Mathematics Society (1995-1996).  
Distinction in the Pancyprian Mathematics Competition organized by the Cyprus Mathematics Society (1995-1996).

## SELECTED PUBLICATIONS

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### Journals:

**Charalambous P., Chrysanthou Y.**, “The PAG Crowd: A Graph Based Approach for Efficient Data-Driven Crowd Simulation”. Computer Graphics Forum, Vol. 33, Issue 8, pp. 95–108, December 2014.

**Charalambous P., Karamouzas I., Guy S, Chrysanthou Y.**, “A Data-Driven Framework for Visual Crowd Analysis”. Computer Graphics Forum (Pacific Graphics 2014), Vol. 33, Issue 7, pp. 41-50, October 2014.

**Aristidou A., Charalambous P., Chrysanthou Y.**, “Emotion Analysis and Classification: Understanding the Performers' Emotions Using the LMA Entities”. Accepted at Computer Graphics Forum (published online 20 April 2015).

**Aristidou A., Stavrakis E., Charalambous P., Chrysanthou Y. and Stephania Loizidou Himona**, “Folk Dance Evaluation Using LMA”. Journal on Computing and Cultural Heritage, Vol. 8, Issue 4, Article 20, August 2015.

## Conferences

**Ramirez Jose Guillermo Rangel, Lange D., Charalambous P., Esteves C., and Pettré, J.**, "Optimization-based computation of locomotion trajectories for crowd patches". In *Proceedings of the Seventh International Conference on Motion in Games (MIG '14)*. ACM, New York, NY, USA, 7-16. 2014.

**Charalambous P., Chrysanthou Y.**, "Classifying Pedestrian Behaviour using Random Forests", Poster at MIG 2013, Trinity College, Dublin, Ireland, November 7 – November 9, 2013.

**Charalambous, P., Iliadou, H., Apostolou, C. and Chrysanthou, Y.**, 2012, "Reconstruction of Everyday Life in 19th Century Nicosia". 4th International Conference, EuroMed 2012, Limassol, Cyprus, October 29 – November 3, 2012. Proceedings, 568–577.

**Charalambous P., Chrysanthou Y.**, "Learning Crowd Behavior, Workshop on Crowd Simulation". Collocated with CASA 2010, Saint-Malo, France, May 31 – June 3, 2010

**Charalambous P., Chrysanthou Y.**, "Learning crowd steering behaviors from examples", Proceeding MIG'10 Proceedings of the Third international conference on Motion in games pp: 35-35, 2010

**Iliadou H., Charalambous P., and Chrysanthou Y.**, "Reviving Nicosia of the XIX<sup>th</sup> Century", 11<sup>th</sup> International Conference on Urban History, EAUH 2012, Prague, Czech Republic, 2012

**Grivas, T. B., P. Patias, K. Soutanis, E. Stylianidis, V. Tsioukas, C. Georgiadis, C. Andreou, P. Charalambous, and Y. Chrysanthou.** "Design, implementation and first results of a 3RD generation digital photogrammetric system from trunk surface assessment and scoliosis screening." *Scoliosis* 7, no. Suppl 1 (2012): P14.