

ALEX BACOPOULOS – Publications

In preparation: A research book on COMPUTATIONAL OPTIMIZATION AND APPROXIMATION (as originally suggested by Richard Bellman – see R.B.'s 1982 letter)

- A Novel Adaptive Wavelet-Based Approach for a Class of Singularly Perturbed PDEs (with V. Konstandinou, X. Ren, & L.S. Xanthis), *HERMIS* (5) (2004), 1-6
- Discrete Approximation of Nonconvex Hyperbolic Optimal Control Problems with State Constraints, *Control & Cybernetics* (with I. Chrysosoverghi, J. Coletsos and B. Kokkinis), 26 (1) (1998), 1-22
- On the Link of Simultaneous Approximations to Vectorially Minimal Projections, *Analysis and Topology*, World Scientific Publ. Co. (1998), 53-62
- Mixed Frank-Wolfe Penalty Method with Applications to Nonconvex Optimal Control Problems, 334 (with I. Chrysosoverghi, B. Kokkinis and J. Coletsos). *JOTA*, 94 (2) (1997), 311
- Vectorially Minimal Projections, in: *Approximation Theory III, Vol. 1: Approximation and Interpolation* (eds. C.K. Chui and Schumaker), World Scientific Publ. Co. (1995), 15-22
- *Introduction to Numerical Analysis (Εισαγωγή στην Αριθμητική Ανάλυση)* (355-page book) (with I. Chrysosoverghi), *Symeon Press* (4th ed. 1994)
- Discontinuous Alternation from a Singularity, in: *Topics in Polynomials of One and Several Variables and their Applications* (eds. H. M. Srivastava and A. Yanushauskas), World Scientific Publ. Co. (1993), 43-56
- Approximation of Relaxed Nonlinear Parabolic Optimal Control Problems (with I. Chrysosoverghi). *JOTA*, 77 (1) (1993), 31-50.
- An Efficient Blend of the First Algorithm of Remes, (with C.A. Botsaris). *J. Math. Anal. Appl.*, 174 (2) (1993), 342-358
- A New Conic Method for Unconstrained Minimization, (with C.A. Botsaris), *J. Math. Analysis and Applications*, 167 (1), (1992), 12-31
- Multicriteria Optimization, in: *Constantin Caratheodory: An International Tribute*, World Scientific Publ. Co. (1991), 53-64
- Discrete Approximation of Relaxed Optimal Control Problems, (with I. Chrysosoverghi). *JOTA*, 65 (3) (1990), 395-407
- Discrete Approximation of Relaxed Optimal Control Problems, (with I. Chrysosoverghi). *J. Of Optimization Th. and Applications*, 65(3) (1990), 395-407
- Approximation en contrôle optimal non convexe (with I. Chrysosoverghi), *Proceedings of the 7th Balcan Congress of Mathematics* (1988)

- *Numerical Analysis (Αριθμητική Ανάλυση)* (270-page book), *Symeon Press* (3rd ed. 1988)
- *Finite Elements (Πεπερασμένα Στοιχεία)* (201-page book), *Symeon Press* (2nd ed. 1983)
- Computation of Best Simultaneous Approximations with a Singularity (with I. Grimard). *Num. Funct. Anal. and Optimization* (1981), 543-577
- Construction of Best Continuous Approximations to a Discontinuous Function, *Proc. Intern. Conf. Constructive Function Theory*, Varna, Bulgaria (1980), 209-215
- On Best Approximation by Vector-Valued Norms, (with I. Singer and G. Godini). *Revue Roumaine de Math. Pures et Appliquées* (1978), 343-360
- An Error Analysis for Absolute and Relative Approximation, (with R. Zahar). *Aequationes Math.* (1977), 1-20
- On Convex Vectorial Optimization in Linear Spaces, (with Ivan Singer). *J. Optimization Th. and Applications* (1977), 175-188
- Uniform and Relative Approximation with a Singularity, (with Oved Shisha and G.D. Taylor). *J. Approx. Th.* (1977), 356-365
- An Error Analysis for Vectorial Approximation, (with R. Zahar). *Proc. 5th Manitoba Conf. Numerical Math.* (1975), 213-220.
- Representation of Functions, *Proc. Conf. Math. Physics*, C.R. Democritos Press (1973), 1-58
- The Technique of Vectorial Approximation, *Proc. Symposium Approx. Theory and Applications*, M.S.U. Press (1972), 57-66
- On a Map from Splines into a Positive Cone, (with M. Marsden). *Aequationes Math.* (1971), 122-124
- On Approximation by Sums of Chebyshev Norms, *Numerische Mathematik* (1970), 243-247
- Deux généralisations de l'approximation Tchebitcheff vérifiant des contraintes d'interpolation, *C.R. Acad. Sc. Paris*, t. 270 (1970), 1498-1501
- On ε -interpolation and Simultaneous Approximation, *Bull. Soc. Math. de Grèce* (1969), 183-190
- Vectorial Approximation by Restricted Rationals (with G.D. Taylor). *Math. Systems Theory* (1969), 232-243
- Non Linear Chebyshev Approximation by Vector Norms, *J. Approx. Theory* (1969), 79-84