

# CURRICULUM VITAE

MARTA SIMEONI

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## PERSONAL DETAILS

**Name and Surname:** Marta Simeoni  
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**Professional Status:** Ricercatore (Assistant Professor)

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## EDUCATION AND ACADEMIC POSITION

**since sept. 2000** Ricercatore (Assistant Professor) at the Computer Science Department of the University Ca' Foscari of Venice, Italy (since nov. 2011 Department of Environmental Science, Computer Science and Statistics).

**march 2000** PhD in Computer Science, Dipartimento di Informatica dell'Università La Sapienza di Roma, Italy.

**march 1995** Laurea in Computer Science, Università degli Studi di Udine.

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## TEACHING ACTIVITY

Current teaching activity:

- course *Architettura degli Elaboratori, Mod. 1* Corso di Laurea triennale di Informatica, Università Ca' Foscari, Venezia.
- course *Elementi di Informatica per l'Economia* Corso di Laurea Triennale in Economia Università Ca' Foscari, Venezia
- *Bioinformatics*, Master degree in Computer Science, Università Ca' Foscari, Venezia;

Past teaching activity includes the following courses:

- *Laboratorio di Algoritmi e Programmazione*, Corso di Laurea triennale di Informatica, Università Ca' Foscari, Venezia;
- course *Sistemi di Elaborazione delle Informazioni* Corso di Laurea Magistrale in Amministrazione, Finanza e Controllo, Università Ca' Foscari, Venezia

- *Biologia Computazionale*, Dottorato di Informatica, PhD course, Università Ca' Foscari, Venezia.

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## RESEARCH ACTIVITY

My recent research activity is in the area of *Systems Biology* and deals mainly with the representation, comparison and alignment of Metabolic Pathways. Comparison of metabolic pathways is useful in phylogenetic analysis and for understanding metabolic functions when studying diseases and in drugs engineering. Previous research in this area dealt with genome assembly and with the use of hybrid automata to represent the dynamic behavior of complex systems, with the aim of applying model checking techniques to reason about the considered system.

Another current line of research is in the *Ecoinformatics* field and concern the representation and analysis of trophic networks or food webs, a kind of networks used in ecology to represent feeding interactions (what-eats-what) in an ecosystem

Other research activity was concerned with different research areas, namely *Theory and Application of Graph Transformation Systems* and *Software Performance*.

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## SOME PUBLICATIONS

- [1] *Petri Nets for modelling and analysing Trophic Networks*  
Paolo Baldan, Martina Bocci, Daniele Brigolin, Nicoletta Cocco, Monika Heiner, Marta Simeoni  
Fundamenta Informaticae, to appear, 2018.
- [2] *MP-Align: Alignment of Metabolic Pathways*  
Ricardo Alberich, Mercé Llabrès, David Sánchez, Marta Simeoni, Marc Tuduri  
BMC Systems Biology, vol. 8, pp. 1-16, 2014.
- [3] *Comparing Metabolic Pathways through Reactions and Potential Fluxes*  
Paolo Baldan, Nicoletta Cocco, Federica Giummolè, Marta Simeoni  
Transactions on Petri nets and other models of concurrency Springer LNCS vol. 8100, pp. 1-23, 2013.
- [4] *Representing and Comparing Metabolic Pathways as Petri Nets with MPath2PN and CoMeta*  
Paolo Baldan, Nicoletta Cocco, Marta Simeoni  
Proceedings of the Fourth International Workshop on Interactions Between Computer Science and Biology (CS2Bio'13), in Electronic Notes in Theoretical Computer Science, Elsevier, vol. 299, pp. 5-13, 2013.
- [5] *Petri nets for modelling metabolic pathways: a survey*  
Paolo Baldan, Nicoletta Cocco, Andrea Marin, Marta Simeoni  
Natural Computing, vol. 9 (4), pp. 955- 989, 2010.
- [6] *Taming the complexity of biochemical models through bisimulation and collapsing: theory and practice*  
Marco Antoniotti, Carla Piazza, Alberto Policriti, Marta Simeoni, Bhubaneswar Mishra  
Theoretical Computer Science, Vol. 325/1, pag. 45-67, 2004.
- [7] *Ordering BAC clones from fingerprint data obtained through four enzymes digestion and fluorescent labeling*  
Giulio Marcon, Nicola Cannata, Mercè Llabrés, Marta Simeoni, Giorgio Valle  
Proceedings of 5th Annual Spanish Bioinformatics Conference, Barcelona 2004.
- [8] *A Sense of Life: Computational & Experimental Investigations with Models of Biochemical & Evolutionary Processes*

B. Mishra, R. Daruwala, Y. Zhou, N. Ugel, A. Policriti, M. Antonioti, S. Paxia, M. Rejali, A. Rudra, V. Cherepinsky, N. Silver, W. Casey, C. Piazza, M. Simeoni, P. Barbano, M. Spivak, J-W. Feng, O. Gill, M. Venkatesh, F. Cheng, B. Sun, I. Ioniata, T.S. Anantharaman, E.J.A. Hubbard, A. Pnueli, D. Harel, V. Chandru, R. Hariharan, M. Wigler, F. Park, S.-C. Lin, Y. Lazebnik, F. Winkler, C. Cantor, A. Carbone, and M. Gromov  
OMICS - A Journal of Integrative Biology (Special Issue on BioCOMP, S. Kumar Editor), Vol. 7(3), 2003.

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