

# CURRICULUM VITAE ET STUDIORUM

PAOLO PENNA

## PERSONAL DATA:

Name Paolo Penna  
Birth Date January 13, 1972  
Nationality Italian  
WWW <http://www.dia.unisa.it/~penna/no-blood-for-oil.html>  
email [penna@dia.unisa.it](mailto:penna@dia.unisa.it)

## EDUCATION:

1991-1996 Degree in Computer Science at the University of Rome “La Sapienza”  
(advised by [Pilu Crescenzi](#))  
1996-2000 PhD in Computer Science at the University of Rome ”La Sapienza”  
(advised by [Giorgio Gambosi](#))

## WORKING EXPERIENCES AND VISITING POSITIONS:

Apr 1999 - Jan 2001 Visiting INRIA in Sophia Antipolis (hosted by [Afonso Ferreira](#))  
Mar 2001 - Apr 2001 Visiting ETH Zurich (hosted by [Peter Widmayer](#))  
May 2001 - Sep 2002 PostDoc at ETH Zurich (hosted by [Peter Widmayer](#))  
Feb 2002 - Mar 2002 Visiting Carleton University (hosted by [Evangelos Kranakis](#))  
Oct 2002 - Aug 2011 PostDoc at Università di Salerno (hosted by [Vincenzo Auletta](#)  
and [Giuseppe Persiano](#))  
Sep 2011 - Dec 2011 PostDoc at ETH Zurich (hosted by [Peter Widmayer](#))  
Jan 2012 - Present PostDoc at Università di Salerno (hosted by [Vincenzo Auletta](#)  
and [Giuseppe Persiano](#))

## LANGUAGES:

Italian (mother tongue), English (written/spoken, good knowledge), French (spoken good, written basic), German (basic knowledge).

## PROGRAM COMMITTEES:

2012 MFCS-12,  
2011 SAGT-11,  
2008 SOFSEM-09, WAOA-08, ComP2P-08,  
2007 Student Research Competition at MOBICOM-07 (co-chair),  
FUN-07, P2P-07, AD-HOC-NOW-07,  
2006 P2P-06, AD-HOC-NOW-06,  
2005 P2P-05, MOBIHOC-05,  
2003 AD-HOC-NOW-03.

## RESEARCH INTERESTS:

- Algorithms and Complexity,
- Algorithmic Game Theory, Micro Economics and the Internet,
- Wireless Networks,
- Online Algorithms,
- Parallel Computing,
- Knowledge Representation,
- Graph Drawing,
- Computational Biology.

## PUBLICATIONS

### CONFERENCES WITH REVIEW PROCESS

1. V. Auletta, D. Ferraioli, F. Pasquale, P. Penna, and G. Persiano *Convergence to Equilibrium of Logit Dynamics for Strategic Games*. Proc. of **SPAA-11**.
2. P. Penna, F. Schoppmann, R. Silvestri, and P. Widmayer. *Pseudonyms in cost-sharing games*. Proc. of **WINE-09**.
3. V. Auletta, P. Penna, and G. Persiano. *Private capacities in mechanism design*. Proc. of **MFCS-09**.
4. P. Penna and C. Ventre. *Optimal collusion-resistant mechanisms with verification*. Proc. of **EC-09**.

5. V. Auletta, L. Moscardelli, P. Penna, and G. Persiano. *Interference Games in Wireless Networks*. Proc. of **WINE-08**.
6. P. Penna and C. Ventre. *Collusion-Resistant Mechanisms with Verification Yielding Optimal Solutions*. Proc. of **ESA-08**.
7. V. Auletta, P. Penna, G. Persiano, and C. Ventre. *Alternatives to Truthfulness are Hard to Recognize*. Proc. of **SAGT-08**.
8. A. Monti, P. Penna, and R. Silvestri. *An Equivalent Version of the Caccetta-Häggkvist Conjecture in an Online Load Balancing Problem*. Proc. of **WG-07**.
9. P. Penna, G. Proietti, and P. Widmayer, *Strongly Polynomial-Time Truthful Mechanisms in One Shot*. Proc. of **WINE-06**.
10. V. Auletta, R. De Prisco, P. Penna, P. Persiano, and C. Ventre. *New Constructions of Mechanisms with Verification*. Proc. of **ICALP-06**.
11. P. Penna and C. Ventre. *The Algorithmic Structure of Group Strategyproof Cost-Sharing Mechanisms* Proc. of **STACS-06**.
12. P. Crescenzi, M. Di Ianni, A. Lazzoni, P. Penna G. Rossi, and P. Vocca. *Equilibria for Broadcast Range Assignment Games in Ad-Hoc Networks*. Proc. of **AD-HOC-NOW-05**.
13. V. Auletta, R. De Prisco, P. Penna, and G. Persiano. *On Designing Truthful Mechanisms for Online Scheduling*. Proc. of **SIROCCO-05**.
14. P. Penna and C. Ventre. *Free-riders in Steiner tree cost-sharing games*. Proc. of **SIROCCO-05**.
15. P. Penna and C. Ventre. *Energy-efficient Broadcasting in Ad-Hoc Networks: Combining MSTs with Shortest-path Trees*. Proc. of **PE-WASUN-04**.
16. P. Penna and C. Ventre. *More Powerful and Simpler Cost-Sharing Methods*. Proc. of **WAOA-04**.
17. V. Auletta, R. De Prisco, P. Penna, and P. Persiano. *The Power of Verification for One-Parameter Agents*. Proc. of **ICALP-04**.
18. G. Melideo, P. Penna, G. Proietti, R. Wattenhofer, and P. Widmayer. *Truthful mechanisms for generalized utilitarian problems*. Proc. of **IFIP-TCS-04**.
19. V. Auletta, R. De Prisco, P. Penna, and P. Persiano. *How to Route and Tax Selfish Unsplittable Traffic*. Proc. of **SPAA-04**.
20. P. Penna and C. Ventre. *Sharing the cost of multicast transmissions in wireless networks*. Proc. of **SIROCCO-04**.

21. V. Auletta, R. De Prisco, P. Penna, and P. Persiano. *Deterministic Truthful Approximation Mechanisms for Scheduling Related Machines*. Proc. of **STACS-04**.
22. P. Crescenzi, G. Gambosi, G. Nicosia, P. Penna, and W. Unger. *On-line load balancing made simple: Greedy strikes back*. Proc. of **ICALP-03**.
23. C. Ambuehl, A. Clementi, P. Penna, G. Rossi, and R. Silvestri. *Energy Consumption in Radio Networks: Selfish Agents and Rewarding Mechanisms*. Proc. of **SIROCCO-03**.
24. M Cielibak, S. Eidenbenz, A. Pagourtzis, and P. Penna. *Noisy Data Make the Partial Digest NP-hard*. Proc. of **WABI-03**.
25. G. Bongiovanni and P. Penna. *XOR-based schemes for fast parallel IP lookups*. Proc. of **CIAC-03**.
26. E. Kranakis, P. Penna, K. Schlude, D.S. Taylor, and P. Widmayer. *Improving Customer Proximity to Railway Stations*. Proc. of **CIAC-03**.
27. A.E.F. Clementi, G. Huiban, P. Penna, G. Rossi, and Y.C. Verhoeven. *On the Approximation Ratio of the MST-based Heuristic for the Energy-Efficient Broadcast Problem in Static Ad-Hoc Radio Networks*. Proc. of **WMAN-03**.
28. A.E.F. Clementi, G. Huiban, P. Penna, G. Rossi, and Y.C. Verhoeven. *Some Recent Theoretical Advances and Open Questions on Energy Consumption in Ad-Hoc Wireless Networks*. Proc. of **ARACNE-02**.
29. L. Anderegg, P. Penna, and P. Widmayer. *Online train disposition: to wait or not to wait?* Proc. of **ATMOS-02**.
30. A. Pagourtzis, P. Penna, K. Schlude, K. Steinhofel, D.S. Taylor, and P. Widmayer. *Server Placements for Win-Win Strategies*. Proc. of **IFIP-TCS-02**.
31. T. Erlebach, M. Gantenbein, D. Huerlimann, G. Neyer, A. Pagourtzis, P. Penna, K. Schlude, K. Steinhofel, D.S. Taylor, and P. Widmayer. *On the complexity of train assignment problems*. Proc. of **ISAAC-01**.
32. A. Clementi, P. Crescenzi, A. Monti, P. Penna, and R. Silvestri. *On Computing Ad-Hoc Selective Families*. Proc. of **RANDOM-01**.
33. A. Clementi, P. Crescenzi, P. Penna, G. Rossi, and P. Vocca. *On the Complexity of Computing Minimum Energy Consumption Broadcast Subgraphs*. Proc. of the **STACS-01**.
34. A. Clementi, A. Ferreira, P. Penna, S. Perennes, and R. Silvestri. *The Minimum Range Assignment Problem on Linear Radio Networks*. Proc. of **ESA-00**.
35. P. Crescenzi, G. Gambosi, and P. Penna. *On-Line Algorithms for the Channel Assignment Problem in Cellular Networks*. Proc. of **DIALM-00**.

36. G. Bongiovanni, A. Clementi e P. Penna. *A Note on Parallel Read Operations on Large Public Databases*. Proc. of **ARACNE-00**.
37. P. Penna. *Succinct Representations of Model Based Belief Revision*. Proc. of **STACS-00**.
38. A. Clementi, P. Penna, and R. Silvestri. *The Power Range Assignment Problem in Radio Networks on the Plane*. Proc. of **STACS-00**.
39. A. Clementi, P. Penna, and R. Silvestri. *Hardness Results for The Power Range Assignment Problem in Packet Radio Networks*. Proc. of **APPROX-99**.
40. A. Andreev, A. Clementi, P. Penna, and J. Rolim. *Memory Organization Schemes for Large Shared Data: A Randomized Solution for Distributed Memory Machines*. Proc. of **STACS-99**.
41. P. Penna and P. Vocca. *Proximity Drawings: Three Dimensions are Better than Two*. Proc. of **GD-98**.
42. P. Penna and P. Vocca. *Proximity Drawings of Binary Trees in Polynomial Area*. Proc. of **CCCG-98**.
43. P. Crescenzi and P. Penna. *Minimum-Area h-v Drawings of Complete Binary Trees*. Proc. of **GD-97**.
44. P. Crescenzi and P. Penna. *Upward Drawings of Search Trees*. Proc. of **WG-96**.

#### INTERNATIONAL JOURNALS

45. V. Auletta, P. Penna, G. Persiano, and C. Ventre. *Alternatives to truthfulness are hard to recognize*. **Autonomous Agents and Multi-Agent Systems**, 22(1): 200-216, 2011.
46. V. Auletta, R. De Prisco, P. Penna, and P. Persiano. *The Power of Verification for One-parameter Agents*. **Journal of Computer and System Sciences**, 75:190-211, 2009.
47. V. Auletta, R. De Prisco, P. Penna, and P. Persiano. *Routing Selfish Unsplittable Traffic*. **ACM Transactions on Algorithms**, 3(4), 2007.
48. P. Crescenzi, G. Gambosi, G. Nicosia, P. Penna, and W. Unger. *On-line load balancing made simple: Greedy strikes back*. **Journal of Discrete Algorithms**, 5(1):162-175, 2007.
49. G. Bongiovanni and P. Penna. *XOR-based schemes for fast parallel IP lookups*. **Theory of Computing Systems**, 38: 481-501, 2005.

50. C. Ambuehl, A. Clementi, P. Penna, G. Rossi, and R. Silvestri. *On the Approximability of the Range Assignment Problem in Radio Networks in Presence of Selfish Agents*. **Theoretical Computer Science**, 343(1-2): 27-41, 2005.
51. M. Cieliebak, S. Eidenbenz, and P. Penna. *Partial Digest is hard to solve for erroneous input data*. **Theoretical Computer Science**, 349(3): 361-381, 2005.
52. P. Crescenzi, G. Gambosi, and P. Penna. *On-Line Algorithms for the Channel Assignment Problem in Cellular Networks*. **Discrete Applied Mathematics**, 137(3):237-266, 2004.
53. A. Clementi, P. Penna, and R. Silvestri. *On the Power Assignment Problem in Radio Networks*. **ACM Mobile Networks and Applications**, 9(2):125-140, 2004.
54. P. Penna and P. Vocca. *Proximity Drawings in Polynomial Area and Volume*. **Computational Geometry: Theory and Applications**, 20:91-116, 2004.
55. A. Clementi, A. Ferreira, P. Penna, S. Perennes, and R. Silvestri. *The Minimum Range Assignment Problem on Linear Radio Networks*. **Algorithmica**, 35: 95-110, 2003.
56. P. Penna. *On the Approximability of Two Tree Drawing Conventions*. **Information Processing Letters**, Vol. 82/5, pag. 237-242, 2002.
57. P. Crescenzi and P. Penna. *Strictly-upward drawings of ordered search trees*. **Theoretical Computer Science**, Vol. 203, No. 1, pag. 51-67, 1998.
58. P. Crescenzi, P. Penna, and A. Piperno. *Linear Area Upward Drawings of AVL Trees*. **Computational Geometry: Theory and Applications**, Vol. 9, No. 1-2, pag. 25-42, 1998.

#### CHAPTERS IN BOOKS

59. A. Ferreira, J. Galtier, and P. Penna. *Topological design, routing and hand-over in satellite networks*. Chapter in Handbook of Wireless Networks and Mobile Computing, John Wiley & Sons, pag. 473-491, 2002.

#### OTHERS

60. A. Andreev, A. Clementi, P. Penna, and J. Rolim. *Parallel Read Operations Without Memory Contention*. Technical report of Electronic Colloquium in Computational Complexity, ECCC TR-0053, 2000. (Also submitted to international journal)

61. A. Clementi, P. Crescenzi, P. Penna, G. Rossi, and P. Vocca. *A Worst-case Analysis of a MST-based Heuristic to Construct Energy-efficient Broadcast Subtrees in Wireless Networks*. Technical Report 010 of the Univ. of Rome “Tor Vergata”, 2001. Available at <http://www.dia.unisa.it/~penna/papers/stacs01full.pdf> (Also submitted to international journal)
62. J. Galtier and P. Penna. *Complexity Links Between Matrix Multiplication, Klees Measure and Call Access Control for Satellite Constellations*. INRIA TR-4166, France, April 2001. Available at <ftp://ftp-sop.inria.fr/pub/rapports/.INDEX.html>
63. P. Penna and C. Ventre. *Some New Ideas for Critical Resource Sharing Involving Selfish Agents*. Manuscript, 2005.

Last Update: March 27, 2012