

CURRICULUM VITAE

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Date of birth: 20 February 1973
Place of birth: Irkutsk, Russia
Citizenship: Russian Federation
Languages: Russian (native), fluent English, spoken Italian
Marital status: Married, two daughters

RESEARCH INTERESTS

Operations research, combinatorial optimization, location, clustering and data mining, scheduling, vehicle routing, parallel and distributing computing

EDUCATION

August 1990 – June 1995 Irkutsk State University, Department of Mathematics,
Speciality "Applied Mathematics"

Qualifications: Master of Science in Mathematics

October 1995 – November 1998

Post graduate course on a speciality “Mathematical cybernetics” at the Irkutsk State University, Department of Mathematics under the supervision of Professor Strekalovsky A.S.. The title of my thesis is “Global Search in Convex Maximization Problems”. The thesis was defended in December 1998.

Qualifications Ph.D. diploma was obtained in July 1999.

EMPLOYMENT

September 1996 – June 1998

Irkutsk State University, Department of Mathematics, Chair of Optimization Method

Position: Teacher of Mathematics

Responsibilities: Linear Programming for third year students, Operational Researches for fourth year students.

December 1998 to present

The Institute of System Dynamics and Control Theory of Siberian Branch of the Russian Academy of Sciences, Laboratory of Methods of Global Optimization

Position: assistant professor

Responsibilities: I research the theory and application of the mixed integer programming (MIP) problem. My scientific interest includes all the elements of MIP: modeling, heuristics, cutting planes, branch and cut and price algorithm etc. In particular I focus on solving large scale combinatorial optimization problems: p-median and related location problems, educational timetabling problem etc. I develop the grid oriented parallel framework of the branch and cut algorithm.

January 1999 – August 2001

Irkutsk State University, International Department.

Position: Teacher of Computer Science

Responsibilities: Computer Science for the first year students.

November 2001 – August 2002

Centro di Ricerca in Matematica Pura e Applicata, Universita di Salerno, Italy.

Position: Invited researcher

Responsibilities: Research activity focused on difficult Combinatorial Optimization problems.

September 2002 – August 2004

Dipartimento di Ingegneria dell'Informazione e Matematica Applicata, Universita di Salerno, Italy.

Position: Postdoctoral research fellow

Responsibilities: I worked on the research project "Models and Algorithm of optimization". My research work was focused on difficult combinatorial optimization problems. Particularly I developed the models and algorithm for the following application: university course timetabling for the Engineering faculty of Benevento university, school timetabling problem for the Italian high-schools, optimal diversity of electric wiring in car industry for ELASIS S.C.p.A. (FIAT S.p.A. group).

AWARDS&GRANTS

1. "Open society" institute (Soros' fund) student fellowship, 1993-1994.
2. "Open society" institute (Soros' fund) student fellowship, 1994 – 1995.
3. Grant 95-01-01288-a of Russian Foundation for Basic Research, 1995 – 1998.
4. Grant 98-01-00043-a of Russian Foundation for Basic Research, 1998 – 2001.
5. Grant 01-01-00048-a of Russian Foundation for Basic Research, 2001 – 2003.
6. Grant 05-01-00110-a of Russian Foundation for Basic Research, 2005 – 2007.
7. Grant 11-01-00270-a of Russian Foundation for Basic Research, 2011 – 2013.
8. Grant 12-07-33045-mol_a_ved of Russian Foundation for Basic Research, 2012 – 2013.
9. Grant 12-07-13116-ofi_m_RZD of Russian Foundation for Basic Research, 2012 – 2013.
10. Postdoctoral fellowship, Dipartimento di Ingegneria dell' Informazione e Matematica Applicata, Universita di Salerno, 2002 – 2004.
11. NATO Reintegration Grant CBP.NR.RIG.981258, 2005-2007.
12. Grant of Siberian Branch of Russian Academy of Sciences for youth scientists, 2006-2007.
13. Grant № 153 of Human Capital Foundation, 2007-2008.
14. Grant of Russian Science Support Foundation, 2008.

OTHER SKILLS & OCCUPATIONS

Programming skills in C/C++, Pascal, Delphi, VBA. MIP solvers: FICO Express, IBM ILOG CPLEX. Parallel and distributed computing: PVM, MPI.

SELECTED PUBLICATIONS:

1. P. Avella, I. Vasil'ev, A Computational Study of a Cutting Plane Algorithm for University Course Timetabling, *Journal of Scheduling*, 2005 (8), pp. 497-514.
2. P. Avella, M. Boccia, A. Sforza, I. Vasil'ev, A Branch-and-Cut Algorithm for the Median-Path Problem, *Computational Optimization and Applications*, 2005(32), pp. 215-230.
3. P. Avella, A. Sassano, I. Vasil'ev, Computational study of large-scale p -Median problems, *Mathematical Programming*, 2007 (109), pp. 89-114.
4. E.P. Mancini, S. Marcarelli, I. Vasilyev, U. Villano A grid-aware MIP solver: Implementation and case studies, *Future Generation Computer Systems*, 2007 (24), pp. 133-141.
5. P. Avella, B. D'Auria, S. Salerno, I. Vasil'ev, A computational study of local search algorithms for Italian high-school timetabling, *Journal of Heuristic*, 2007 (13), pp. 543 - 556.
6. M. Boccia, A. Sforza, C. Sterle, I. Vasilyev, A Cut and Branch Approach for the Capacitated p-Median Problem Based on Fenchel Cutting Planes, *Journal of Mathematical Modelling and Algorithms*, 2008 (7), pp. 43-58.
7. P. Avella, M. Boccia, C., A. Sforza, I. Vasil'ev, An effective heuristic for large-scale capacitated facility location problems, *Journal of Heuristics*, V. 15 (6), 2009, pp. 597-615.

8. P. Avella, M. Boccia, I. Vasilyev, Computational experience with general cutting planes for the Set Covering problem, *Operations Research Letters*, V. 37, 2009, pp. 16-20.
9. P. Avella, M. Boccia, I. Vasilyev, A computational study of exact knapsack separation for the generalized assignment problem, *Computational Optimization and Applications*, V. 45(3), 2010, pp. 543 – 555.
10. P. Avella, M. Boccia, I. Vasilyev, Computational Testing of a Separation Procedure for the Knapsack Set with a Single Continuous Variable, *INFORMS Journal on Computing*, 2012, 24(1), pp.165–171.
11. P. Avella, M. Boccia, S. Salerno, I. Vasilyev, An aggregation heuristic for large scale p-median problem, *Computers and Operations Research*, 2012, 39(7), pp.1625-1632.
12. E. Carrizosa, A. Ushakov, I. Vasilyev, A computational study of a nonlinear minsum facility location problem, *Computers and Operations Research*, 2012, 39(11), 2625–2633.
13. 13. Igor Vasilyev, Xenia Klimentova, Maurizio Boccia, Polyhedral study of simple plant location problem with order, *Operations Research Letters*, V. 40(2), 2013, pp. 153-158.
14. 14. Pasquale Avella, Maurizio Boccia, Igor Vasilyev, Lifted and Local Reachability Cuts for the Vehicle Routing Problem with Time Windows, , *Computers and Operations Research*, V.40(8), 2013, pp. 2004–2010.

REFERENCES

1. Professor Alexander Strekalovsky, Head of System Analysis and Optimization Department. Institute of System Dynamics & Control Theory, Siberian Branch of Russian Academy of Sciences.
134, Lermontov street, Irkutsk, Russia, 664033,
Phone: +7 3952460241, Fax: +7-3952511616, E-mail: strekal@icc.ru
2. Professor Antonio Sforza, Professore Associato di Ricerca Operativa, Dipartimento di Informatica e Sistemistica, Università degli Studi di Napoli “Federico II”.
Via Claudio 21, 80125 Napoli, Italy.
Phone: +39-0817683377, Fax: +39-0817683636, E-mail: sforza@unina.it
3. Professor Pasquale Avella, Professore di Ricerca Operativa, Dipartimento di Ingegneria, Università del Sannio.
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