



## **DATI PERSONALI E POSIZIONE ACCADEMICA**

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Dal 2018 Valentino Santucci è ricercatore a tempo determinato (tipo A) per il settore scientifico-disciplinare ING-INF/05 (Sistemi di Elaborazione delle Informazioni) presso l'Università per Stranieri di Perugia.

Precedentemente è stato assegnista di ricerca presso il Dipartimento di Matematica e Informatica dell'Università degli Studi di Perugia dove, nel 2012, ha conferito il dottorato in Matematica e Informatica.

## **STUDI E FORMAZIONE**

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2012 – Dottorato di ricerca in "Matematica e Informatica per la Elaborazione e la Rappresentazione della Informazione e della Conoscenza" conseguito presso l'Università degli Studi di Perugia. Titolo della tesi: "Evolutionary Optimization Techniques based on Autonomous Computational Entities".

2007 – Laurea specialistica in Informatica conseguita con lode presso l'Università degli Studi di Perugia. Titolo della tesi: "A Structured Pattern Image Recognition System".

2005 – Corso post-laurea di alta formazione in "Esperto in sicurezza delle tecnologie della informazione e della comunicazione".

2004 – Laurea triennale in Informatica conseguita presso l'Università degli Studi di Perugia. Titolo della tesi: "A Visual Editor for Standard Scientific Notation W3C/MathML".

## **TITOLI ED ALTRI INCARICHI**

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Dal 2012 al 2018 è stato titolare di assegni e borse di ricerca presso il Dipartimento di Matematica e Informatica dell'Università degli Studi di Perugia.

## **ATTIVITÀ DIDATTICA**

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Ha svolto attività di tutoraggio e supporto alla didattica per vari insegnamenti dei corsi di laurea triennale e magistrale in Informatica presso l'Università degli Studi di Perugia.

## **ATTIVITÀ SCIENTIFICA E DI RICERCA**

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La sua attività di ricerca rientra nei settori scientifico-disciplinari ING-INF/05 e INF/01.

I suoi principali interessi di ricerca sono:

- Ottimizzazione Combinatoria, Calcolo Evolutivo e Intelligenza Artificiale
- Informatica per la formazione, l'insegnamento e l'apprendimento
- Metodologie per la linguistica computazionale

### **Pubblicazioni:**

2016 – Valentino Santucci, Marco Bairoletti and Alfredo Milani. Algebraic Differential Evolution Algorithm for the Permutation Flowshop Scheduling Problem with Total Flowtime Criterion. IEEE Transactions on Evolutionary Computation, vol. 20, no. 5, pp. 682–694.

2016 – Marco Bairoletti, Alfredo Milani and Valentino Santucci. A discrete differential evolution algorithm for multi objective permutation flowshop scheduling. Intelligenza Artificiale, vol. 10, no. 2, pp. 81–95.

- 2016 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. Solving Permutation Flowshop Scheduling Problems with a Discrete Differential Evolution Algorithm. *AI Communications*, vol. 29, no. 2, pp. 269–286.
- 2012 – Valentino Santucci, Alfredo Milani and Flavio Vella. A Study on the Synchronization Behaviour of Differential Evolution and a Self-Adaptive Extension. *Journal of Artificial Intelligence and Soft Computing Research*, vol. 2, no. 4, pp. 279–301.
- 2012 – Alfredo Milani and Valentino Santucci. Community of Scientist Optimization: An Autonomy Oriented Approach to Distributed Optimization. *AI Communications*, vol. 25, no. 2, pp. 157–172.
- 2017 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. A New Precedence-Based Ant Colony Optimization for Permutation Problems. In *Proceedings of 11th International Conference on Simulated Evolution and Learning (SEAL 2017)*, Lecture Notes in Computer Science, vol. 10593, pp. 960–971, Springer, Cham.
- 2017 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. Algebraic perspectives of solutions spaces in combinatorial optimization. In *Book of abstracts of XII Workshop on Artificial Life and Evolutionary Computation (WIVACE 2017)*, pp. 18–21, ISBN 978-88-903581-3-5.
- 2017 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. Algebraic Particle Swarm Optimization for Permutations Search Space. In *Proceedings of 2017 IEEE Congress on Evolutionary Computation 2017 (CEC 2017)*, pp. 1587–1594, IEEE, San Sebastian.
- 2017 – Marco Baidoetti and Valentino Santucci. Fitness Landscape Analysis of the Permutation Flowshop Scheduling Problem with Total Flow Time Criterion. In *Proceedings of 17th International Conference on Computational Science and its Applications (ICCSA 2017)*. Lecture Notes in Computer Science, vol. 10404, pp. 705–716, Springer, Cham.
- 2016 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. An Extension of Algebraic Differential Evolution for the Linear Ordering Problem with Cumulative Costs. In *Proceedings of 14th International Conference on Parallel Problem Solving from Nature (PPSN 2016)*, Lecture Notes in Computer Science, vol. 9921, pp. 123–133, Springer, Cham.
- 2016 – Valentino Santucci and Alfredo Milani. A Triple Interpretation of Combinatorial Search Spaces. In *Proceedings of PPSN 2016 Workshop on Landscape-Aware Heuristic Search*.
- 2015 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. Linear Ordering Optimization with a Combinatorial Differential Evolution. In *Proceedings of 2015 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2015)*, pp. 2135–2140, IEEE, Kowloon.
- 2015 – Marco Baidoetti, Alfredo Milani and Valentino Santucci. A discrete differential evolution algorithm to solve multi-objective permutation flowshop scheduling problems. In *Proceedings of the 6th Italian Workshop on Planning and Scheduling (IPS 2015)*, held in conjunction with AI\*IA 2015 Conference. Published by CEUR-WS.org, pp. 88–94.
- 2015 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. An Algebraic Differential Evolution for the Linear Ordering Problem. In *Proceedings of the Companion Publication of the 2015 Annual Conference on Genetic and Evolutionary Computation (GECCO 2015)*, pp. 1479–1480, ACM, New York.
- 2014 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. A Differential Evolution Algorithm for the Permutation Flowshop Scheduling Problem with Total Flow Time Criterion. In *Proceedings of 13th International Conference on Parallel Problem Solving from Nature (PPSN 2014)*, Lecture Notes in Computer Science, vol. 8672, pp. 161–170, Springer, Cham.
- 2014 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. On the Big-Valley Hypothesis for the Permutation Flowshop Scheduling Problem with Total Flow Time Criterion. In *Proceedings of PPSN 2014 Workshop on Scaling Behaviours of Landscapes, Parameters and Algorithms*.
- 2014 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. An Analysis of the Smoothness and Neutrality of the Permutation Flowshop Scheduling Problem with Total Flow Time Criterion. In *Proceedings of PPSN 2014 Workshop on Scaling Behaviours of Landscapes, Parameters and Algorithms*.
- 2014 – Valentino Santucci, Marco Baidoetti and Alfredo Milani. A Discrete Differential Evolution Algorithm for the Total Flowtime Flowshop Scheduling Problem. In *Proceedings of the 21st RCRA workshop on Experimental Evaluation of Algorithms for Solving Problems with Combinatorial Explosion (RCRA 2014)*.

- 2014 – Marco Baiocchi, Andrea Chiancone, Valentina Poggioni and Valentino Santucci (2014) Towards a new generation ACO-based Planner. In Proceedings of the 2014 International Conference on Computational Science and its Applications (ICCSA 2014), Lecture Notes in Computer Science, vol. 8584, pp. 798–807, Springer, Cham.
- 2013 – Valentino Santucci and Alfredo Milani. Particle Swarm Estimation of Distribution Algorithm for Lymphoma Classification through Automatic Biopsies Analysis. In Proceedings of the International Conference on Medical Imaging using Bio-Inspired and Soft Computing (MIBISOC 2013), pp. 175–181. Publisher and editor: European Centre for Soft Computing.
- 2011 – Alfredo Milani and Valentino Santucci. Adaptive Memetic Particle Swarm Optimization. In Proceedings of 16th Online Conference on Soft Computing in Industrial Applications (WSC16).
- 2011 – Alfredo Milani and Valentino Santucci. Community of Scientist Optimization: Foraging and Competing for Research Resources. In IJCAI 2011 Workshop Proceedings, 18th RCRA International Workshop on Experimental Evaluation of Algorithms for solving problems with combinatorial explosion, pp. 66–80.
- 2011 – Valentino Santucci, Alfredo Milani and Flavio Vella. Self-adaptive Asynchronous Differential Evolution. In Proceedings of IEEE Symposium on Differential Evolution 2011 held in conjunction with IEEE Symposium Series on Computational Intelligence 2011 (SSCI 2011), pp. 170–177, IEEE, Paris.
- 2011 – Valentino Santucci and Alfredo Milani. Covariance-based Parameters Adaptation in Differential Evolution. In Proceedings of the Companion Publication of the 2011 Annual Conference on Genetic and Evolutionary Computation (GECCO 2011), pp. 687–690, ACM, New York.
- 2011 – Valentino Santucci and Alfredo Milani. Particle Swarm Optimization in the EDAs framework. In Proceedings of 15th Online Conference on Soft Computing in Industrial Applications (WSC15), Advances in Intelligent and Soft Computing, vol. 96, pp. 87–96, Springer, Berlin Heidelberg.
- 2010 – Valentino Santucci. Exploit Evolutionary Computation Theory. In Abstract Booklet of the 1st AI\*IA Doctoral Consortium, held in conjunction with AI\*IA 2010 Symposium, pp. 107–111.
- 2010 – Alfredo Milani, Valentino Santucci, and Clement Leung. Optimal Design of Web Information Contents for e Commerce Applications. Proceedings on 25th International Symposium on Computer and Information Sciences, vol. 62, Lecture Notes in Electrical Engineering, pp. 339–344, Springer, Dordrecht.
- 2010 – Alfredo Milani and Valentino Santucci. Asynchronous Differential Evolution. In Proceedings of 2010 IEEE Congress on Evolutionary Computation (CEC 2010), pp. 1–7, IEEE, Barcellona.
- 2009 – Alfredo Milani and Valentino Santucci. COSO: Community of Scientists Optimization. In Proceedings of the Workshop on Complexity, Evolution and Emergent Intelligence, held in conjunction with 11th AI\*IA Conference.
- 2009 – Alfredo Milani and Valentino Santucci. Online PSO for Web Marketing Optimization. In Proceedings of 2009 IEEE International Conference on e-Business Engineering (ICEBE 2009), pp. 583–587, IEEE, Macau.
- 2009 – Alfredo Milani, Valentino Santucci, and Clement Leung. Optimizing Web Content Presentation: A online PSO approach. In Proceedings of IEEE/WIC/ACM International Joint Conferences on Web Intelligence and Intelligent Agent Technologies (WI-IAT 2009), vol. 3, pp. 26–29, IEEE, Milan.
- 2004 – Alfredo Milani and Valentino Santucci. Un editore visuale per notazioni scientifiche standard W3C/MathML. In Proceedings of Expo E-Learning 2004.

## **PARTECIPAZIONE A CONVEGNI E CONFERENZE**

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Jun 2017 – CEC 2017

2017 IEEE Congress on Evolutionary Computation), San Sebastian (Spain).

Chairman of the special session "Recent Advances in Evolutionary Computation for Permutation Problems".

With talk on "Algebraic Particle Swarm Optimization for Permutations Search Space")

Sep 2016 – PPSN 2016.

14th International Conference on Parallel Problem Solving from Nature, Edinburgh (Scotland, UK).

With talk on "An Extension of Algebraic Differential Evolution for the Linear Ordering Problem with Cumulative Costs".

Jul 2015 – GECCO 2015.

Genetic and Evolutionary Computation Conference, Madrid (Spain).

With poster on "An Algebraic Differential Evolution for the Linear Ordering Problem"

May 2015 – CSCWD 2015.

19th IEEE International Conference on Computer Supported Cooperative Work in Design, Calabria (Italy).

With talk on "Semantic Context Extraction from Collaborative Networks"

Sep 2014 – PPSN 2014.

13th International Conference on Parallel Problem Solving from Nature, Ljubljana (Slovenia).

With talk on "A Differential Evolution Algorithm for the Permutation Flowshop Scheduling Problem with Total Flow Time Criterion".

Jul 2014 – VSL 2014.

Vienna Summer of Logic, Vienna (Austria).

With talk on "A Discrete Differential Evolution Algorithm for the Total Flowtime Flowshop Scheduling Problem" in a companion workshop.

May 2013 – MIBISOC 2013.

International Conference on Medical Computing using Bio-inspired and Soft Computing, Bruxelles (Belgium).

With talk on "Particle Swarm Estimation of Distribution Algorithm for Lymphoma Classification through Automatic Biopsies Analysis".

Dec 2011 – WSC16.

16th Online World Conference on Soft Computing in Industrial Applications.

With presentation on "Adaptive Memetic Particle Swarm Optimization"

Sep 2011 – CP 2011.

17th International Conf. on Principles and Practice of Constraint Programming, Perugia (Italy).

Jul 2011 – IJCAI '11.

22th International Joint Conference on Artificial Intelligence, Barcelona (Spain).

With talk on "Community of Scientist Optimization: Foraging and Competing for Research Resources" in a companion workshop.

Dec 2010 – AI\*IA 2010 Symposium.

11th Symposium of the Italian Association for Artificial Intelligence, Brescia (Italy).

With poster on "Exploit Evolutionary Computation Theory".

Nov 2010 – WSC15.

15th Online World Conference on Soft Computing in Industrial Applications.

With presentation on "Particle Swarm Optimization in the EDAs framework".

Recipient of the Best Paper Award.

Sep 2010 – ISCIS 2010.

25th International Symposium on Computer and Information Sciences, London (UK).

With talk on "Optimal Design of Web Information Contents for E-Commerce Applications".

Jul 2010 – WCCI 2010.

2010 IEEE World Congress on Computational Intelligence, Barcelona (Spain).

With talk on "Asynchronous Differential Evolution".

Dec 2009 – AI\*IA 2009 Conference.

11th Conference of the Italian Association for Artificial Intelligence, Reggio Emilia (Italy).

With talk on "CoSO: Community of Scientists Optimization".

Sep 2009 – WI-IAT 2009.

2009 IEEE/WIC/ACM International Conf. on Web Intelligence and Intelligent Agent Technology, Milan (Italy).

With talk on "Optimizing Web Content Presentation: a Online PSO Approach".

Aug 2009 – GALN '09.

Days of Linear Numeric Algebra and Applications, Perugia (Italy).

Oct 2004 – Expo eLearning 2004. Ferrara (Italy).  
With talk on "A Visual Editor for Standard Scientific Notation W3C/MathML".

Perugia, 10-04-2018

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F.to Valentino Santucci