

# **CURRICULUM VITAE**

**Panagiota Fatourou**

**April 2011**

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## 1. Personal

### Office Address

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&  
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### Home Address

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E-mail: [faturu@csd.uoc.gr](mailto:faturu@csd.uoc.gr) & [faturu@ics.forth.gr](mailto:faturu@ics.forth.gr)

URL: <http://www.cs.uoi.gr/~faturu/>

*Place of Birth:* Kalamata, Messinia, Greece  
*Year of Birth:* 1973  
*Citizenship:* Greek  
*Marital Status:* Single  
*Languages:* Greek (native), English (fluent), German (moderate)

## 2. Education

**Ph.D. in Computer Engineering and Informatics**, Excellent (GPA: 10.0/10.0),  
Department of Computer Engineering and Informatics, University of Patras, June 1999.  
Thesis Supervisor: Paul Spirakis

**Degree in Computer Science**, Very Good (GPA: 8.36/10.0), Department of Computer  
Science, University of Crete, November 1995.

## 3. Research Interests

### **Algorithms and Complexity**

Design and analysis of algorithms, design and analysis of data structures, lower bounds  
and impossibility results.

### **Distributed Computing**

Algorithms, models, lower bounds, complexity analysis, decentralized data structures,  
distributed objects, communication protocols, internet protocols, peer-to-peer computing.

### **Parallel Computing**

Algorithms, complexity analysis, parallel programming languages, multithreaded computing, scheduling, load balancing.

### **Experimental Algorithmics**

Implementation and experimental evaluation of algorithms (with emphasis in distributed algorithms, distributed data structures, and peer-to-peer systems).

## **4. Teaching Interests**

### **Theoretical Computer Science**

Design and analysis of algorithms, data structures, theory of computation, distributed computing, parallel computing.

### **Systems and Programming**

Distributed systems, computer networks, operating systems, programming languages, parallel programming languages, concurrent programming, network programming.

### **Mathematics for Computer Science**

Combinatorics, probability, queuing theory, graph theory.

## **5. Research Appointments**

*Department of Computer Science, University of Crete, Greece*

**Assistant Professor**, October 2010 - now

*Institute of Computer Science, Foundation for Research and Technology – Hellas (FORTH)*

**Assistant Professor**, January 2009 - now

*Department of Computer Science, University of Ioannina, Greece*

**Assistant Professor**, April 2008 – October 2009

*Department of Computer Science, University of Ioannina, Greece*

**Lecturer**, November 2002 – March 2008

*Department of Computer Science, University of Ioannina, Greece*

**Visiting Assistant Professor**, September 2001 – October 2002

*Department of Computer Science, Greek Open University*

**Teaching and Research Fellow**, Academic year 2001-2002

*Department of Computer Science, University of Toronto, Canada*

**Postdoc Researcher**, Theory team, March 2001 – July 2001. Principal investigator: Faith Ellen Fich

*Max-Planck Institut für Informatik, Saarbrücken, Germany*

**Postdoc Researcher**, Research team “Algorithms and Complexity”, September 1999 – February 2001. Principal investigator: Kurt Mehlhorn

*Computer Technology Institute, Patras, Hellas*

**Graduate Research Assistant**, January 1996 – August 1999. Principal Investigator: Paul Spirakis

*Institute of Computer Science, Foundation of Research and Technology- Hellas (FORTH), Heracleon, Hellas*

**Undergraduate Trainee**, July 1994 – December 1995. Principal investigator: Christos Nikolaou

## 6. Scientific Activities

### Editorial

*Distributed Computing Column, Bulletin of the European Association for Theoretical Computer Science (BEATCS)*

**Editor**, January 2009 – now.

### Conference Chairing

1. *32<sup>nd</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC’13)*, 2013.

**General Chair** (*Steering Committee Chair: Andrzej Pelc*)

2. *31<sup>st</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC’12)*, Madeira Island, Portugal, 2012.

**Treasurer** (*Steering Committee Chair: Andrzej Pelc*)

3. *Euro-Par, Topic 12: Theory and Algorithms for Parallel Computation*, Bordeaux, France, 2011.

**Junior Vice Chair** (General Chair: Arnold L. Rosenberg)

### Conference Committees

1. *29<sup>th</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC’10)*, Zurich, Switzerland, July 2010

**Member of the Program Committee** (PC Chair: Rachid Guerraoui)

2. *IEEE International Parallel and Distributed Processing Symposium (IPDPS’10), Algorithms Track*, Atlanta, Georgia, April 2010

**Member of the Program Committee** (PC Chair: Rajmohan Rajaraman)

3. *International Conference on Parallel and Distributed Computing and Networks (PDCN'10)*, Innsbruck, Austria, February 2010  
**Member of the Program Committee**
4. *20<sup>th</sup> ACM Symposium on Parallelism in Algorithms and Architectures (SPAA'08)*, Munich, Germany, June 2008  
**Member of the Program Committee** (PC Chair: Nir Shavit)
5. *26<sup>th</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'07)*, Portland, Oregon, USA, August 2007  
**Member of the Program Committee** (PC Chair: Roger Wattenhofer)
6. *International Conference on Parallel and Distributed Computing and Networks (PDCN'07)*, Innsbruck, Austria, February 2007  
**Member of the Program Committee** (Conference Chair: Zaodi Gu)
7. *International Conference on Parallel and Distributed Computing and Networks (PDCN'06)*, Innsbruck, Austria, February 2006  
**Member of the Program Committee** (Conference Chair: Thomas Fahringer)
8. *9th International Conference on Principles of Distributed Systems (OPODIS'05)*, Pisa, Italy, December 2005  
**Member of the Program Committee** (PC Chairs: Jim Anderson & Roger Wattenhofer)
9. *19<sup>th</sup> International Symposium on Distributed Computing (DISC'05)*, Krakow, Poland, September 2005  
**Member of the Program Committee** (PC Chair: Pierre Fraigniaud)
10. *IADIS Multi-conference on Computer Science and Information Systems, (MCCSIS'05), 2005*  
**Member of the Program Committee** (Conference Chairs: Pedro Isaías & Miguel Baptista Nunes & Antonio Palma dos Reis)
11. *International Conference on Parallel and Distributed Computing and Networks (PDCN'05)*, Innsbruck, Austria, February 2005  
**Member of the Program Committee** (Conference Chairs: Thomas Fahringer & M.H. Hamza)
12. *23<sup>rd</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'04)*, St. John's, Newfoundland, Canada  
**Member of the Program Committee** (PC Chair: Shay Kutten)
13. *9<sup>th</sup> IEEE International Conference on Parallel and Distributed Systems (ICPADS'02)*, Taiwan, December 2002

**Member of the Program Committee** (PC Chair: Shlomi Dolev )

14. *15<sup>th</sup> International Symposium on DIStributed Computing (DISC'01)*, Lisbon, Portugal, October 2001

**Member of the Program Committee** (PC Chair: Jennifer Welch)

15. *14<sup>th</sup> International Symposium on DIStributed Computing (DISC'00)*, Toledo, Spain, October 2000

**Member of the Program Committee** (PC Chair: Maurice Herlihy)

16. *7<sup>th</sup> International Conference on High Performance Computing (HiPC'00)*, Bangalore, India, December 2000

**Member of the Program Committee** (PC Chair: Assaf Schuster )

## **Organization of Conferences**

1. *28<sup>th</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'09)*, Calgary, Alberta, Canada

**Awards Chair**, August 2009

2. *24<sup>th</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles Of Distributed Computing (PODC'05)*, Las Vegas, Nevada, USA

**Publicity co-chair** with Danny Hendler (Department of Computer Science, University of Toronto), July 2005.

3. *23<sup>rd</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles Of Distributed Computing (PODC'04)*, St. John's, Newfoundland, Canada

**Publicity co-chair** with Victor Luchango (Sun Microsystems Labs), July 2004.

4. *12<sup>th</sup> International Symposium on DIStributed Computing (DISC'98)*, Andros, Greece

**Local Arrangement & Publicity co-chair** with Paul Spirakis (University of Patras, Hellas & Computer Technology Institute, Patras, Hellas) and Lefteris Kirousis (University of Patras & Computer Technology Institute), September 1998.

## **Organization of Schools**

1. *1<sup>st</sup> TransForm Summer School on Theoretical Aspects of Transactional Memory*, Crete Island, Greece.

**Chair of the Organizing Committee**, September 2011

2. *TransForm Initial Training School*, Rennes, France, 2011.

**Coordinator**, February 2011

3. *1<sup>st</sup> Max-Planck Advanced Course on the Foundations of Computer Science*, Saarbrücken, Germany

**Member of the Organizing Committee**, August-September 2000

## Journal Referee

Refereed research articles for the following journals:

- *Journal of Parallel and Distributed Computing*
- *Distributed Computing (special issue devoted to DISC'07)*
- *Distributed Computing (special issue devoted to PODC'07)*
- *Distributed Computing*
- *Theory of Computing Systems (special issue devoted to SIROCCO'02)*
- *Computing*
- *Information Processing Letters*
- *Theoretical Computer Science (special issue with subject "Game Theory Meets Theoretical Computer Science")*
- *Theoretical Computer Science, Track A*
- *Parallel Processing Letters*

## Conference Referee

Refereed (as an external reviewer) research articles for the following conferences:

- *30<sup>th</sup> Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, Zurich, Switzerland July 2010
- *IEEE International Conference on Cluster Computing (Cluster)*, Heraklion, Greece, September 2010
- *International Symposium on Systems, Architectures, Modeling, and Simulation (SAMOS'10)*, Samos, Greece, July 2010
- *21<sup>st</sup> International Symposium on Distributed Computing (DISC)*, Lemesos, Cyprus, September 2007
- *5<sup>th</sup> International Workshop on Experimental Algorithms (WAE)*, Menorca Island, Spain, May 2006
- *17th ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, Las Vegas, NV, USA, July 2005
- *18th International Symposium on Distributed Computing (DISC)*, Amsterdam, the Netherlands, October 2004
- *29<sup>th</sup> International Symposium on Mathematical Foundations of Computer Science (MFCS)*, Prague, Czech Republic, August 2004
- *17th International Symposium on Distributed Computing (DSIC)*, Sorrento, Italy, October 1-3, 2003
- *10<sup>th</sup> Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Umea, Sweden, June 18-20, 2003
- *15<sup>th</sup> ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)*, San Diego, California, USA, June 7-9, 2003.
- *14th ACM Symposium on Parallel Algorithms and Architectures (SPAA)*, Winnipeg, Canada, August 10-13, 2002

- *9th Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Andros, Greece, June 10-12, 2002
- *8th Annual International Computing and Combinatorics Conference (COCOON)*, Singapore, August 15-17, 2002
- *25th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, Bratislava, Slovak Republic, August 28 – September 1, 2000
- *19th ACM Symposium on Principles of Distributed Computing (PODC)*, Portland, Oregon, July 2000
- *26th International Colloquium on Automata, Languages and Programming (ICALP)*, Prague, Czech Republic, July 1999
- *6th Annual European Symposium on Algorithms (ESA)*, Venice, Italy, August 1998
- *4th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Amalfi, Italy, June 1998
- *11th International Workshop on Distributed Algorithms (WDAG)*, Saarbrücken, Germany, September 1997

## 7. Teaching Record

*Department of Computer Science, University of Crete, Hellas*

**Assistant Professor.** Courses taught:

- Data Structures (undergraduate core): Fall 2008, Fall 2009, Spring 2011
- Distributed Computing (graduate): Fall 2009, Fall 2010
- Distributed Systems (graduate): Spring 2010, Spring 2011

*Department of Computer Science, University of Ioannina, Hellas*

**Assistant Professor** (April 2008-now), **Lecturer** (November 2002 – March 2008) **and Visiting Assistant Professor** (September 2001 – October 2002). Courses taught:

1. Data Structures (core undergraduate): Fall 2001, Fall 2002, Fall 2003, Fall 2005, Fall 2006, Fall 2007
2. Operating Systems (core undergraduate): Spring 2002, Spring 2003, Spring 2004, Spring 2005
3. Distributed Computing (graduate): Spring 2004, Winter 2004, Spring 2006, Spring 2007, Spring 2008, Spring 2009
4. Distributed Systems (undergraduate): Spring 2002, Winter 2004, Spring 2006, Spring 2007, Spring 2008, Spring 2009

*Department of Arts, University of Ioannina*

**Visiting Assistant Professor**, winter 2002. Course taught:

- Multimedia (core undergraduate).

*Department of Computer Science, Greek Open University*

**Teaching and Research Fellow**, Academic year 2001- 2002. Courses taught:

- Software Technology
- Data Structures
- Operating Systems

*Department of Computer Science, University of Saarland, Saarbrücken, Germany*

**Teaching Fellow**, October 2000- February 2001. Graduate course taught (in collaboration with Berthold Voecking and Uli Mayer):

- WS00/01: Advanced Algorithms and Data Structures for Different Models of Computation

*Department of Computer Engineering and Informatics, University of Patras*

**Teaching Assistant**, January 1996-January 1999. Courses assisted:

5. Operating Systems I (core undergraduate): Winter 1996, Winter 1997, Winter 1998
6. Operating Systems II (core undergraduate): Spring 1995, Spring 1996, Spring 1997.

*Department of Computer Science, University of Crete, Hellas*

**Teaching Assistant**, September 1995 – November 1995; course assisted:

- CS 241: C, Assembly, Unix (core undergraduate)

## **8. Student Supervision**

### **PhD Thesis Supervision**

Eleftherios Kosmas, September 2008 - now

Nikolaos Kallimanis, October 2007 – now

### **Master Thesis Supervision**

*Department of Computer Science, University of Ioannina*

Eleftherios Kosmas, “Software Transactional Memory”, February 2007 – now.

Maria Christodoulidou, “Data Management in P2P systems”, February 2006 – now.

Nikolaos Kallimanis, “Shared Data Structures”, September 2006 – October 2007.

## **Diploma Thesis Supervision**

*Department of Computer Science, University of Crete*

Karolos Antoniadis, March 2011 – now

*Department of Computer Science, University of Ioannina*

Christos Bournazis, “Experimental Evaluation of Distributed Algorithms”, September 2006-June 2007.

Stavrina Tsourou, “Distributed Hash Tables”, September 2005 – September 2006.

Nikolaos Kallimanis, “Distributed Shared Objects”, September 2004 – June 2005.

Frosini Kouri, “Distributed Storage and Retrieval in P2P Systems”, September 2004 – September 2006.

Maria Christodoulidou, “Data Management in P2P systems”, September 2003 – December 2004.

*Department of Computer Engineering and Informatics, University of Patras*

George Mourkousis, “Beyond Counting Networks”, September 1998 – May 1999, co-supervised with Paul Spirakis

Vassilis Tsivourakis, “Bandwidth Allocation Protocols”, September 1998 – May 1999, co-supervised with Paul Spirakis

## **Participation in PhD Supervising Committees**

Spiridoula Margariti, June 2006 – now.

## **Participation in Master Theses Committees**

Charis Kourdounakis, «Subscription Indexes for Web Syndication Systems», Department of Computer Science, University of Crete, January 2011.

Spiridoula Margariti, «Searching in Peer-to-Peer Networks», Department of Computer Science, University of Ioannina, June 2006 – March 2006.

Ioannis Petrakis, “Using Histograms for Building and Querying Workload-Aware Small-Worlds in Peer-to-Peer Systems”, Department of Computer Science, University of Ioannina, September 2001 – July 2002.

## **Participation in Diploma Theses Committees**

*Department of Computer Science, University of Ioannina*

Eletherios Kosmas & Spiridon Agathos, “Implementation of a network driver for multi-hop routing on wireless ad-hoc networks over Windows”, September 2004 – June 2005.

Ioannis Kanellos. ``User Interfaces for Medical Problems, using ontology to process naïve speech'', September 2002 – December 2003.

Georgia Kastidou. ``Using Extensible Hashing for Discovering Mobile Agents'', September 2001 – July 2002.

Panagiotis Papapetrou. ``Development Methods for User-Computer Interfaces'', September 2002 – June 2003.

Ioannis Petrakis. ``Quick Search in XML Documents'', September 2001 – July 2002.

Kostantinos Stefanidis. ``Management of a Publication-Subscription Systems in a Relational Database'', September 2002 – September 2003.

## **Project Supervision**

*Foundation for Research and Technology – Hellas, Institute of Computer Science*

Eleni Kanellou. February 2011 - now

*Computer Technology Institute, Patras*

Anna Evlogimenou. Worked on the implementation of a distributed shared memory frame.

Panagiotis Zarafidis. Worked on the implementation of a dynamic graph connectivity algorithm.

Anna Zoura. Worked on the implementation of a dynamic graph connectivity algorithm.

## **9. Participation in Research and Development Projects**

**Project Name:** TransForm: Theoretical Foundations of Transactional Memory

**Financing Source:** European Commission – Marie Curie Action: Initial Training Network

**Duration (from – to):** 1/11/2009 – 31/10/2013

**Participation Period (from - to):** 1/11/2009 - now

**Role:** Coordinator of the project

**Description:** Major chip manufacturers have shifted their focus from trying to speed up individual processors into putting several processors on the same chip. They are now talking about potentially doubling efficiency on a 2x core, quadrupling on a 4x core and so forth. Yet multi-core is useless without concurrent programming. The constructors are now calling for a new software revolution: the concurrency revolution. This might look at first glance surprising for concurrency is almost as old as computing and tons of concurrent programming models and languages were invented. In fact, what the revolution is about is way more than concurrency alone: it is about concurrency for the masses.

The current parallel programming approach of employing locks is widely considered to be too difficult for any but a few experts. Therefore, a new paradigm of concurrent programming is needed to take advantage of the new regime of multi-core computers.

Transactional Memory (TM) is a new programming paradigm which is considered by most researchers as the future of parallel programming. Not surprisingly, a lot of work is being devoted to the implementation of TM systems, in hardware or solely in software. What might be surprising is the little effort devoted so far to devising a sound theoretical framework to reason about the TM abstraction. To understand properly TM systems as well as be able to assess them and improve them, a rigorous theoretical study of the approach, its challenges and its benefits is badly needed. This is the challenging research goal undertaken by this MC-ITN. The main goal of this project is to gather leading researchers in the field of concurrent computing over Europe, and combine their efforts in order to define what might become the modern theory of concurrent computing. It aims at training a set of graduate students in this direction with the hope that these students will help Europe become a leader in concurrent computing.

**Project Name:** Transactional Memories: Foundations, Algorithms, Tools, and Applications (Euro-TM, IC1001)

**Funding Source:** European Commission – COST Action

**Duration:** 2/2011 – 1/2015

**Participation Period:** 2/2011 - now

**Role:** Greece Representative to the Action – Member of the management committee

**Description:** Parallel programming (PP) used to be an area once confined to a few niches, such as scientific and high-performance computing applications. However, with the proliferation of multicore processors, and the emergence of new, inherently parallel and distributed deployment platforms, such as those provided by cloud computing, parallel programming has definitely become a mainstream concern. Transactional Memories (TMs) answer the need to find a better programming model for PP, capable of boosting developers' productivity and allowing ordinary programmers to unleash the power of parallel and distributed architectures avoiding the pitfalls of manual, lock based synchronization. It is therefore no surprise that TM has been subject to intense research in the last years. This action aims at consolidating European research on this important field, by coordinating the European research groups working on the development of complementary, interdisciplinary aspects of Transactional Memories, including theoretical foundations, algorithms, hardware and operating system support, language integration and development tools, and applications.

**Project Name:** Herakleitos II: Reinforcement Programme of Human Research Manpower

**Financing Source:** Herakleitos II: Reinforcement Programme of Human Research Manpower - General Secretariat of Research & Technology (GSRT)

**Duration:** 9/2010 – 8/2013

**Participation Period:** 9/2010 - now

**Role:** Advisor of the PhD Student that will undertake the research project

**Description:** This project considers deriving and defining the appropriate theoretical foundations that will allow the study of Software Transactional Memory (STM) algorithms and the appropriate complexity and performance metrics that will allow the comparison of different STM implementations. In particular, performance will be studied according to the time, the required space and the power demands. This project also aims

designing new resource and power efficient STM algorithms, which can be implemented on multicore-processors with limited resources and power. This enables the applications of these systems to achieve better performance with less power consumption.

**Project Name:** CumuloNimbo – A Highly Scalable Transactional Multi-Tier Platform as a Service

**Funding Source:** European Commission - STREP project (FP7)

**Duration:** 10/2010 –9/2013

**Participation Period:** 2/2011 - now

**Role:** Participation to the project's working team of the Computer Architecture and VLSI Systems Lab, Institute of Computer Science, Foundation for Research and Technology – Hellas – Contribution to the study of the consistency of such systems.

**Description:** CumuloNimbo is a European project funded by the European Commission under the 7th Programme Framework (FP7) that targets to obtain a highly scalable transactional platform as a service (PaaS). One of their innovations will be attaining scalability without trading off consistency as it is the norm in today's PaaS.

**Project Name:** STREAM – Scalable Autonomic Streaming Middleware for Real-Time Processing of Massive Data Flows

**Funding Source:** European Commission – STREP project (FP7)

**Duration:** 2/2008 –1/2011

**Participation Period:** 6/2009 – 31/1/2011

**Role:** Participation to the project's working team of the Computer Architecture and VLSI Systems Lab, Institute of Computer Science, Foundation for Research and Technology – Hellas – Study of existing data flow computing systems.

**Description:** A growing number of applications requires the ability to analyze massive amounts of streaming data in real-time. Examples of such applications are: market data feed processing of the output of large scale ad-hoc networks, etc. The project aims at providing a highly scalable cloud computing platform to enable a new breed of services.

**Project Name:** MOMENT – Monitoring and Measurement in the Next Generation Technologies

**Funding Source:** European Commission – STREP project (FP7)

**Διάρκεια:** 1/2008 – 6/2010

**Participation Period:** 1/2009 – 6/2009

**Role:** Participation to the project's working team of the Distributed Systems Computing Lab, Institute of Computer Science, Foundation for Research and Technology –Hellas – Production of a survey on the Analysis of Network Traffic Streams.

**Description:** This project aimed at integrating existing network measurement and monitoring infrastructures towards a common and open, pan-European platform.

**Project Name:** ENCORE – Enabling technologies for programmable manycores

**Funding Source:** European Commission – FP7

**Duration:** 3/2010 – 2/2013

**Participation Period:** 3/2010 - now

**Role:** Participation to the project's working team of the Computer Architecture and VLSI Systems Lab, Institute of Computer Science, Foundation for Research and Technology – Hellas – Contribution to the design and analysis of concurrent data structures for modern multicore systems.

**Description:** ENCORE focuses on runtime management of parallelism and data locality for future heterogeneous many-core processors.

**Project Name:** Design and Analysis of Concurrent Data Structures

**Financing Source:** Research Committee, University of Ioannina

**Duration (from – to):** 1/9/2007 – 31/8/2009

**Participation Period (from - to):** 1/9/2009 - now

**Role:** Faculty member, Department of Computer Science, University of Ioannina

**Description:** The purpose of the project is the design and analysis of fundamental concurrent data structures with the main emphasis on snapshot objects.

**Project Name:** Operational Programme for Education and Initial Vocational Training (EPEAEK)

**Financing Source:** Ministry of National Education and Religious Affairs

**Duration (from – to):** 1/1/2003 – 31/12/2005

**Participation Period (from - to):** 1/1/2003 - now

**Role:** Faculty Position, Department of Computer Science, University of Ioannina

**Description:** The purpose of the project is the re-design and upgrade of the undergraduate and graduate programme of studies of the Department of Computer Science at the University of Ioannina. Participation at the following work packages:

- α. Phase U1 – Re-design of the undergraduate programme of studies: U.1.1. Study of Objectives.
- β. Phase U3 – Evaluation of the undergraduate programme of studies: U.1.3. Design of the Evaluation System.
- γ. Phase M3 – Evaluation of the graduate programme of studies: M.1.3 – Design of the Evaluation System.

**Project Name:** Metro – Research and teaching on distributed computing and networking.

**Financing Source:** Greek Secretariat of Research and Technology (program ENTEP)

**Duration:** 24 months (academic years 2002-2003 and 2003-2004)

**Participation Period:** The project has been approved by the GSRT but it was withdrawn by the participants (Panagiota Fatourou and Leandros Tassioulas) due to the appointment of Panagiota Fatourou as a faculty member of the Department of Computer Science of the University of Ioannina.

**Role:** Invited researcher from abroad

**Scientific Director:** Leandros Tassioulas

**Project Name:** Long-Duration European Research Project ESPRIT #20244 – ALCOM-IT (Algorithms and COMplexity on Information Technology), Computer Technology Institute, Patras.

**Financing Source:** European Union

**Duration:** 01/01/1996 – 30/6/1999

**Participation Period:** 01/01/1996 – 30/6/1999

**Role:** Junior Researcher, Computer Technology Institute, Patras

**Description:** Participation to the following work packages of the project:

- α. W.P. 1.1, LEDA (Library of Efficient Data Structures and Algorithms)  
Implementation of dynamic graph connectivity algorithms.
- β. W.P. 2.1, FRAMES  
Design and implementation of a software library for the simulation of distributed shared memory.
- γ. W.P. 4.1, PAROS (PARallel Operating Systems)  
Design and implementation of efficient scheduling algorithms for multi-threaded computations.

**Project Name:** Pilot network of the schools of Achaia, Computer Technology Institute, Patras.

**Financing Source:** Achaia's Prefecture

**Duration:** 01/01/1996 - 31/12/1996

**Participation Period:** 01/01/1996 – 31/12/1996

**Role:** Junior Researcher, Computer Technology Institute, Patras

**Description:** Design of networking applications for educational purposes.

**Project Name:** RU-1 Odyssey, Computer Technology Institute

**Financing Source:** Ministry of National Education and Religious Affairs

**Duration:** 01/01/97 – now

**Participation Period:** 01/01/1997 – 31/7/1997

**Role:** Junior Researcher, Computer Technology Institute, Patras

**Description:** Design and implementation of networking education software.

**Project Name:** European Project Training Educators through Networks and Distributed Systems (TRENDS), Computer Technology Institute.

**Financing Source:** European Union

**Duration:** 01/01/96 – 31/01/98

**Participation Period:** 01/08/1997 – 31/12/1997

**Role:** Junior Researcher, Computer Technology Institute, Patras

**Description:** Design of distance education software.

**Project Name:** Greek Parliament Information System

**Financing Source:** Greek Parliament

**Duration:** 01/01/96 – 31/12/96

**Participation Period:** 01/01/96 – 31/12/96

**Role:** Junior Researcher, Computer Technology Institute, Patras

**Description:** Design of the information system of the Greek Parliament.

## 10. Administration Work

Member of the following committees of the Department of Computer Science, University of Crete:

- *Coordination Committee for the Graduate Studies*, October 2010 – now
- *Evaluation committee for graduate studies applications*, October 2009
- *Evaluation committee for graduate studies applications*, March 2010

Member of the following committees of the Department of Computer Science, University of Ioannina:

- *Recruiting and evaluation committee for adjunct faculty positions*, September 2006
- *Recruiting and evaluation committee for adjunct faculty positions*, June 2006
- *Evaluation committee for graduate studies applications*, Winter semester, Academic year 2006-2007
- *Recruiting and evaluation committee for adjunct faculty positions*, January 2006 – coordinator
- *Committee for the Department's facilities*, September 2005 - now
- *Coordination Committee for the Graduate Studies*, November 2003 – February 2006
- *Undergraduate Studies Committee*, October 2003 – September 2005
- *Real Estate Registry Committee*, October 2003 – September 2005
- *Seminar Committee*, November 2002 – September 2003
- *Committee of Practical Training*, November 2002 – September 2003

## 11. Colloquia – Lectures - Presentations

### Colloquia

Has delivered the following colloquia talks:

- *Institute of Computer Science, Foundation for Research and Technology – Hellas (FORTH)*, Heraklion, Crete, March 2008. Talk title: “Snapshot Objects”.
- *Department of Computer Science, University of Crete*, Heraklion, Crete, November 2007. Talk title: “Concurrent Data Structures”
- *University of Ioannina*, July 2007. Talk title: “Current Research on Atomic Snapshots”.

- *Computer Science Department, University of Toronto, Canada, July 2006.* Talk title: “Single-Scanner Multi-Writer Snapshot Implementations are Fast!”
- *Institute of Computer Science, FORTH, Heraklion, Crete, April 2006.* Talk title: “Distributed Objects”.
- *University of Ioannina, April 2002.* Talk title: “Atomic Objects”.
- *Max-Planck Institut für Informatik, Saarbrücken, Germany, September 1999 – February 2000.* Talk titles:
  - “Distributed Computing – Algorithms and Impossibility Results”, November 2000.
  - “Scheduling Multithreaded Computations”, November 2000.
  - “Thread Scheduling for Multiprogrammed Multiprocessors”, July 2000.
  - “Scheduling Algorithms for Strict Multithreaded Computations”, September 1999.
- *University of Patras, January 1996 – August 1999.* Talk titles:
  - “A New Scheduling Algorithm for Strict Multithreaded Computations”, May 1999.
  - “Algorithmic Foundations of Rate-Based Flow Control”, April 1999.
  - “Max-Min Priority Fair Theory”, May 1998.
  - “Optimal Optimistic Algorithms for Rate-Based Flow Control”, August 1997.
- *University of Cyprus, September 1997.* Talk title: “Current Trends in the Theory of Rate-Based Flow Control in Computer Networks”
- *University of Paderborn, December 1996.* Talk title: “Efficient Scheduling of Multithreaded Computations”

## Invited Lectures

Has delivered the following invited talk:

- *Combinatorial and Global Optimization Conference, Chania, Crete, May 1998;* talk title: “Priority, Max-Min Flow Control, Sensitive to Traffic Levels”

## Conference Presentations

Has delivered presentations at the following conferences:

- *ACM Symposium on Principles of Distributed Computing (PODC’07), pp. 33-42, Portland, Oregon, August 2007*
- *35<sup>th</sup> Annual ACM Symposium on Theory of Computing (STOC), San Diego, California, June 2003.*

- *15<sup>th</sup> International Symposium on DIStributed Computing (DISC)*, Lisbon, Portugal, October 2001.
- *13<sup>th</sup> Annual ACM Symposium on Parallel Algorithms and Architectures (SPAA)*, Crete Island, Greece, July 2001
- *13th International Symposium on DIStributed Computing (DISC)*, Bratislava, Slovak Republic, September 1999
- *3rd International Workshop on Algorithm Engineering (WAE)*, London, United Kingdom, July 1999
- *2nd International Conference on Principles of Distributed Systems (OPODIS)*, Amiens, France, December 1998
- *17th Annual ACM Symposium on Principles of Distributed Computing (PODC)*, Puerto Vallarta, Mexico, June/July 1998
- *Combinatorial and Global Optimization Conference*, Chania, Crete, May 1998 (**invited talk**)
- *16th Annual ACM Symposium on Principles of Distributed Computing (PODC)*, Santa Barbara, California, August 1997

## **12. Honors - Awards**

*Computer Technology Institute, Patras, Hellas, 1999*

**Best Young Researcher Award**

*Computer Technology Institute, Patras, Hellas., 1996*

**Research Fellowship** for year 1996

*Institute of Computer Science, Foundation of Research and Technology- Hellas (FORTH), Heracleon, Hellas*

**Student Fellowship**, July 1994 – September 1995

*Greek Mathematical Society, 1990*

**First Prize among students of Messinia District**

*Greek Mathematical Society, 1989*

**First Prize among students of Messinia District**

## 13. Publications

### Thesis

1. Panagiota Fatourou, “Algorithmic Foundations of Rate-Based Flow Control”, *Ph.D. Thesis*, Department of Computer Engineering and Informatics, University of Patras, June 1999.
2. Panagiota Fatourou, “IMMI: A tool for the graphical representation of a distributed system”, Diploma Thesis, Department of Computer Science, University of Crete, June 1995.

### Book Chapters

3. Panagiota Fatourou, “Schedulers for Optimistic Rate Based Flow Control”, *Encyclopedia of Algorithms*, 2008.

### Research Articles in Journals

4. Faith Ellen, Panagiota Fatourou and Eric Ruppert, “The space complexity of unbounded timestamps”, *Distributed Computing*, 21(2), pages 103-115, July 2008.
5. P. Fatourou, F. Fich and E. Ruppert, “Time Lower Bounds for Implementations of Multi-Writer Snapshots”, *Journal of the ACM*, 54(6), article 30 (34 pages), December, 2007.
6. P. Fatourou, M. Mavronicolas, and P. Spirakis, “Max-Min Fair Flow Control Sensitive to Priorities”, *Journal of Interconnection Networks*, Vol. 6, No. 2, pp. 85-114, June 2005.
7. P. Fatourou, M. Mavronicolas and P. Spirakis, “Efficiency of Oblivious versus Non-Oblivious Schedulers for Optimistic, Rate-Based Flow Control”, *SIAM Journal on Computing*, Vol. 34, No. 5, pp. 1216-1252, 2005.
8. P. Fatourou and M. Herlihy, “Read-Modify-Write Networks”, *Distributed Computing*, Vol. 17, pp. 33-46, 2004.
9. P. Fatourou, “Low-Contention, Depth-First Scheduling of Parallel Computations with Synchronization Variables”, *Information & Computation*, **accepted**.
10. P. Fatourou and P. Spirakis, “Efficient Scheduling of Strict Multithreaded Computations”, *Theory of Computing Systems Journal (TOCS)*, pp. 173-232, Vol. 33, No. 3, May/June 2000.

### Research Articles in Conferences (extended abstracts)

11. P. Fatourou and N. D. Kallimanis, “A Highly-Efficient Wait-Free Universal Construction”, *23rd Annual ACM Symposium on Parallelism in Algorithms and Architectures (SPAA '11)*, San Jose, California, USA, June 2011 (to appear).

12. F. Ellen, P. Fatourou, E. Ruppert, and F. van Breugel, "Non-Blocking Binary Search Trees", *Proceedings of the 29th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'10)*, Zurich, Switzerland, July 2010 (to appear).
13. P. Fatourou and N. Kallimanis, "The RedBlue Adaptive Universal Constructions", *Proceedings of the 23<sup>rd</sup> International Symposium on Distributed Computing (DISC'09)*, pp. 127-141, Elche, Spain, September 2009.
14. F. Ellen, P. Fatourou, and E. Ruppert, "The Space Complexity of Unbounded Timestamps", *Proceedings of the 21<sup>st</sup> International Symposium on Distributed Computing (DISC'07)*, Lemesos, Cyprus, September 2007.
15. P. Fatourou and N. D. Kallimanis, "Time Optimal, Space-Efficient Single-Scanner, Multi-Writer Snapshots & Efficient Multi-Scanner Snapshots using CAS", *Proceedings of the 26<sup>th</sup> ACM Symposium on Principles of Distributed Computing (PODC'07)*, pp. 33-42, Portland, Oregon, August 2007.
16. H. Attiya, F. Ellen, P. Fatourou, "The Complexity of Updating Multi-Writer Snapshot Objects", *Proceedings of the 8<sup>th</sup> International Conference on Distributed Computing and Networking (ICDCN'06), Lecture Notes in Computer Science*, Vol. 4308, pp. 319-330, Guwahati, India, December 2006.
17. M. Christodoulidou and P. Fatourou, "Simple and Efficient Replication in Chord", *Proceedings of the 18<sup>th</sup> International Conference on Parallel and Distributed Computing Systems (PDCS'06)*, pp. 214-219, Dallas, Texas, November 2006.
18. P. Fatourou and N. Kallimanis, "Single-Scanner Multi-Writer Snapshot Implementations are Fast!", *Proceedings of the 25th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC'06)*, pp. 228-237, Denver, Colorado, July 2006.
19. P. Fatourou, F. Fich and E. Ruppert, "Time-Space Tradeoffs for Implementations of Snapshots", *Proceedings of the 38<sup>th</sup> Annual ACM Symposium on Theory of Computing (STOC'06)*, pp. 169 - 178, Seattle, WA, 2006.
20. P. Fatourou, F. Fich and E. Ruppert, "A Tight Time Lower Bound for Space-Optimal Implementations of Multi-Writer Snapshots", *Proceedings of the 35<sup>th</sup> Annual ACM Symposium on Theory of Computing (STOC'03)*, pp. 259-268, San-Diego, California, June 2003.
21. P. Fatourou, F. Fich and E. Ruppert, "Space-Optimal Multi-Writer Snapshot Objects are Slow", *Proceedings of the 21st ACM Symposium on Principles of Distributed Computing (PODC '02)*, Monterey, California, July 2002.
22. P. Fatourou and M. Herlihy, "Adding Networks", *Proceedings of the 15<sup>th</sup> International Symposium on Distributed Computing (DISC '01)*, pp. 330-341, Lisbon, Portugal, October 2001.
23. P. Fatourou, "Low-Contention, Depth-First Scheduling of Parallel Computations with Write-Once Synchronization Variables", *Proceedings of the 13<sup>th</sup> ACM*

*Symposium on Parallel Algorithms and Architectures (SPAA '01)*, pp. 189-198, Crete Island, Greece, July 2001.

24. P. Fatourou and P. Spirakis, "A New Scheduling Algorithm for General Strict Multithreaded Computations", *Proceedings of the 13th International Symposium on Distributed Computing (DISC'99)*, pp. 297-311, Bratislava, Slovakia, September 1999.
25. P. Fatourou, P. Spirakis, P. Zarafidis and A. Zoura, "Implementation and Experimental Evaluation of Graph Connectivity Algorithms using LEDA", *Proceedings of the 3<sup>rd</sup> International Workshop on Algorithm Engineering (WAE '99)*, pp. 124-138, London, July 1999.
26. P. Fatourou, M. Mavronicolas, and P. Spirakis, "Max-Min Fair Flow Control Sensitive to Priorities", *Proceedings of the 2nd International Conference on Principles of Distributed Systems (OPODIS '98)*, pp. 45-59, Amiens, France, December 1998.
27. P. Fatourou, M. Mavronicolas and P. Spirakis, "The Global Efficiency of Distributed, Rate-Based, Flow Control Algorithms", *Proceedings of the 5th International Colloquium on Structural Information and Communication Complexity (SIROCCO '98)*, pp. 244-258, Amalfi, Italy, June 1998.
28. P. Fatourou, M. Mavronicolas and P. Spirakis, "Efficiency of Oblivious versus Non-Oblivious Schedulers for Optimistic, Rate-Based Flow Control", *Proceedings of the 16th Annual ACM Symposium on Principles of Distributed Computing (PODC '97)*, pp. 139-148, Santa Barbara, California, August 1997.
29. P. Fatourou and P. Spirakis, "Scheduling Algorithms for Strict Multithreaded Computations", *Proceedings of the 7th International Symposium on Algorithms and Computation (ISAAC '96)*, pp. 407-416, Osaka, Japan, December 1996.

### **Research Articles in Conferences, Invited**

30. P. Fatourou, M. Mavronicolas and P. Spirakis, "Advances in Rate-Based Flow Control", *Proceedings of the 4th International Colloquium on Structural Information and Communication Complexity (SIROCCO '97)*, Carleton University Press, pp. 266-281, June 1997.

### **Brief Announcements in Conferences**

31. H. Attiya, F. Ellen, P. Fatourou, "The Complexity of Updating Multi-Writer Snapshot Objects", *Proceedings of the 26<sup>th</sup> ACM Symposium on Principles of Distributed Computing (PODC'07)*, pp. 318-319, Portland, Oregon, August 2007.
32. P. Fatourou and M. Herlihy, "Adding Networks", *Proceedings of the 20<sup>th</sup> Annual ACM Symposium on Principles of Distributed Computing (PODC '01)*, New-Port, Rhode Island, August 2001.
33. P. Fatourou, M. Mavronicolas and P. Spirakis, "The Global Efficiency of Distributed, Rate-Based, Flow Control Algorithms", *Proceedings of the 17th Annual*

*ACM Symposium on Principles of Distributed Computing (PODC'98)*, p. 311, Puerto Vallarta, Mexico, June/July 1998.

## **Other Articles**

34. James Aspnes, Costas Busch, Shlomi Dolev, Panagiota Fatourou, Chryssis Georgiou, Alex Shvartsman, Paul Spirakis, and Roger Wattenhofer, “Eight open problems in distributed computing”, *Bulletin of the European Association for Theoretical Computer Science*, Vol. 90, pp. 109-126, October 2006.
35. P. Fatourou, “The DISC 2001 Conference”, *Distributed Computing Column, SIGACT News*, pp. 46-53, Vol. 33, No. 1, March 2002.