

## 1. TEACHING ACTIVITIES – CRISTINA SILVANO

### 1.1. TEACHING ACTIVITY AT UNIVERSITIES

#### *Academic Year 2011/2012*

- "Advanced Computer Architectures" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Computer Architectures and Operating Systems" (10 Credits), Undergraduate Programme, Computer Engineering, Politecnico di Milano, Como Campus

#### *Academic Year 2010/2011*

- "Advanced Computer Architectures" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Computer Architectures and Operating Systems" (10 credits), Undergraduate Programme, Computer Engineering, Politecnico di Milano, Como Campus

#### *Academic Year 2009/2010*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Computer Architectures and Operating Systems" (10 Credits), Undergraduate Programme, Computer Engineering, Politecnico di Milano, Como Campus

#### *Academic Year 2008/2009*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Hardware/software co-design methodologies" (5 Credits), Master of Science, Computing Systems Engineering and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus.

#### *Academic Year 2007/2008*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Hardware/software co-design methodologies" (5 Credits), Master of Science, Computing Systems Engineering and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer Science Fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus

#### *Academic Year 2006/2007*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Hardware/software co-design methodologies" (5 Credits), Master of Science, Computing Systems Engineering and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer science fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus
- "Computer and Interconnection Architectures" (12 Credits), Undergraduate Programme, Information and Communication Technology, University of Milan
- "Advanced computer architectures", (2.5 Credits) Ph. D. Programme, Computing Systems Engineering, Politecnico di Milano, Milano Leonardo Campus (in collaboration with prof. M. Sami)

#### *Academic Year 2005/2006*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus (Course completely offered in English)
- "Hardware/software co-design methodologies" (10 Credits), Master of Science, Computing Systems Engineering and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer science fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus
- "Computer and Interconnection Architectures" (12 Credits), Undergraduate Programme, Information and Communication Technology, University of Milan

*Academic Year 2004/2005*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus
- "Hardware/software co-design methodologies" (5 Credits), Master of Science, Computing Systems Engineering and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer science fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus
- "Computer and interconnection architectures" (12 Credits), Undergraduate Programme, Information and Communication Technology, University of Milan

*Academic Year 2003/2004*

- "Architectures for multimedia systems" (5 Credits), Master of Science, Computer Engineering, Politecnico di Milano, Como Campus
- "Computer science fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus
- "Computer and interconnection architectures" (12 Credits), Undergraduate Programme, Information and Communication technology, University of Milan

*Academic Year 2002/2003*

- "Computer Architectures" (10 Credits), Master of Science, Electronics and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer science fundamentals" (10 Credits), Undergraduate Programme, Management and Production Engineering, Politecnico di Milano, Como Campus
- "Computer and Interconnection Architectures" (12 Credits), Undergraduate Programme, Information and Communication Technology, University of Milan

*Academic Year 2001/2002*

- "Computer Architectures" (10 Credits), Master of Science, Electronics and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer and Interconnection Architectures" (12 Credits), Undergraduate Programme, Information and Communication Technology, University of Milan
- "Computer Architectures I" (Labs for prof. N. Scarabottolo), Undergraduate Programme, Computer Science, University of Milan, Crema Campus

*Academic Year 2000/2001*

- "Computer Architectures I" (Labs for prof. N. Scarabottolo), Undergraduate Programme, Computer Science, University of Milan, Crema Campus
- "Computer and interconnection architectures / part II" (6 Credits), Undergraduate Programme, Computer Science, University of Milan
- "Laboratory of operating systems / part I" (6 Credits), Undergraduate Programme, Computer Science, University of Milan
- "Advanced computer architectures", Ph. D. Programme, Computer Science, Department of Computer Science, University of Milan
- "Computer Architectures" (Labs for prof. M. Sami), Master of Science, Electronics and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus

*Academic Year 1999/2000*

- "Laboratory of Computer Architectures I" (6 Credits), Undergraduate Programme, Computer Science, University of Milan, Crema Campus
- "Computer Architectures" (Labs for prof. M. Sami), Master of Science, Electronics and Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus
- "Computer Architectures" (Labs for prof. R. Stefanelli), Master of Science, Computer Engineering, Politecnico di Milano, Milano Leonardo Campus

*Academic Year 1998/99*

- "Electronic Design Automation" (Labs for prof. P. Gubian), Master of Science, Electronics Engineering, University of Brescia
- "Computer Architectures" (Labs for prof. M. Sami), Master of Science, Electronics and

Telecommunications Engineering, Politecnico di Milano, Milano Leonardo Campus

- "Computer Architectures" (Labs for prof. R. Stefanelli), Master of Science, Computer Engineering, Politecnico di Milano, Milano Leonardo Campus

*Academic Year 1997/98*

- "Electronic Design Automation" (Labs for prof. P. Gubian), Master of Science, Electronics Engineering, University of Brescia
- "Computer Systems" (Labs for prof. G. Berini), Undergraduate Programme, Computer Engineering, Politecnico di Milano, Como Campus

*Academic Year 1996/1997*

- "Electronic Design Automation" (Labs for prof. P. Gubian), Master of Science, Electronics Engineering, University of Brescia

## **1.2. OTHER TEACHING ACTIVITIES**

- Seminars in the course: "*Design of VLSI Circuits*", Master in Information Technology, CEFRIEL, Milan, *A. Y. 1997/98, A. Y. 1998/99, A. Y. 1999/2000 e A. Y. 2000/2001.*
- Seminars in the course: "*Computer Architectures*", per la Scuola Interuniversitaria Lombarda di Specializzazione per l'Insegnamento Secondario – Milano Session (SILSIS-MI), Physics – Computer Science – Mathematics (Ref. prof. N. Scarabottolo). *A. Y. 1999/2000 e A.Y. 2000/2001.*
- Tutorial: "*HD02 – Architectures of VLSI systems*" held at Siemens Mobile Communications, Cinisello Balsamo (MI), 8-9 Sept. 2003 (in collaboration with prof. D. Sciuto, Politecnico di Milano).
- Tutorial: "Introduction to Multiprocessors" held at STMicroelectronics, Agrate B. (Italy), 18/4/2000.
- Tutorial: "Advanced Computer Architectures" held at Alenia Spazio - LABEN, Milan, 25-26 October 2002.

## **1.3. ACADEMIC RESPONSIBILITIES**

- Thesis Committee Member for several undergraduate students and master students in Computer Science at University of Milano, 2000-2002.
- Committee Member, Committee on Undergraduate Studies in Computer Engineering, Politecnico di Milano, Como Campus, 2002-Present.
- Chair, Committee on Undergraduate Studies Approval in Computer Engineering, Politecnico di Milano, Como Campus, 2005-Present.
- Committee Member, Committee on Graduate Admissions in Computer Engineering, Politecnico di Milano, Como Campus, 2002-Present.
- Thesis Committee Member for several undergraduate students and master students in Computer Engineering at Politecnico di Milano, 2002-Present.
- Committee Member, Committee for the comparative evaluation to evaluate the candidates for one position as Assistant Professor (MIUR Researcher) in Computer Engineering, University of Catania, 2007-2008.

## **1.4. RESEARCH ADVISING**

### **1.4.1. Doctoral Students Supervision**

1. **Vittorio Zaccaria, Ph. D.**, currently Assistant Professor at Dipartimento di Elettronica e Informazione, Politecnico di Milano, System Architectures Group. First employment: R&D Engineer at STMicroelectronics in Agrate B. (I) and Manno (CH). Ph.D. Thesis on: "Power exploration methodologies for VLIW-based systems", XIV Ph.D. cycle at Politecnico di Milano, Ph. D. defense: February 2002, Advisor: prof. M. Sami. Co-Advisors: prof. D. Sciuto, Dr. C. Silvano.
2. **Gianluca Palermo, Ph.D.**, currently Assistant Professor at Dipartimento di Elettronica e Informazione, Politecnico di Milano, System Architectures Group. First employment: Post-Doc at Dipartimento di Elettronica e Informazione, Politecnico di Milano. Ph.D. Thesis on: "Design Methodologies for Embedded Architectures based on Network on-Chip", XVIII Ph.D. cycle at Politecnico di Milano, Ph. D. defense: February 2006, Advisor: prof. C. Silvano.
3. **Giovanni Beltrame, Ph.D.**, currently Assistant Professor at École Polytechnique de Montréal. First employment: Microelectronics Engineer at European Space Agency (NL). XVIII Ph.D.

- cycle at Politecnico di Milano, Ph.D. Thesis on “Modeling, Simulating, Analysis and Optimization of Multi-Processor System-on-Chip Platforms”, Ph. D. defense: February 2006, Advisor: prof. D. Sciuto. Co-Advisor: prof. C. Silvano.
4. **Matteo Monchiero Ph.D.**, currently Senior Research Scientist, Intel Labs at Hillsboro (OR, US). First employment: Post Doctoral Research Associate at HP Labs in Palo Alto, CA, Exascale Computing Lab., Ph.D. Thesis on: “Power/performance analysis and optimization of multicore architectures”, XIX Ph.D cycle at Politecnico di Milano, Ph. D. defense: February 2007, Advisor: prof. C. Silvano.
  5. **Oreste Villa, Ph.D.**, currently (and first employment): Research Scientist at the High Performance Computing Group at Pacific Northwest National Laboratory , Richland, WA (USA), Ph.D. Thesis: “Designing and Programming Multi-core Architectures”, XX PhD cycle at Politecnico di Milano, Ph. D. defense: February 2008, Advisor: prof. C. Silvano.
  6. **Giovanni Mariani, Ph. D.**, currently (and first employment): Post-Doc at ALaRI, the Advanced Learning and Research Institute, part of the Faculty of Informatics of the University of Lugano (Switzerland), Ph.D. Thesis: "A Design Space Exploration Methodology Supporting Run-time Resource Management for Multi-Core Architectures", Ph. D. at University of Lugano, Ph. D. defense: March, 2011, Advisor: prof. M. Sami, Co-Advisor: prof. C. Silvano
  7. **Leandro Fiorin**, currently **Ph.D. student** at ALaRI, the Advanced Learning and Research Institute, part of the Faculty of Informatics of the University of Lugano (Switzerland), Ph.D. Thesis: "High level services for Networks-on-Chip", PhD Defense: to be done by March 2012, Advisor: prof. M. Sami, Co-Advisor: prof. C. Silvano.
  8. **Marco Ceriani**, currently **Ph. D. student**, Dipartimento di Elettronica e Informazione, Politecnico di Milano. Co-Advisors: prof. G.Palermo, prof. C.Silvano.
  9. **Edoardo Paone**, currently **Ph. D. student**, Dipartimento di Elettronica e Informazione, Politecnico di Milano.

#### 1.4.2. *Undergraduated and Master Students Supervision*

1. I was advisors of several Master students in Information Technology at Cefriel Research and Training Center di Milano, EDA (Electronic Design Automation) Group, 1993-1999.
2. I was co-advisors of several Master students in Electrical Engineering at Università degli Studi di Brescia, 1996-1999.
3. I was advisor of several undergraduate and Master students in Computer Science at Università degli Studi di Milano, 2000-2002.
4. I was advisor of about **60** undergraduate students and Master students in Computer Engineering, Electrical Engineering, and Communication Engineering at Politecnico di Milano, 2002-Present.

#### 1.5. *PHD EXTERNAL EXAMINER*

1. In May 2009, I have been invited as Opponent Member of the Doctoral Examination Committee, Board of the Doctorates, Delft University of Technology (NL) for the Ph.D. defense of the candidate Carlo Galuzzi discussing a thesis titled: "Automatically fused instructions".
2. In February 2011, I have been invited as Opponent Member of the Doctoral Examination Committee, Board of the Doctorates, Delft University of Technology (NL) for the Ph.D. defense of the candidate Kamana Sigdel discussing a thesis titled: "System-level Design Space Exploration of Reconfigurable Architectures".
3. In June 2011, I have been invited as Opponent Member of the Doctoral Examination Committee, Technical University of Catalonia (Spain) for the Ph.D. defense of the candidate Friman Sánchez Castaño discussing a thesis titled: "Exploiting Multiple Levels of Parallelism in Bioinformatics Applications", Advisors: Dr. Alex Ramírez and Dr. Mateo Valero.
4. More recently, in April 2011, I have been invited as Opponent member of the Doctoral Examination Committee, University of Verona, for the Ph. D. defense of the candidate Francesco Stefanni discussing a thesis titled: “A design and verification methodology for networked embedded systems” April 2011. Advisor: prof. Franco Fummi.

#### 1.6. *RESEARCH STAFF*

1. **Vittorio Zaccaria, Ph. D.**, currently **Assistant Professor** at Dipartimento di Elettronica e Informazione, Politecnico di Milano, System Architectures Group. His current research focuses on design space exploration and parallel programming paradigms and architectures.
2. **Gianluca Palermo, Ph.D.**, currently **Assistant Professor** at Dipartimento di Elettronica e Informazione, Politecnico di Milano, System Architectures Group. His current research focuses

- on design space exploration and Network-on-chip for many-core architectures.
3. **Giovanni Agosta, Ph. D.**, currently **Assistant Professor** at Dipartimento di Elettronica e Informazione, Politecnico di Milano. Formal Languages and Compilers Group. His current research focuses on dynamic compilation for ILP architectures. The main research advisor is professor Stefano Crespi Reghizzi, Politecnico di Milano.
  4. **Sotirios Xydis**, Ph. D. from Technical University of Athens, currently **Post-Doc** at Dipartimento di Elettronica e Informazione, Politecnico di Milano. System Architectures Group. His current research focuses on design space exploration, high level synthesis and programmable architectures.
  5. **Iyad Al Khatib, Ph.D.** from Royal Institute of Technology, Stockholm, Sweden, currently Post-Doc at Dipartimento di Elettronica e Informazione, Politecnico di Milano. System Architectures Group. His current research focuses on design space exploration for multi/many core architectures and pervasive systems for healthcare applications.

### 1.7. VISITORS

1. **Arpad Gellért, Ph. D., Assistant Professor**, “Lucian Blaga” University of Sibiu, Romania, **Visiting Researcher**, Spring 2009.
2. **Caroline Concatto**, Ph. D. student at Universidade Federal do Rio Grande do Sul, Instituto de Informática, Departamento de Informática Aplicada, Porto Alegre (Brasil). Advisor: Prof. Luigi Carro. **Visiting student** from 15-01-10 to 15-04-10, FP7 HiPEAC NoE Collaboration Grant.
3. **Debora Matos**, Ph. D. student at Universidade Federal do Rio Grande do Sul, Instituto de Informática, Departamento de Informática Aplicada, Porto Alegre (Brasil). Advisor: Prof. Luigi Carro. **Visiting student** from 02-02-11 al 02-05-11, FP7 HiPEAC NoE Collaboration Grant.
4. **Anelise Kologeski**, Ph. D. student at Universidade Federal do Rio Grande do Sul, Instituto de Informática, Departamento de Informática Aplicada, Porto Alegre (Brasil). Advisor: Prof. Luigi Carro. **Visiting student** from 02-02-11 al 02-05-11, FP7 HiPEAC NoE Collaboration Grant.

Milano, January 13th, 2012