

CURRICULUM VITAE OF PANDO G. GEORGIEV

Updated August, 2011

Current position:

Assoc. Research Scientist
Center of Applied Optimization, Industrial and Systems Engineering Department
University of Florida
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Degrees:

- D.Sc. in Mathematics (Habilitation), July 2001, Sofia University “St. Kl. Ohridski”, Faculty of Mathematics and Informatics
- Ph.D. in Mathematics, January 1987, Sofia University “St. Kl. Ohridski”, Faculty of Mathematics and Informatics (Supervisor: Acad. P. Kenderov).
- Master of Mathematics, July 1982, Sofia University “St. Kl. Ohridski”, Faculty of Mathematics and Informatics, (Supervisor: Acad. P. Kenderov).

Faculty and research positions:

- Center for Applied Optimization, ISE, University of Florida – Assoc. Research Scientist (Jan. 2009 – present)
- ECECS (Electrical & Computer Engineering and Computer Science) Department, University of Cincinnati, Cincinnati, Ohio – Visiting Scholar (2004 – 2008).
- Department of Mathematical Sciences, University of Cincinnati – Adjunct Associate Professor, September 2006 - August 2007.
- Laboratory for Advanced Brain Signal Processing, Brain Science Institute, The Institute of Physical and Chemical Research (RIKEN), Wako-shi, 2-1 Hirosawa, Saitama 351-0198, Japan – Research Scientist, (2000 – 2004).
- Hirosaki University, Department of Mathematical System Science, Japan – Visiting Professor (1999 – 2000).
- Sofia University “St. Kl. Ohridski”, Faculty of Mathematics and Informatics, Department of Probability, Operations Research and Statistics, Assistant Professor (1989 – 1994), Associate Professor (1994 – 2006), Elected Full Professor (2006).

Teaching experience (in reverse chronological order):

- in Department of Mathematical Sciences, University of Cincinnati: *Calculus III, Elementary Probability and Statistics, Calculus and Anal. Geometry IV, Linear Algebra I, II.*

- in Computer Science Department, University of Cincinnati: *Statistical learning theory – kernel methods for pattern analysis*, lectures for graduate students.
- in the Faculty of Mathematics and Informatics, Sofia University "St. Kl. Ohridski", Bulgaria: Main course on *Optimization* for undergraduate students, part I and part II, delivered 5 years; *Numerical Methods and Optimization*, lectures undergraduate students, delivered 2 years; *Applied Nonlinear Analysis*, lectures for graduate students, delivered 3 years; *Optimality and Equilibrium*, lectures for graduate students, delivered 3 years; *Optimal Control and Calculus of Variations*, lectures for graduate students, delivered 2 years; *Mathematical Economics*, lectures for graduate students, delivered 2 years.

Research experience and interests (in reverse chronological order):

- data analysis and machine learning: kernel methods for pattern analysis, classification, support vector machines, data mining, signal processing, independent and sparse component analysis, and their applications to bioinformatics, brain imaging and energy problems;
- optimization, operations research, statistics, equilibrium problems, inverse problems, and their applications in mathematical biosciences and energy problems
- variational and non-smooth analysis and their applications, set-valued and functional analysis, geometry of Banach spaces
- Participated in editing, correction and development of the book "Adaptive Blind Signal and Image Processing" by A. Cichocki and S. Amari, John Wiley & Sons, 2002
- Participated in development of software packages "ICA Lab. for Signal Processing and "ICA Lab. for Image Processing" (see <http://www.bsp.brain.riken.jp>).

Supervised Ph.D. Students: Nadia P. Zlateva - defended Ph.D. thesis 1999

Supervised Master of Science Students: 9, defended.

Computer skills:

- Matlab, C++, Visual Basic, LaTeX, Word, Powerpoint
- Co-author of software packages "ICA Lab. for Signal Processing and "ICA Lab. for Image Processing", free downloadable at <http://www.bsp.brain.riken.jp>

Visiting positions, grants, awards:

- National Sun Yat-sen University, Taiwan, April-May 2008.
- Laboratory for Advanced Brain Signal Processing, Brain Science Institute, The Institute of Physical and Chemical Research (RIKEN), Wako-shi, 2-1 Hirosawa, Saitama 351-0198, Japan, January-February 2008.
- Laboratory of Mathematical Neuroscience, Brain Science Institute, The Institute of Physical and Chemical Research (RIKEN), Wako-shi, 2-1 Hirosawa, Saitama 351-0198, Japan, July 2005.
- Hirosaki University, Japan, December 1999 - August 2000, Japan Society of Promotion of Science (JSPS) award and local grant.
- University of Rome II, Italy, 1.5 months, July and September 1999, CNR grant (Italy).
- University of Pau, France, 3 months, 1999, NATO grant CB/JB SC105 N⁰ 44/96165.

- University of Rome II, "Tor Vergata", Italy, 1 month, July 1998, CNR grant (Italy).
- Complutenza University Madrid, 1 week, November 1997 (local grant).
- University of Messina, Italy, 1 week, October 1997 (award of Ministry of Education and Science in Bulgaria).
- University of Rome II, "Tor Vergata", 1 month, 1996, CNR grant (Italy).
- University of Mons-Hainaut, Belgium, 1 month, 1995, TEMPUS grant, European Union.
- University of Rome II, "Tor Vergata", 1 month, 1995, TEMPUS grant, European Union.
- International Center for Theoretical Physics (ICTP), Trieste, Italy, 6 months, 1995 (ICTP grant).
- Gold medal in the National Competition for high school students' papers in mathematics, (1975, Bulgaria)

Invited Seminars: in more than 20 Universities in Europe, Asia, USA.

International conferences (lectures): more than 40 conferences in Europe, Asia, USA.

International conferences – committee member:

- International Conference on Optimization, Simulation and Control Ulaanbaatar, Mongolia, July 25 - 28, 2010, <http://www.ise.ufl.edu/cao/cosc2010/Committee.html>
- International Conference on Biomedical Data & Knowledge Mining: Towards Biomarker Discovery July 7 - 9, 2010, Chania, Crete, Greece, <http://www.ise.ufl.edu/cao/DMBIO2010/DMBIO2010/Welcome.html>
- International Conference on Systems Analysis Tools for Better Health Care Delivery: A New Engineering Health Care Partnership March 24 - 26, 2010. Gainesville, Florida, <http://www.ise.ufl.edu/cao/hc2010>
- Conference on Energy, Sustainability and Climate Change February 26 - 28 2010 Gainesville, Florida, <http://www.ise.ufl.edu/cao/escc2010/>
- 2nd International Conference on the Dynamics of Information Systems February 3-5, 2010, Destin, Florida, <http://www.ise.ufl.edu/cao/dis2010/>
- 8th International Conference on Independent Component Analysis and Signal Separation – ICA2009, March 15 – 18, 2009, Brazil, <http://www.ica2009.org/>
- 7th International Conference on Independent Component Analysis and Signal Separation, London, UK 9 - 12 September 2007, <http://www.elec.qmul.ac.uk/ica2007/>
- "Data Mining, Systems Analysis and Optimization in Neuroscience", University of Florida, February 2006, <http://www.ise.ufl.edu/cao/neuroscience2006/>
- 6th International Conference on "Independent Component Analysis and Blind Source Separation", ICA2006 Charleston, South Carolina, USA, March 5-8, 2006, <http://www.cnel.ufl.edu/ica2006/committees.php>
- 4th International Conference on "Independent Component Analysis and Blind Source Separation", Nara, Japan April 2003, <http://www.kecl.ntt.co.jp/icl/signal/ica2003/>

Membership: American Mathematical Society, INFORMS, Mathematical Optimization Society, Institute of Electrical and Electronic Engineers, Union of the Bulgarian Mathematicians.

Other activities: member of the Specialized Scientific Council for Mathematics at the High Attestation Committee, Bulgaria (1997 - 2001).

PUBLICATIONS

Updated August, 2011

(in reverse chronological order)

A: Refereed journal papers and book chapters, reviewed in "Mathematical Reviews"

1. Pando Georgiev, Panos Pardalos, Nash equilibrium and saddle points for multifunctions, *J. Communications in Mathematical Analysis* (to appear)
2. Pando Georgiev, Lars Kindermann and Panos M. Pardalos, Iterative Roots of Multidimensional Operators and Applications to Dynamical Systems, *Optimization letters* (to appear)
3. Pando Georgiev, Panos Pardalos, Generalized Nash equilibrium problems for lower semi-continuous strategy maps, *Journal of Global Optimization*, Volume 50, Issue 1, May 2011.
4. Pando Georgiev, Altannar Chinchuluun and Panos Pardalos, Optimality conditions of first order for global minima of locally Lipschitz functions, *Optimization: A Journal of Mathematical Programming and Operations Research*, Volume 60, Issue 1 & 2, 2011, Pages 277 - 282
5. Georgiev, Pando G., Parameterized variational inequalities, *Journal of Global Optimization*, Volume 47 , Issue 3 (July 2010), 457 - 462.
6. Georgiev, Pando G.; Theis, Fabian J. Optimization techniques for data representations with biomedical applications. *Handbook of optimization in medicine*, 253–290, Springer Optim. Appl., 26, Springer, New York, 2009.
7. P. Georgiev, Nonlinear skeletons on data sets and applications - methods based on subspace clustering, published in "Centre de Recherches Mathematiques, CRM Proceedings and Lecture Notes, Vol. 45, 2008, pp. 95 - 108.
8. Georgiev, Pando G.; Pardalos, Panos M.; Chinchuluun, Altannar. Localization of minimax points. *J. Global Optim.* 40 (2008), no. 1-3, 489–494. MR2373575
9. Georgiev, Pando; Pardalos, Panos; Theis, Fabian. A bilinear algorithm for sparse representations. *Comput. Optim. Appl.* 38 (2007), no. 2, 249–259. MR2349935 (2008g:65063)
10. Georgiev, Pando; Pardalos, Panos; Cichocki, Andrzej. Algorithms with high order convergence speed for blind source extraction. *Comput. Optim. Appl.* 38 (2007), no. 1, 123–131. MR2332404 (2008f:65109)
11. Theis, Fabian J.; Georgiev, Pando; Cichocki, Andrzej. Robust sparse component analysis based on a generalized Hough transform. *EURASIP J. Adv. Signal Process.* 2007, Art. ID 52105, 13 pp. MR2299326 (2008f:94006)

12. Georgiev, Pando Gr. Second-order Clarke subdifferential of $C^{1,1}$ functions. *Nonlinear analysis and convex analysis*, 105–110, Yokohama Publ., Yokohama, 2007. MR2286165
13. Georgiev, Pando; Ralescu, Anca; Ralescu, Dan. Cross-cumulants measure for independence. *J. Statist. Plann. Inference* 137 (2007), no. 3, 1085–1098. MR2301738
14. Georgiev, Pando G.; Theis, Fabian; Cichocki, Andrzej. Optimization algorithms for sparse representations and applications. *Multiscale optimization methods and applications*, 85–99, *Nonconvex Optim. Appl.*, 82, Springer, New York, 2006. MR2191578
15. Georgiev, Pando Gr., Parametric Borwein-Preiss variational principle and applications. *Proc. Amer. Math. Soc.* 133 (2005), no. 11, 3211–3225.
16. Georgiev, Pando Gr., Porosity and differentiability in smooth Banach spaces. *Proc. Amer. Math. Soc.* 133 (2005), no. 6, 1621–1628.
17. Georgiev, Pando Gr., Random critical points. *Proc. 3-rd Intern. Conf. on Nonlinear analysis and convex analysis*, 49–57, Yokohama Publ., Yokohama, 2004.
18. Daniilidis, A.; Georgiev, P., Cyclic hypomonotonicity, cyclic submonotonicity, and integration. *J. Optim. Theory Appl.* 122 (2004), no. 1, 19–39.
19. De Blasi, F. S.; Georgiev, P. G.; Myjak, J., On porous sets and best approximation theory. *J. Nonlinear Convex Anal.* 5 (2004), no. 2, 247–255.
20. Daniilidis, Aris; Georgiev, Pando, Approximate convexity and submonotonicity. *J. Math. Anal. Appl.* 291 (2004), no. 1, 292–301.
21. Nishizawa, Shogo; Tanaka, Tamaki; Georgiev, Pando Gr., On inherited properties for vector-valued multifunctions. *Multi-objective programming and goal programming*, 215–220, *Adv. Soft Comput.*, Springer, Berlin, 2003.
22. Donchev, Tzanko; Georgiev, Pando, Relaxed submonotone mappings. *Abstr. Appl. Anal.* 2003, no. 1, 19–31.
23. De Blasi, Francesco S.; Georgiev, Pando Gr., Hukuhara’s topological degree for non compact valued multifunctions. *Publ. Res. Inst. Math. Sci.* 39 (2003), no. 1, 183–203.
24. Daniilidis, Aris; Georgiev, Pando; Penot, Jean-Paul, Integration of multivalued operators and cyclic submonotonicity. *Trans. Amer. Math. Soc.* 355 (2003), no. 1, 177–195.
25. Georgiev, Pando; Cichocki, Andrzej, On some new ideas and algorithms for independent component analysis. *Nonlinear analysis and convex analysis (Kyoto, 2001)*. *Sūrikaisekikenkyūsho Kōkyūroku* No. 1246 (2002), 19–30.
26. De Blasi, Francesco S.; Georgiev, Pando Gr., On a fixed point theorem of Ky Fan. *Acta Math. Sin. (Engl. Ser.)* 18 (2002), no. 2, 363–374.
27. Finet, C.; Georgiev, P., Optimization by n -homogeneous polynomial perturbations. *Hommage Pascal Laubin. Bull. Soc. Roy. Sci. Lige* 70 (2001), no. 4-6, 251–257 (2002).

28. Georgiev, Pando Gr., ; Tanaka, Tamaki, Fan's inequality for set-valued maps. Proceedings of the Third World Congress of Nonlinear Analysts, Part 1 (Catania, 2000). *Nonlinear Anal.* 47 (2001), no. 1, 607–618.
29. De Blasi, Francesco S.; Georgiev, Pando Gr., Kakutani-Fan's fixed point theorem in hyperspaces. *Tokyo J. Math.* 24 (2001), no. 2, 331–342.
30. Nishizawa, Shogo; Tanaka, Tamaki; Georgiev, Pando Gr., On the heredity of the convexity of set-valued maps. Perspective and problems for dynamic programming with uncertainty (Kyoto, 2001). *Sūrikaisekikenkyūsho Kōkyūroku No. 1207* (2001), 67–78.
31. Scalarization of set-valued maps and Ky Fan inequalities. Perspective and problems for dynamic programming with uncertainty (Kyoto, 2001). *Sūrikaisekikenkyūsho Kōkyūroku No. 1207* (2001), 55–66.
32. Georgiev, Pando Gr., ; Tanaka, Tamaki, Minimax theorems for vector-valued multifunctions. *Nonlinear analysis and convex analysis* (Kyoto, 2000). *Sūrikaisekikenkyūsho Kōkyūroku No. 1187* (2001), 155–164.
33. Georgiev, Pando Gr., ; Tanaka, Tamaki, Ky Fan's inequality for set-valued maps with vector-valued images. *Nonlinear analysis and convex analysis* (Kyoto, 2000). *Sūrikaisekikenkyūsho Kōkyūroku No. 1187* (2001), 143–154.
34. Georgiev, P. G., Parametric Ekeland's variational principle. *Appl. Math. Lett.* 14 (2001), no. 6, 691–696.
35. De Blasi, Francesco S.; Georgiev, Pando Gr., A random variational principle with application to weak Hadamard differentiability of convex integral functionals. *Proc. Amer. Math. Soc.* 129 (2001), no. 8, 2253–2260.
36. Georgiev, Pando Gr., Parametric variational principles in Banach spaces and selection theorems. *Mathematical science of optimization* (Kyoto, 2000). *Sūrikaisekikenkyūsho Kōkyūroku No. 1174* (2000), 217–229.
37. Georgiev, Pando Gr., ; Tanaka, Tamaki, Vector-valued set-valued variants of Ky Fan's inequality. *J. Nonlinear Convex Anal.* 1 (2000), no. 3, 245–254.
38. Georgiev, Pando G., A modified smooth variational principle and its parametrization. *Compt. Rend. Acad. Bulg. Sci.* 53 (2000), no. 9, 17–20.
39. Georgiev, Pando Grigorov; Tanaka, Tamaki, Fan's inequalities for vector-valued multifunctions. *Proc. Japan Acad. Ser. A Math. Sci.* 76 (2000), no. 9, 153–157.
40. Georgiev, Pando Gr., Variational principles in Banach spaces and their parametrizations. *Research on nonlinear analysis and convex analysis* (Kyoto, 1999). *Sūrikaisekikenkyūsho Kōkyūroku No. 1136* (2000), 13–27.
41. Georgiev, Pando Gr., ; Zlateva, Nadia P., Reconstruction of the Clarke subdifferential by the Lasry-Lions regularizations. *J. Math. Anal. Appl.* 248 (2000), no. 2, 415–428.

42. Georgiev, P. G.; Granero, A. S.; Jimnez Sevilla, M.; Moreno, J. P., Mazur intersection properties and differentiability of convex functions in Banach spaces. *J. London Math. Soc.* (2) 61 (2000), no. 2, 531–542.
43. Georgiev, P.; Zlateva, N., Lasry-Lions regularizations and reconstruction of subdifferentials. *Compt. Rend. Acad. Bulg. Sci.* 51 (1998), no. 9-10, 9–12.
44. Gateaux differentiability via smooth perturbations. *Bull. Austral. Math. Soc.* 56 (1997), no. 3, 421–428.
45. Georgiev, Pando Gr., Submonotone mappings in Banach spaces and applications. *Set-Valued Anal.* 5 (1997), no. 1, 1–35.
46. Well-posedness in linear infinite optimization. *Parametric optimization and related topics, IV* (Enschede, 1995), 111–121, *Approx. Optim.*, 9, Lang, Frankfurt am Main, 1997.
47. Second-order subdifferentials of $C^{1,1}$ functions and optimality conditions. *Set-Valued Anal.* 4 (1996), no. 2, 101–117.
48. Georgiev, P.; Kutzarova, D.; Maaden, A. On the smooth drop property. *Nonlinear Anal.* 26 (1996), no. 3, 595–602.
49. Georgiev, P. G.; Zlateva, N. P., Second subdifferentials of $C^{1,1}$ functions: optimality conditions and well posedness. *Compt. Rend. Acad. Bulg. Sci.* 46 (1993), no. 11, 25–28 (1994).
50. Georgiev, P. Gr., Approximation of convex bodies in R^m by polytopes. *Compt. Rend. Acad. Bulg. Sci.* 46 (1993), no. 9, 29–31 (1994).
51. Georgiev, Pando Gr., On the residuality of the set of norms having Mazur’s intersection property. *Math. Balkanica (N.S.)* 5 (1991), no. 1, 20–26.
52. Georgiev, Pando Gr., The smooth variational principle and generic differentiability. *Bull. Austral. Math. Soc.* 43 (1991), no. 1, 169–175.
53. Georgiev, P. Gr., Fréchet differentiability of convex functions in separable Banach spaces. *Compt. Rend. Acad. Bulg. Sci.* 43 (1990), no. 9, 13–15.
54. Georgiev, P. Gr., Uniqueness of the alternating points of the linear and convex Chebyshev approximation. *Compt. Rend. Acad. Bulg. Sci.* 42 (1989), no. 9, 21–22.
55. Georgiev, Pando Grigorov Mazur’s intersection property and a Kreĭn- Milman type theorem for almost all closed, convex and bounded subsets of a Banach space. *Proc. Amer. Math. Soc.* 104 (1988), no. 1, 157–164.
56. Georgiev, Pando Grigorov The strong Ekeland variational principle, the strong drop theorem and applications. *J. Math. Anal. Appl.* 131 (1988), no. 1, 1–21.
57. Georgiev, Pando G., A counterexample from the approximation of plane convex compacta by inscribed polygons. *Mathematics and mathematical education* (Sunny Beach (Slunchev Bryag), 1986), 196–201, *Publ. House Bulgar. Acad. Sci.*, Sofia, 1986.

58. Georgiev, P. G., Strengthened forms of Ekeland's variational principle, of the drop theorem, and some applications. *Compt. Rend. Acad. Bulg. Sci.* 39 (1986), no. 8, 15–18.
59. Georgiev, Pando G., Almost all convex, closed and bounded subsets of a Banach space are dentable. *Mathematics and mathematical education (Sunny Beach (Slunchev Bryag), 1985)*, 355–361, *Bulgar. Akad. Nauk, Sofia*, 1985.
60. Georgiev, Pando G., Approximation of convex n -gons by $(n - 1)$ -gons. (Bulgarian) *Mathematics and mathematical education (Sunny Beach, 1984)*, 289–303, *Bulgar. Akad. Nauk, Sofia*, 1984.

B: Refereed journal papers and book chapters, not reviewed in "Mathematical Reviews"

61. Pando Georgiev and Henry Tuckwell, "On the possible use of ICA to identify synaptic inputs from observations of several neurons", *Neurocomputing* **67** (2005) 450 - 455.
62. Georgiev P., F. Theis and A. Cichocki, "Sparse Component Analysis and Blind Source Separation of Underdetermined Mixtures" *IEEE Transactions of Neural Networks*, Vol. 16, No. 4, July 2005, 992 - 996.
63. Georgiev, P., and A. Cichocki, "Robust Independent Component Analysis via Time-Delayed Cumulant Functions", *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, Vol. E86-A, No.3 (2003), pp. 573-579.
64. Cichocki, A., and P. Gr., Georgiev, "Blind Source Separation Algorithms with Matrix Constraints", *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, Vol. E86-A, No. 3 (2003), pp. 522-531 (invited paper).
65. Pando Georgiev, Fabian Theis and Anca Ralescu, Identifiability conditions and subspace clustering in sparse BSS, *Lecture Notes Computer Sci.* 4666, pp. 357364, 2007, M.E. Davies et al. (Eds.): ICA 2007, Springer-Verlag Berlin Heidelberg 2007.
66. Pando Georgiev, Danielle Nuzillard and Anca Ralescu, Sparse Deflations in Blind Signal Separation, *Lecture Notes in Computer Science* 3889, Springer 2006, pp. 807–814 (Proc. 6th International Conference on Independent Component Analysis and Blind Signal Separation, March 2006, Charleston, SC).
67. Georgiev P., F. Theis, A. Cichocki and H. Bakardjian, "Sparse component analysis: a new tool for data mining", chapter in a book from "Biocomputing" book series, Kluwer Academic Publishers (in press).
68. P. Georgiev and F. Theis, "Blind Source Separation of Linear Mixtures with Singular Matrices", *Lecture Notes in Computer Science*, Springer-Verlag Heidelberg, Vol. 3195, 2004, pp. 121 - 128.
69. F.J. Theis, P. Georgiev, and A. Cichocki. Blind source recovery: algorithm comparison and fusion. In *Proc. of 24-th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering (MaxEnt 2004)*, volume 735 of AIP (American Institute of Physics) conference proceedings, pages 320-327, Garching, Germany, 2004.

70. Georgiev P., A. Cichocki and H. Bakardjian, "Optimization techniques for independent component analysis with applications to EEG data," chapter in the book "Quantitative Neuroscience: Models, Algorithms, Diagnostics, and Therapeutic Applications", pp. 53-68, Boston, USA: Kluwer Academic, 2004.
71. Georgiev, Pando; Cichocki, Andrzej, "Sparseness theorems and sparse representation of signals". Nonlinear analysis and convex analysis (Kyoto, 2003). *Sūrikaiseikikenkyūsho Kōkyūroku* No. 1386 (2004), 13-25.
72. Georgiev, P., and Andrzej Cichocki, "Robust Blind Source Separation utilizing second and fourth order statistics", *Lectures Notes in Computer Science*, **2415**(2002), pp. 1162-1167.

C: Refereed conference papers:

73. Pando Georgiev, Anca Ralescu, Dan Ralescu, "Fuzzy Subspace Clustering Algorithm and Applications to Blind Signal Separation", Proc. World Congress on Computational Intelligence, Vancouver, 2006.
74. Pando Georgiev, Anca Ralescu, "Clustering on Subspaces and Sparse Representation of Signals", in Proc. 2005 IEEE International 48th Midwest Symposium on Circuits and Systems, August 7-10, 2005, Cincinnati, USA, pp. 1843-1846.
75. P. Georgiev, F. Theis and A. Ralescu, "Sparse Representations of Data and Support Vector Machines", Proc. of 10-th Intern. Conf. on Information Processing and Management of Uncertainty in Knowledge-Based Systems, July 4-9, 2004, Perugia, Italy (IPMU 2004), pp.2109 – 2116.
76. P. G. Georgiev, F. J. Theis, and A. Cichocki, "Blind source separation and sparse component analysis of overcomplete mixtures," in Proceedings of International Conference on Acoustics, Speech, and Signal Processing (ICASSP2004), vol. V, (Montreal, Canada), pp. 493-496, IEEE Signal Processing Society, IEEE, May 2004.
77. P. G. Georgiev and A. Cichocki, "Sparse component analysis of overcomplete mixtures by improved basis pursuit method," in Proceedings of 2004 IEEE International Symposium on Circuits and Systems (ISCAS2004), vol. V, (Vancouver, Canada), pp. 37-40, IEEE, May 2004.
78. A. Cichocki, Y. Li, P. G. Georgiev, and S. Amari, "Beyond ICA: Robust sparse signal representations," in Proceedings of 2004 IEEE International Symposium on Circuits and Systems (ISCAS2004), vol. V, (Vancouver, Canada), pp. 684-687, IEEE, May 2004.
79. F. J. Theis, P. G. Georgiev, and A. Cichocki, "Robust overcomplete matrix recovery for sparse sources using a generalized Hough transform," in Proceedings of 12th European Symposium on Artificial Neural Networks (ESANN2004), (Bruges, Belgium), pp. 343-348, Apr. 2004.
80. Georgiev, P., and Andrzej Cichocki, "Robust Blind Source Separation and Dispersing Algorithms", in *Proc. Intern. Conf. on Acoustics Speech and Signal Processing (ICASSP 2002)*, Orlando, Florida, May 13-17, 2002 pp. I-997 - I-1000.
81. Lars Kindermann and Pando Georgiev, "Modelling Iterative Roots of Mappings in Multidimensional Spaces", Proceedings of the 9th International Conference on Neural Information Processing (ICONIP'02), Singapore 2002, 2655-2659.

82. Cichocki, A., and P. Georgiev, "Blind Identification Problems with Constraints", in *Neural Networks for Signal Processing XII, Proceedings of the 2002 IEEE Workshop*, Martigny, Switzerland, Sept. 2002, pp. 535-544.
83. Georgiev, P., A. Cichocki, and S. Amari, "On Some Extensions of the Natural Gradient Algorithm", in *Proc. Third International Conference on Independent Component Analysis and Blind Signal Separation*, San Diego, California, Dec. 9-13, 2001, pp. 581-585.
84. Georgiev, P., "Blind source separation of bilinearly mixed signals", in *Proc. Third International Conference on Independent Component Analysis and Blind Signal Separation*, San Diego, California, Dec. 9-13, 2001, pp. 328-330.
85. Georgiev, P., and A. Cichocki, "Blind Source Separation via Symmetric Eigenvalue Decomposition", in *Proc. Sixth International Symposium on Signal Processing and its Applications*, Kuala Lumpur, Malaysia, Aug. 13-16, 2001, pp. 17-20.
86. Pando Gr., Georgiev, Andrzej Cichocki and Shun-ichi Amari, "Nonlinear dynamical system generalizing the natural gradient algorithm", *Proc. 2001 Intern. Symposium on Nonlinear Theory and its Applications (NOLTA)*, Miyagi Zao Royal Hotel, Miyagi, Japan, Oct. 28-Nov. 1, 2001, pp. 391-394.
87. Georgiev, P., and A. Cichocki, "Multichannel Blind Deconvolution of Colored Signals via Eigenvalue Decomposition", *Proc. 2001 IEEE Workshop on Statistical Signal Processing*, Orchid Country Club, Singapore, Aug. 6-8, 2001, pp. 273-276.