Paola Giannini

Curriculum vitae

BIO AND EDUCATION

Paola Giannini got her undergraduate degree from the University of Pisa in 1980 and her Master of Science in Computer Science from Carnegie-Mellon University of Pittsburg in 1986.
She was Research Associate at the Computer Science Department of the University of Torino from October 1986 till October 1998, Associate Professor at the University of Piemonte Orientale from November 1998 till December 2004, and has been Full Professor at the same University since then. She served as Ph.D. advisor for some Italian and foreign students. She has been the "Chair of Consiglio di Corso di Studi" in Computer Science (both "Triennale" and "Magistrale") from 2006 till 2012 and participate in various department and university committees.
Paola Giannini research interests cover the area of foundations of computer science. She has served and still does as Program Committee member, and in some cases Chair, of international conferences and workshops. She is on the editorial board of the International Journal of Computer and Software Engineering.
Paola Giannini was the coordinator of the PRIN 2004 units EOS project, COFIN 2001 NAPLES project, Task leader of the "Types and Calculations for the items Evolution" for the EC Global Computing DART project, and unit coordinator of the project PRIN 2006 EOS TWO. She was responsible for the site of the University of Eastern Piedmont of the BioBITS project (Developing White and Green Biotechnologies by Converging Platforms from Biology and Information Technology towards Metagenomics).
She has been a visiting professor at the University of Limerick for 4 months in the academic year 2015/2016, and is currently responsible for the University of Eastern Piedmont of the European Master in Data Mining and Knowledge Management.

UNIVERSITY CAREER

2004-	Full Professor, Università del Piemonte Orientale
1998-2004	Associate Professor, Università del Piemonte Orientale
1986-1998	Researcher, Università di Torino

UNIVERSITY POSITIONS

2006-2012	Presidente del Consiglio di Corso di studi in Informatica triennale e magistrale

MAIN FIELDS OF INTEREST

1. Foundations of programming languages
2. Type systems for static and dynamic semantics of languages and systems
3. Calculi for modeling concurrent and stochastic systems

CURRENT ISSUES OF RESEARCH

1. "Dynamic languages"

In this area we investigate the foundations of dynamic languages and their use as target languages for compilation of functional languages. The aim is to provide theoretical foundations and practical tools to deal with languages that support static and dynamic type checking.

2. "Behavioral types"

We study behavioral type theory as the basis for new foundations, and software development methods for communication-intensive distributed systems. We use behavioral types to specify protocols, and choreography in large-scale systems, providing structuring abstractions for complex communication behavior.

3. "Language adaptation"

We design and give a formal definition for micro-languages and their mapping to application features. We analyze mainstream languages in terms of micro-languages, and develop algorithms for the automatic identification of application concerns and their association with the micro-languages.

4. "Modeling Biological Systems"

We develop models, languages and tools for describing, analyzing and implementing "in silico" bio-systems. The newly tailored formalisms share with the existing ones their formal, executable semantics, thus allowing for re-use of established theories, methods and tools.

FOUNDED PROJECTS

BANDO	TITOLO DEL PROGETTO
PRIN 2012	CINA – "Compositionality,Interaction,Negotiation,Autonomicity" http://sysma.imtlucca.it/cina/doku.php The project deals with the issues related to the development and management of open-ended IT systems consisting of heterogeneous, highly parallel, massively distributed components with complex interactions and behaviors and with autonomy in terms of individual properties, objectives and decision-making. It aims at developing a coherent, integrated set of languages, methods and tools to build systems that can operate in open-ended, unpredictable environments while adapting to changing contexts or requirements, and that behave reliably and are able to cope with failures and attacks.

TOP FIVE PAPERS

1. P. Giannini and S. Ronchi Della Rocca. Characterization of typings in polymorphic type

discipline. In *Proceedings of 3-th Annual IEEE Symposium on Logic in Computer Science*, pages 61–70, Edinburgh, 1988.

2. S. Drossopoulou, F. Damiani, M. Dezani-Ciancaglini, and P. Giannini. Fickle: Dynamic object re- classification. In *ECOOP'01*, LNCS 2072, pages 130–149. Springer, 2001.

3. C. Anderson, P. Giannini, and S. Drossopoulou. Towards type inference for javascript. In *19th European Conference on Object-Oriented Programming (ECOOP 2005)*, LNCS 3586, pages 428–453. Springer, 2005.

4. F. Damiani, E. Giachino, P. Giannini, and S. Drossopoulou. A type safe state abstraction for coordination in java-like languages. *Acta Informatica*, 45:479–536, 2008.

5. L. Bioglio, M. Dezani-Ciancaglini, P. Giannini, and A. Troina. Typed Stochastic Semantics for the Calculus of Looping Sequences. *Theoretical Computer Science*, 431:165 –180, 2012.