

Andrea Pacifici

Dipartimento di Ingegneria Civile e Ingegneria Informatica (DICII)
Università di Roma “Tor Vergata”
via del Politecnico, 1
Roma, 00133 Italy

Phone: +39 067259 7795

Fax: +39 067259 7305

email: andrea.pacifici@uniroma2.it

URL: <http://disp.uniroma2.it/users/pacifici/>

Born: in Roma, Italy

Nationality: Italian

Current position

Associate professor at Dipartimento di Ingegneria Civile e Ingegneria Informatica (DICII),
Università di Roma “Tor Vergata”.

Areas of competence & specialization

Operations research, combinatorial optimization. Computational complexity characterization and design of algorithms with applications to scheduling, logistics, production, telecom and transportation systems. This has included:

- multi-agent optimization;
- nonlinear integer programming; and
- discrete event simulation modeling.

Appointments & grants

2012–	Associate professor at DICII, Università di Roma “Tor Vergata”.
2010–2012	Associate professor at Dipartimento di Informatica, Sistemi e Produzione, Università di Roma “Tor Vergata”.
2003–2010	Assistant professor at Dipartimento di Ingegneria dell’Impresa, Università di Roma “Tor Vergata”.
1999–2003	Assistant professor at Dipartimento di Informatica, Sistemi e Produzione, Università di Roma Tor Vergata.
2004	Visiting Faculty at ATLAS Research Center, The University of Arizona, Tucson, Arizona (May–July).
1997–2000	Research fellow at Dipartimento di Informatica e Automazione, Università degli Studi Roma Tre.
1996	One-year research fellow CNR (National Research Council), Università di Roma Tor Vergata.

Education

- 1997 Visiting Scholar at the System and Industrial Engineering Dept., The University of Arizona, Tucson, Arizona, supervisor Prof. Pitu B. Mirchandani (April-July).
- 1993-1996 Ph.D. program in Operations Research at Università di Roma La Sapienza. (Ph.D. Doctor on July 1997.)
- 1993 “Laurea” degree in Electronic Engineering with full marks at Università di Roma La Sapienza.

Teaching

TEACHING APPOINTMENTS

- 2010-2013 *Operations research*: basic courses for graduate and graduate students in engineering at University “Tor Vergata”.
- 1999-2010 *Operations research*: basic courses for undergraduate students in engineering and computer science at University “Tor Vergata”.
- 2000-2009 *Applied discrete optimization*: advanced course for graduate students in engineering at University “Tor Vergata”.
- 1998-2008 *Decision Analysis, Optimization, Spreadsheet Optimization* in master courses at University “Tor Vergata”, and LUISS Guido Carli, Roma, Italy. *Combinatorial Optimization* and *Operations Research* in “laurea” courses at the University of Siena and University of L’Aquila.

PH.D. STUDENTS

- 2006-2010 Dr. Enrico Grande. The master (*laurea*) thesis of Enrico Grande was awarded in 2006 as the best Italian Master Thesis in OR by AIRO (Italian Association of OR).

OB

RESEARCH PROJECTS

- 1997-2012 Italian Ministry for Education (MIUR): Several “CoFin” projects concerning development of models and algorithms for applications in telecommunication and production logistics.
- 2004-2010 Network of Excellence IST-NoE EuroNGI (2004-06) e EuroFGI : “Design and Engineering of the Next Generation Internet Towards Convergent Multi-Service Networks”.
- 2001-2002 Italian Ministry for Environment : “Mobility optimization in a urban environment”.
- 1997-2000 MURST-IMI Production Innovation: “Support Infrastructure for multi-agent production systems”.

OTHER ACTIVITIES

- 2011-2013 Scientific Committee of the *Cologne Twente Workshop on Combinatorial Optimization*.
- 2011 Program Committee of *LAGOS*

- 2006- Teaching Board of the Ph.D. Program in Operations Research at University “Sapienza”, Roma, Italy.
- 2000- Co-organization of the lectures “Algoritmi a Colazione” (Seminars for Lunch) people.dii.uniroma2.it/OR%20Group/AlgoCol.html at University “Tor Vergata”.
- 2000- Referee activity for several journals: *Annals of Operation Research*, *Eur. Jour. of Operational Research*, *Discrete Applied Mathematics*, *IIE Transactions*, *International Journal of Flexible Manufacturing Systems*, *International Journal of Production Economics*, *Journal of Simulation Modeling Practice and Theory*, *Management Science*, *Ricerca Operativa/4OR*, *Theoretical Computer Science A*.

Publications & talks

UNDER REVISION

- 2010 R1 Marini, C., G. Nicosia, A. Pacifici, U. Pferschy (2010). Strategies in Competing Subset Selection, submitted to *Annals of Operations Research*.

JOURNAL ARTICLES

- 2012 J23 Marini, C., G. Nicosia, A. Pacifici, U. Pferschy. Strategies in competing subset selection. *Annals of Operations Research*, (online, DOI: 10.1007/s10479-011-1057-2.)
- 2012 J22 Agnetis, A., H. Kellerer, G. Nicosia, A. Pacifici. Parallel dedicated machines scheduling with chain precedence constraints. *European Journal of Operational Research* 221: 296–305.
- 2012 J21 Agnetis, A., E. Grande, A. Pacifici. Demand allocation with latency cost functions, *Mathematical Programming A*: 132:277–294.
- 2012 J20 Nicosia, G., A. Pacifici. Optimal allocation plan for distribution centers of a frozen food company, *Int.l Jour. of Applied Management Science* 4:224–238.
- 2011 J19 Nicosia, G., A. Pacifici, U. Pferschy. Competitive subset selection with two agents, *Discrete Applied Mathematics*: 159:1865–1877.
- 2011 J18 Frangioni, A., C. Gentile, E. Grande, A. Pacifici. Projected Perspective Reformulations with applications in design problems, *Operations Research* 59:1225–1232.
- 2011 J17 Detti, P., G. Nicosia, A. Pacifici, M. Servilio. Optimal power control in OFDMA cellular networks, *Networks* 57(3):200–211.
- 2011 J16 Agnetis, A., M. Flamini, G. Nicosia, A. Pacifici. A job-shop problem with one additional resource type, *Journal of Scheduling* 14(3), 225–237.
- 2010 J15 Naldi, M., A. Pacifici (2010). Optimal sequence of free traffic offers in mixed fee-consumption pricing packages, *Decision Science* 50(1):281–291.
- 2010 J14 Agnetis A., M. Flamini, G. Nicosia, A. Pacifici (2010). Scheduling three chains on two parallel processors is NP-hard, *European Journal of Operational Research* 202(3):669–674.
- 2009 J13 Felici, G., M. Mecoli, P.B. Mirchandani, A. Pacifici (2009). Equilibrium in a Two-Agent Assignment Problem, *Int.l Jour. of Operational Research* 6(1):4–26.
- 2009 J12 Agnetis, A., E. Grande, P.B. Mirchandani, A. Pacifici (2009). Covering a line segment with variable radius discs, *Computers & Operations Research* 36 (5):1423–1436.
- 2007 J11 Bielli, M., G. Felici, M. Mecoli, A. Pacifici (2007). Equilibrium in Competing Supply-Demand Flow Problems, *Systems Science* 33(1):7–17, Wroclaw University of Technology,

Poland.

- 2007 J10 Agnetis, A., D. Pacciarelli, A. Pacifici (2007). Multi-agent single machine scheduling, *Annals of Oper. Res.* 150:3–15.
- 2006 J9 Alfieri, A., G. Nicosia, A. Pacifici (2006). Exact algorithms for a discrete metric labeling problem, *Discrete Optimization* 3(3):181–194.
- 2004 J8 Agnetis, A., P.B. Mirchandani, D. Pacciarelli, A. Pacifici (2004). Scheduling Problems with Two Competing Agents, *Operations Research* 52(2):229–242.
- 2002 J7 Agnetis, A., P.B. Mirchandani, A. Pacifici (2002). Partitioning of Biweighted Trees, *Naval Research Logistics* 49:143–158.
- 2002 J6 Nicosia, G., D. Pacciarelli, A. Pacifici (2002). Optimally balancing assembly lines with different workstations, *Discrete Applied Mathematics* 118:99–113.
- 2001 J5 Agnetis, A., D. Pacciarelli, A. Pacifici (2001). Job Shop Scheduling with Two Jobs and Nonregular Objective Functions, *INFOR* 39(3):227–244.
- 2000 J4 Agnetis, A., D. Pacciarelli, A. Pacifici (2000). Nondominated Schedules for a Job-Shop with Two Competing Users, *Computational and Mathematical Organization Theory* 6(2):191–217.
- 1998 J3 Lucertini, M., D. Pacciarelli, A. Pacifici (1998). Modeling an Assembly Line for Configuration and Flow Management, *Computer Integrated Manufacturing Systems* 11(1):15–24.
- 1997 J2 Agnetis, A., A. Pacifici, F. Rossi F., M. Lucertini, S. Nicoletti, F. Nicolò, G. Oriolo, D. Pacciarelli, E. Pesaro (1997). Scheduling flexible flow lines in an automobile assembly plant, *European Journal of Operational Research* 97:348–362.
- 1996 J1 Lucertini, M., D. Pacciarelli, A. Pacifici A. (1996). Optimal Flow Management in Flexible Assembly System: The Minimal Part Transfer Problem, *Systems Science* 22(2):1–15, Wroclaw University of Technology, Poland.

REFEREED BOOK CHAPTERS AND ONLINE JOURNALS

- 2010 B9 Nicosia, G., A. Pacifici, U. Pferschy (2009). Subset Weight Maximization with Two Competing Agents, *Lecture Notes in Artificial Intelligence* 5783:74–85, Springer-Verlag.
- 2009 B8 Abrardo, A., P. Detti, G. Nicosia, A. Pacifici, M. Servilio (2009). Optimal channel allocation in OFDMA multi-cell systems, *Lecture Notes in Computer Science* 5425:103–111, Springer-Verlag.
- 2008 B7 Flamini M., V. Gammieri, G. Nicosia, A. Pacifici, S. Veglioni (2008). “Coordinamento di una supply network nel settore del fashion”, *Scienza delle decisioni in Italia: applicazioni della ricerca operativa a problemi aziendali*. G. Felici, A. Sciomachen eds., 197–210, ECIG, Genova, ISBN/ISSN: 9788875441500 (in Italian).
- 2007 B6 Agnetis A., D. Pacciarelli and A. Pacifici (2007). “Combinatorial Models for Multi-agent Scheduling Problems” in *Multiprocessor Scheduling: Theory and Applications*. E. Levner ed., I-Tech Education and Publishing, Vienna, Austria. ISBN 978-3-902613-02-8.
- 2007 B5 Confessore, G., P. De Luca, G. Liotta, A. Pacifici (2007). “Group Technology and material flows: layout design via optimisation and simulation” in *Leobener Logistik Cases III: Management of complex material flows supported by simulation. State of the art and innovative concepts*. C. Engelhardt-Nowitzki, O. Nowitzki and B. Krenn eds., 97–111, Deutscher Universitats Verlag Gabler. ISBN 978-3-8350-0963-9.
- 2004 B4 Nicosia, G., A. Pacifici (2004). Exact algorithms for a discrete metric labeling problem.

- In *Electronic Notes in Discrete Mathematics*, L. Liberti, F. Maffioli eds., 17:196–200.
- 1999 B3 Lucertini M., D. Pacciarelli, A. Pacifici (1999). “Integrating Layout Design and Material Flow Management in Assembly System” in *MODELING MANUFACTURING SYSTEMS: From Aggregate Planning to Real-Time Control*. P. Brandimarte, A. Villa eds., 3:45–64, Springer-Verlag, Berlin/Heidelberg. ISBN: 3-540-65500-X.
- 1998 B2 Nicoletti S., G. Nicosia, A. Pacifici (1998). “Group Technology with Flow Shop Cells” in *6-th IEEE Mediterranean Conference, Theory and Practice of Control and Systems*. A. Tornambè, G. Conte, A. M. Perdon eds., 800–805, World Scientific. ISBN 981-02-3668-9.
- 1996 B1 Agnetis A., M. Lucertini, S. Nicoletti, F. Nicolò, G. Oriolo, D. Pacciarelli, A. Pacifici, E. Pesaro, F. Rossi (1996). “The Decision Process for the Material Flow Management in a FIAT Car Assembly Plant” in *OPTIMIZATION IN INDUSTRY 3: Mathematical Programming and Modeling Techniques in Practice*. A. Sciomachen ed., 5:67–82, John Wiley & Sons Inc. ISBN: 0-471-95677-5.

PH.D. THESIS

- 1997 T1 Pacifici A. (1997). *Modelli ed algoritmi per le decisioni nella produzione flessibile*, Università degli Studi di Roma “La Sapienza”, Italy, Feb. 1997.

CONFERENCE PROCEEDINGS (SELECTION)

- 2010 P14 Frangioni, A., C. Gentile, E. Grande A. Pacifici (2010). Projected Perspective Reformulations for MIPQ Problems, EWMINLP 2010 conference, Marseille, France, April 2010.
- 2009 P13 Grande, E., P.B. Mirchandani, A. Pacifici (2009). Minimum Cost Multicommodity Flow over Time, 8th Cologne-Twente Workshop on Graphs and Combinatorial Optimization, CTW09, Paris, France, June 2–4, 2009.
- 2009 P12 Nicosia, G., A. Pacifici, U. Pferschy (2009). On multi-agent knapsack problems, 8th Cologne-Twente Workshop on Graphs and Combinatorial Optimization, CTW09, Paris, France, June 2–4, 2009.
- 2009 P11 Frangioni, A., C. Gentile, E. Grande A. Pacifici (2009). Projected Perspective Reformulations for NonLinear Network Design Problems, Proceedings INOC2009 conference, G. Bigi, A. Frangioni and M.G. Scutellà eds., paper MD3-1.
- 2009 P10 Agnetis, A., Enrico Grande, Andrea Pacifici (2009), Demand allocation with latency cost functions, AIRO Winter Conference, Cortina d’Ampezzo, Italy, January 2009.
- 2008 P9 P. Detti, G. Nicosia, A. Pacifici, M. Servilio (2008). Cellular Radio Resource Allocation Problem, 7th Cologne-Twente Workshop on Graphs and Combinatorial Optimization, Gargnano, Italy May 13–15, 2008
- 2008 P8 Agnetis A., M. Flamini, G. Nicosia, A. Pacifici (2008). A branch and bound algorithm for a generalized Job Shop Scheduling problem, Proceedings of the International Symposium on Combinatorial Optimization, March 16–19 2008, University of Warwick, Coventry, UK.
- 2005 P7 Confessore, G., P. De Luca, G.Liotta, A.Pacifici (2005). An integrated approach for the Design of Plant Layout and Material Flows. Proceedings of the 18th International Conference on Production Research (ICPR 18). July 31–August 4, 2005, Salerno, Italy.
- 2004 P6 Pacifici A., P. Mirchandani, M. Mecoli, and A. Agnetis (2004). Locational decisions for

- barge-tracking radars. Technical report RS-2004-2, July 2004, The A.T.L.A.S. Research Center, UofA, Tucson AZ.
- 2003 P5 Confessore G., A. Furlan, G. Liotta, A. Pacifici (2003). A Simulation Approach for Concurrent Designing Plant Layout and Material Flow Management, EURO-INFORMS Joint Int.l Meeting, Istanbul, Turkey, July 6-10, 2003.
- 2001 P4 Caramia M., G.F. Italiano, G. Oriolo, A. Pacifici (2001). Routing a fleet of vehicles for dynamic combined pick-up and deliveries services, Operation Research Proceedings, September 2001, GOR Gesellschaft für Operations Research e.V.
- 2001 P3 Nicosia G., G. Oriolo, A. Pacifici, A. (2001). Optimal allocation plan for distribution centers of a frozen food company, Proceedings Triennial Symposium on Transportation Analysis, Tristan IV, Sao Miguel, Azores Islands, Portugal, June 13-19, 2001
- 1997 P2 Agnetis A., P.B. Mirchandani, D. Pacciarelli, A. Pacifici, M. Salvaderi (1997). Nondominated Schedules for a Job Shop with Two Competing Users, International Symposium on Mathematical Programming, Lausanne, Switzerland, August 24-29, 1997.
- 1997 P1 Nicosia G., D. Pacciarelli, A. Pacifici (1997). On a Generalized Assembly Line Balancing Problem, Proceedings of the International Conference of Operational and Quantitative Management, Jaipur, India, January 5-8, 1997.