

Curriculum Vitae – August 2008 – Gyula Pap

Born April 28, 1979 in Debrecen, Hungary.

Education

- PhD, 2007, Applied Mathematics, Eötvös University, Department of Operations Research, supervisor: András Frank
- MSc, 2002, Mathematics, Eötvös University, supervisor: László Szegő

Research and teaching

- post doctoral associate 2008–, Cornell University, Department of Computer Science
- research assistant 2005-2008, Eötvös University, Institute of Mathematics
- member 2002-, the Egerváry Research Group of the Hungarian Academy of Sciences (EGRES)
- 1999- teachers' assistant for discrete mathematics, operations research (4 semesters), non-linear optimization, and analysis

Awards and Prizes

- 2008 Prize for Young Scientists (Hungarian Academy of Sciences)
- 2007 Grünwald Prize (Bolyai Math. Society, Hungary)
- 2000-2001 Nokia Scholarship (Nokia Hungary)
- 2001 “Excellent Student of the Faculty” Award (Eötvös University)
- National Schweitzer Competition: 2nd Prize 1997, 2000; 3rd Prize 1998, 1999
- International Mathematics Competition: 2nd Prize 1998, 1999
- International Mathematics Olympiad: Gold Medal 1996, 1997

Other experience

- 1997-1999 member of the Editorial Board of “Középiskolai Matematikai Lapok”, a Hungarian Mathematical Journal for Secondary School Students
- 1996-1997 initiated a study circle for mathematics in Fazekas M. Gimnázium
- Block Course, Berlin, 2003
- ADONET summer schools: Cologne, 2004; Lisbon, 2005

List of publications – August 2008 – Gyula Pap

Refereed papers

- Weighted Restricted 2-Matching, *Mathematical Programming, Ser. B*, (2008), doi: 10.1007/s10107-008-0211-3
- Packing non-returning A -paths algorithmically, *Discrete Mathematics*, Volume 308, Issue 8, (April 2008) 1472-1488
- (with M. Makai, J. Szabó) Matching Problems in Polymatroids Without Double Circuits, IPCO XII, 2007, Ithaca NY, [in: Integer Prog. and Comb. Opt., M. Fischetti, D.P. Williamson eds.], Lecture Notes in Computer Science, LNCS 4513, Springer Verlag (2007), 167-181.
- Hypo-matchings in directed graphs, *Graph Theory*, [in: Trends in Mathematics, Bondy, A.; Fonlupt, J.; Fouquet, J.-L.; Fournier, J.-C.; Ramírez Alfonsín, J.L., eds.], Birkhäuser Verlag, Basel, Switzerland (2007), 325-335.
- Combinatorial algorithms for matchings, even factors and square-free 2-factors, *Mathematical Programming Ser. B*, Volume 110, Issue 1, (June 2007), 57-69.
- Packing non-returning A -paths, *Combinatorica*, Volume 27, Issue 2, (March 2007), 247-251.
- (with L. Szegő) Matchings of cycles and paths in directed graphs, *Combinatorica*, *Combinatorica*, Volume 27, Issue 3, (2007), 383-398.
- Négyzetmentes 2-párosítások páros gráfokban [in Hungarian], *Matematikai Lapok*, **13**, 2006-2007/1, (2007), 49-56.
- A Combinatorial Algorithm to Find a Maximum Even Factor, IPCO XI, 2005, Berlin, [in: Integer Prog. and Comb. Opt., Jünger, Michael; Kaibel, Volker, eds.], Lecture Notes in Computer Science, LNCS 3509, Springer Verlag (2005), 66-80.
- (with L. Szegő) On the maximum even factor problem in weakly symmetric graphs, *Journal of Combinatorial Theory Ser. B* **91/2** (2004) 201-213.
- A TDI description of Restricted 2-Matching Polytopes, IPCO X, 2004, New York, [in: Integer Prog. and Comb. Opt., D. Bienstock, G. Nemhauser eds.], Lecture Notes in Computer Science, LNCS 3064, Springer Verlag (2004), 139-151.

Thesis

- PhD thesis, Eötvös University, 2007, "A constructive approach to matching and its generalizations"

Invited talks given at conferences

- The Hungarian Method is Fifty, 2005, the Hungarian Academy of Sciences, Budapest, "A new approach to alternating paths"
- 5th Japanese-Hungarian Symposium on Discrete Mathematics and its Applications, 2007, Sendai, "A survey of results on packing \mathcal{A} -paths"

Talks given at conferences

- STOC 2007, San Diego, "Some new results on node-capacitated packing of \mathcal{A} -paths"
- Magyar Operációkutatási Konferencia 2007, Balatonószöd, " \mathcal{A} -utak pontkapacitásos pakolása"
- Oberwolfach 2007, Graph Theory, short presentation
- Graph Theory 2005, Nyborg, "Hypo-matchings in directed graphs"
- Oberwolfach 2005, Combinatorial Optimization, "A new approach to alternating paths"
- ICGT 2005, Hyeres, "Packings and 2-packings of A -paths"
- EUROCOMB 2005, Berlin, "Packing non-returning A -paths algorithmically"
- IPCO 2005, Berlin, "A combinatorial algorithm for the maximum even factor problem"
- 4th Japanese-Hungarian Symposium on Discrete Mathematics and its Applications, 2004, "Budapest Packing non-returning A -paths"
- VOCAL 2004, Veszprém, "A combinatorial algorithm for maximum even factors"
- Graph Theory in memoriam Claude Berge 2004, Paris, "Hypo-matchings in directed graphs"
- IPCO 2004, New York, "A TDI description of Restricted 2-Matching Polytopes"
- EUROCOMB 2003, Prague, " \mathcal{H} -factors in directed graphs"
- 3rd Japanese-Hungarian Symposium on Discrete Mathematics and its Applications, 2003, Tokyo, "Even factors and ear-decompositions"

EGRES Technical Reports

- EGRES TR-2008-12, Strongly polynomial time solvability of integral and half-integral node-capacitated multiflow problems
- with Dion Gijswijt, EGRES TR-2008-11, An algorithm for weighted fractional matroid matching
- EGRES TR-2008-10, A matroid intersection algorithm
- EGRES TR-2006-17, Mader matroids are gammoids
- EGRES TR-2005-15, Alternating paths revisited IV: packings and 2-packings of A -paths
- EGRES TR-2005-14, Alternating paths revisited III: hypo-matchings in directed graphs
- EGRES TR-2005-13, Alternating paths revisited II: K_{tt} -free t -matchings
- EGRES TR-2005-12, Packing non-returning A -paths

- EGRES TR-2004-18, Alternating paths revisited I: even factors
- EGRES TR-2004-15, A TDI description of Restricted 2-Matching Polytopes
- with L. Szegő, EGRES TR-2004-01, On factorizations of directed graphs by cycles
- with L. Szegő, EGRES TR-2003-02, On the maximum even factor problem in weakly symmetric graphs