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Curriculum vitae of Alessandro Dal Palù

Contacts

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Birth: 24 January 1979, Verona (VR).

Degrees

- Computer Science degree (Laurea = BS + MS), University of Verona, Italy, on 10th Jul 2002.
- Ph.D. in Computer Science, at University of Udine on 31th March 2006.

Current position

Associate professor at Parma University,

Dept. of Mathematical, Physical and Computer Sciences, University of Parma.

Research Interests

- Computational Logic: Constraint (Logic) Programming, Answer Set Programming.
- Bioinformatics: protein structure prediction, Rna Alignment.
- Parallelism and GPU computing.
- Analysis of multi-dimensional medical images.
- Computational complexity and data structure optimization.

Curriculum Vitae et Studiorum

Jul 1997 I pursued High School Degree at "Liceo Scientifico Statale G.Fracastoro" in Verona with 60/60.

Sep 1997 I enrolled at University of Verona, for a Computer Science degree.

Sep 1997 – Jul 2002 Scholarship from the Municipality of Verona during my 5 years of University studies.

Aug 2000 Scholarship from "Esu" Verona, for a month of intensive English course at Hull University, UK.

Aug 2001 – Dec 2001 I begun a MS in Computer Science at New Mexico State University, Las Cruces, NM, Usa and collaborated for research on algorithms and data structures optimizations.

May and Jun 2002 Collaboration with Verona University for a project of remote robotic surgery.

10th Jul 2002 I received my Computer Science degree from the Faculty of "Scienze Matematiche Fisiche e Naturali", University of Verona, thesis title: *New optimal algorithms on pointer machines*, advisors: Prof. Roberto Giacobazzi, Prof. Agostino Dovier, Prof. Enrico Pontelli e Prof. Desh Ranjan. I received the grade 110/110 cum laude and a special mention from the committee for the outstanding curriculum.

Sep – Nov 2002 Research period at University of Parma, for integrating Constraint Logic Programming solvers over sets.

Jul – Nov 2002 Collaboration with University of Verona for a project to study the disposition of alarms to alert population in case of high tide in the town of Venice.

Nov 2002 I enrolled and received a 3 years scholarship for a Computer Science Ph.D. at University of Udine.

Apr 2003 – Sep 2004 I was granted a scholarship from the **European Social Fund**: "Misura D4" Miglioramento delle risorse umane nel settore della ricerca e sviluppo tecnologico.

Feb – Mar 2004 Research period in Jena, Germany, on bioinformatics and Constraint Logic Programming. During this period, I designed and implemented a new protein simulator in the framework of CLP over Finite Domains.

Aug – Dec 2004 Research at New Mexico State University, Las Cruces, NM, Usa, focusing on bioinformatics, parallelism and Constraint Logic Programming, e.g. I applied parallel constraint programming to solve protein structure prediction problems.

Dec 2005 Researcher position (assistant professor with tenure track) at University of Parma, Dept. of Mathematics.

March 2006 Final dissertation for Ph.D.

Spring semester 2011 Visiting Professor and research collaborator at New Mexico State University, USA

since Oct 2014 Associate professor position at University of Parma

since Jan 2017 Head of the Computer Science Bachelor Degree

Mar 2018 Fulfilling (H-c index $\mathbf{8} > 6$, $\mathbf{28} > 12$ indexed publications since 2008, $\mathbf{22.3} > 14.8$ normalized citations) the National Evaluation Board (ASN) requirements for Full Professor evaluation for 01/B1 area.

Awards

- 9th March 2007: "Marco Cadoli" Award given by GULP (Gruppo Ricercatori e Utenti Logic Programming) for **best Ph.D. thesis** on computational logics
- **Best paper** award at International Conference of Logic Programming 2010, *CLP-based protein fragment assembly*
- Prolog programming contest winner at International Conference on Logic Programming 2012 (Budapest).

Editor

- Book chapter. Constraint Based Methods for Bioinformatics in Trends in Constraint Programming, Frederic Benhamou, Narendra Jussien and Barry O'Sullivan eds. (co-editor). ISBN: 9781905209972, 2007
- Constraints Journal, Special Issue on Constraint based methods for Bioinformatics (co-editor) Volume 13, Issue 1 (2008).
- Thematic series on Constraints and Bioinformatics, Algorithms for Molecular Biology (co-editor), since 2012.

Committees

- **Program co-chair of ICLP 2018**
- Association of Logic Programming **Executive committee** since 2014.
- PC member of ICLP 2008/11/12/15/17 and publicity chair of ICLP 08.
- Co-Chair of *CP and Biology* Track of International Conference on Principles and Practice of Constraint Programming 2016
- Doctoral Consortium, ICLP10/11 (co-chair).
- Promoter of Workshop on Constraint Based Methods for Bioinformatics (2005-2018), co-chair in 2006/07/09/10/11/13/15/16/18.
- PC member of IJCAI11.
- PC member of national conferences on Computational Logic and AI.

Funded projects

- FIRB 2003: Il riconoscimento molecolare nelle interazioni proteina-ligando, proteina-proteina e proteina superficie: sviluppo di approcci sperimentali e computazionali integrati per lo studio di sistemi di interesse farmaceutico (Approved March 31st 2005) — RBNE03B8KK
- INDAM GNCS 2005: *Sviluppo di risolutori di vincoli e loro applicazioni in teoria dei codici e bioinformatica*
- PRIN 2005: *Vincoli per la programmazione con insiemi, l'analisi di sistemi con automi, il ragionamento su intervalli e la bioinformatica* — 2005015491
- PRIN 2008 Innovative and multi-disciplinary approaches for constraint and preference reasoning. — 20089M932N

- INDAM GNCS 2010: *Tecniche innovative per la programmazione con vincoli in applicazioni strategiche*
- **National PI** of the INDAM GNCS 2011: *Nuova architettura parallela per l'esecuzione di Programmi Logici mediante General Purpose Graphic Processing Unit (GPGPU)*
- INDAM GNCS 2014: *CUD@ASP: sfruttare la potenza di calcolo delle GPU per il ragionamento automatico*
- INDAM GNCS 2015: *Constraint-Based Search using GPUs and applications to protein structure prediction*
- **National PI** of the INDAM GNCS 2016: *Programmazione logica per lo studio dell'evoluzione del genoma nel cancro*
- INDAM GNCS 2017: *DECORE - A DEClarative approach for Object REconstuction*

Management and teaching

- Since 2017 **Head of the CS Bachelor degree**, Parma
- Since 2017 Member of scientific committee for **High Performance Computing** of Parma
- Since 2014 Coordinator of Parma Unit of **Infolife Laboratory** (CINI's Bioinformatics National Lab)
- Commission for International relationships (e.g., Erasmus, ...) for CS degree in Parma.
- A.Y. 02/03. T.A. for the class: C/C++ Programming for Mathematics and CS degree at University of Parma.
- A.Y. 03/04 – 05/06. T.A. for the class: Operating Systems for Biotechnology at University of Udine.
- A.Y. 05/06 – 08/09 . Computer Science, Biotechnology degree, University of Parma.
- A.Y. 10/11. Programming Lab, CS degree, University of Parma.
- A.Y. since 05/06 – today. Operating Systems, CS degree, University of Parma.
- A.Y. since 14/15 – today. Systems architecture, CS degree, University of Parma.
- Advisor of several Bachelor/Master thesis, advisor of PhD students

School/PhD classes teaching

- Protein structure prediction methods (Doctoral school) (4-6/07/11, Sissa, TS).
- Exploring Life through Logic Programming CILC Summer School 2015
- PhD course *HPC: calcolo ad alte prestazioni*, 2017-on, Parma

Riferimenti bibliografici

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[2] Renato Vacondio, Alessandro DAL PALU', Alessia Ferrari, Paolo Mignosa, Francesca Aureli, and Susanna Dazzi. A non-uniform efficient grid type for gpu-parallel shallow water equations models. *ENVIRONMENTAL MODELLING & SOFTWARE*, 88:119–137, 2017.

[3] Alessandro Daducci, Alessandro Dal Palù, Maxime Descoteaux, and Jean-Philippe Thiran. Microstructure informed tractography: Pitfalls and open challenges. *FRONTIERS IN NEUROSCIENCE*, 10, 2016.

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[5] Renato Vacondio, Francesca Aureli, Alessia Ferrari, Paolo Mignosa, and Alessandro Dal Palù. Simulation of the january 2014 flood on the secchia river using a fast and high-resolution 2d parallel shallow-water numerical scheme. *NATURAL HAZARDS*, 80:103–125, 2016.

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