

CURRICULUM VITAE

of

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Personal Data

Date of Birth : April 20, 1958
Married Status : Married, Two Children

Education

1981	Bachelor in Mathematics	University of Crete
1983	M.Sc. in Mathematics and CS	Clarkson University, NY, USA
1985	Ph.D. in Mathematics and CS	Clarkson University, NY, USA

Positions Held

1997-Present	Professor	Technical University of Crete
1991-1997	Associate Professor	Technical University of Crete
1986-1991	Assistant Professor	Clarkson University, NY, USA
1985-1986	Instructor	Clarkson University, NY, USA
1981-1985	Teaching Assistant	Clarkson University, NY, USA

Administrative Positions Held

1999 - Present	<i>Director, Applied Math & Computers Lab</i> , Technical University of Crete
1999 - 2005	<i>Vice President of Academic Affairs</i> , Technical University of Crete
1997-1999	<i>Chairman, Department of Sciences</i> , Technical University of Crete
1997-1999	<i>Graduate Program Director, Department of Sciences</i> , Technical University of Crete

Research Areas

Iterative Solution of Large Algebraic Systems
Numerical Solution of PDEs / Dynamical Systems
Scientific Computing
Mapping of Numerical Algorithms on Parallel / VLSI Computer Architectures
Parallel Computing – Processing - Algorithms
Soliton Cellular Automata
Stochastic Optimization – Adaptive Optics applications
Database Information Systems – Archeological Applications

Awards

1984 : *Sanda Briggs Outstanding Teaching Assistant Award,*
Clarkson University, NY, USA
1986 : *Personal Computer Curriculum Award,*
Clarkson University, NY, USA
1985-1989 : *Sponsored Research Award*
Clarkson University, NY, USA

Committee Member

1987-1989 : *Graduate Studies Committee,*
Math and Computer Science Dept, Clarkson University
1986-1988 : *Computer Science Committee,*
Math and Computer Science Dept, Clarkson University
1986-1988 : *Common Graduate Studies Committee,*
Computer Science and Electrical & Computer Engineering
Departments, Clarkson University.
1994-1995 : *Senate Member,*
Technical University of Crete
1994-1999 : *Graduate Studies Committee,*
Department of Sciences, Technical University of Crete
1997-2005 : *Senate Member,*
Technical University of Crete

Teaching Experience

Undergraduate Courses

Numerical Analysis (Clarkson University, Technical University of Crete)
Numerical Linear Algebra (Technical University of Crete)
Introduction to Finite Elements (Clarkson University)
Applied Iterative Methods (Clarkson University).
Optimization Methods (Clarkson University)
Calculus I, II, III (Clarkson University)
Ordinary Differential Equations (Clarkson University)
Structural Programming (Clarkson University)

Graduate Courses

Numerical Methods (Clarkson University, Technical University of Crete)
Numerical Solution of Differential Equations (Clarkson University, Tech Univ of Crete)
Finite Elements (Clarkson University, Technical University of Crete)
Applied Iterative Methods (Clarkson University)
Optimization Methods (Clarkson University)

Graduate Students

<i>Michael Philippou</i>	:	Master of Science, 1986
<i>James Kossin</i>	:	Master of Science, 1987
<i>Maria Zakyntinaki</i>	:	Master of Science, 1996 Ph.D., 2001
<i>Manolis Mathioudakis</i>	:	Master of Science, 1996 Ph.D., 2001
<i>Anastasis Sifalakis</i>	:	Master of Science, 2002 Ph.D., 2007
<i>Maria Papadomanolaki</i>	:	Master of Science, 2003 Ph.D. (pending)
<i>Mihail Tsivourakis</i>	:	Master of Science, 2004
<i>Paraskeyas Stratis</i>	:	Ph.D. (pending)

Referee

Numerische Mathematik
Linear Algebra and its Applications
SIAM Journal on Matrix Analysis
Journal of Computational and Applied Mathematics
IMA Journal on Numerical Analysis
Parallel Computing
Computer Physics Communications

International Conferences

1985	<i>International Conference on Applied Simulation & Modelling</i>	Montreal
1986	<i>SIAM Conference on Linear Algebra in Signals/Systems/Control</i>	Boston
1987	<i>International Conference on Supercomputing</i>	Athens
1987	<i>IEEE/ACM Fall Joint Computer Science Conference</i>	Dallas
1988	<i>Calculus Revisited</i>	Potsdam
1988	<i>3rd SIAM Conference on Applied Linear Algebra</i>	Madison
1989	<i>Conference on Nonlinear Evolution Equations and Dynamical Systems</i>	Chania
1989	<i>SIAM Conference on Linear Algebra in Signals/Systems/Control</i>	S. Francisco
1993	<i>High Performance Computing Forum</i>	Athens
1993	<i>IEEE Mediterranean Symposium in Control Theory and Applications</i>	Chania
1993	<i>2nd DCP Users Meteorology Conference</i>	Athens
1993	<i>1st International Meeting on Vector & Parallel Processing</i>	Porto
1994	<i>Conference on Nonlinear Dynamics</i>	Xanthi
1994	<i>HERMIS'94 Conference on Mathematics & Informatics</i>	Athens
1996	<i>HERMIS'96 Conference on Mathematics & Informatics</i>	Athens
1998	<i>Advances in Scientific Computing & Modeling</i>	Alicante
1998	<i>4th Hellenic – European Conference Computer Mathematics and its Applications</i>	Athens
1998	<i>IFIP Workshop</i>	Patra
1999	<i>NEEDS'99</i>	Chania
2000	<i>SIAM Conference on Computational Science and Engineering</i>	Washington
2001	<i>5th IMACS Conference on Iterative Methods in Scientific Computing</i>	Heraklio
2001	<i>ENUMATH 2001</i>	Naples
2001	<i>4th Hellenic – European Conference Computer Mathematics and its Applications</i>	Athens
2001	<i>International Conference on Numerical Algorithms</i>	Marrakesh
2006	<i>International Conference on Applied Mathematics</i>	Konstantinoupolis
2006	<i>International Conference on Modern Mathematical Methods</i>	Paros
2007	<i>CESSE 2007</i>	Prague

2007	NUMAN 2007	Kalamata
2008	5 th ECCOMAS	Venice
2008	NUMAN 2008	Kalamata
2009	HERCMA 2009	Athens
2010	ICCAM 2010	Leuven
2010	NUMAN 2010	Chania

Research Programs

- “Iterative Methods & Grid Computing for the Novel Solution of Elliptic PDEs” -- Principal Investigator – Ministry of Education / EU Herakleitos Research Grants – Greece – 2002-07
- “Development, Upgrading and Enrichment of the Technical University of Crete’s Library” -- Principal Investigator – Ministry of Education / EU EPEAEK Grants – Greece – 2000-05
- “Stochastic Optimization for Adaptive Optics in Astronomy” -- Principal Investigator – General Secretariat of Research & Tech – Greece – 1996-98 & 1999-01
- “Bank 92” -- Research Associate -- ESPRIT -- EU -- 1990
- “Pygmalion” -- Research Associate -- ESPRIT -- EU -- 1989

Publications

1. Y. G. Saridakis, “Generalized Consistent Orderings and the Accelerated Overrelaxation Method”, BIT **26**, pp 369 – 376, 1986.
2. Y. G. Saridakis, “On the Analysis of the Unsymmetric Successive Overrelaxation Method when applied on p -Cyclic Matrices”, Numerische Math. **49**, pp 461-473, 1986.
3. E. P. Papadopoulou, Y. G. Saridakis, T.S. Papatheodorou, “Orderings and Partitions of PDE Computations for a Fixed Size VLSI Architecture”, Proceedings IEEE/ACM Fall Joint Computer Science Conf, pp 366-374, Dallas, 1987.
4. Y. G. Saridakis, “New Parallel Iterative Schemes and the AOR Method”, Intern. Journal of Modelling & Simulation **8** (2), pp 57-61, 1988.
5. A. Hadjidimos, T.S. Papatheodorou, Y. G. Saridakis, “Optimal Block Iterative Schemes for Certain Large, Sparse and Nonsymmetric Linear Systems”, Linear Algebra & Applications **110**, pp 285-318, 1988.
6. T. S. Papatheodorou, M. J. Ablowitz, Y. G. Saridakis, “A rule for fast Computation and analysis of Soliton Automata”, Studies in Applied Mathematics **79**, pp 173-184, 1988.
7. Y. G. Saridakis, “An Algorithmic Approach for the Analysis of Extrapolated Iterative Schemes Applied to Least – Squares Problems”, J. of Comp. Appl. Math. **24**, pp 209-225, 1988.
8. Y. G. Saridakis, T. S. Papatheodorou, “Optimal Block Accelerated Overrelaxation Method for a large class of 2-Cyclic Matrices”, Int. J. Computer Mathematics **27**, pp 223-242, 1989.
9. E. Papadopoulou, T. S. Papatheodorou, Y. G. Saridakis, “Block AOR Iterative Schemes for Large Scale Least Squares Problems”, SIAM J. of Numerical Anal. **26** (3), pp 637-660, 1989.
10. T. S. Papatheodorou, Y. G. Saridakis, “Parallel Algorithms and Architectures for Multisplitting Iterative Methods”, Parallel Computing **12**, pp 171-182, 1989.
11. A.S. Fokas, E. P. Papadopoulou, Y. G. Saridakis and M. J. Ablowitz, “International of Simple Particles in Soliton Cellular Automata”, Studies in Applied Mathematics **81**, pp 153-180, 1989.
12. A.S. Fokas, E. P. Papadopoulou, Y. G. Saridakis, “Particles in Soliton Cellular Automata”, Complex Systems **3**, pp 615-633, 1989.
13. A. S. Fokas, E. P. Papadopoulou, Y. G. Saridakis, “Soliton Cellular Automata”, Physica D **41**, pp 297-321, 1990.
14. A. S. Fokas, E. P. Papadopoulou, Y. G. Saridakis, “Coherent Structures in Cellular Automata”, Physics Letters A **147** (7), pp 369-379, 1990.
15. Y. G. Saridakis, J. P. Kossin, “On Exact Convergence of the Accelerated Overrelaxation Method when applied to Consistently Ordered Systems”, Int. J. Computer Math **33**, pp 251-261, 1990.
16. Y. G. Saridakis, “Domains of Divergence of the USSOR Method applied on p -Cyclic Matrices”, Numerische Math. **57**, pp 405-412, 1990.

17. R. Balart, T. S. Papatheodorou, Y. G. Saridakis, "A Quasi Analytical Solution to the Steady State Bridgman-Stockbarger Model", Technical Report 101.84, Clarkson University, 1984.
18. A. Hadjidimos, Y. G. Saridakis, "Modified Successive Overrelaxation (MSOR) and Equivalent 2-step Iterative Methods for Collocation Matrices", J. of Computational & Applied Math **42**, pp 375-393, 1992.
19. A. Hadjidimos, A. Psimarni, Y. G. Saridakis, and A. K. Yeyios, "The Block Modified Accelerated Overrelaxation (MAOR) Method for Generalized Consistently Ordered Matrices", TR-AMCL-9201, Technical University of Crete, Dept. of Sciences, 1992.
20. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "Iterative PDE Computations on a Transputer Based Parallel Computer", Proceedings 2nd Hellenic-European Conference on Mathematics and Informatics (HERMIS'94), pp 425-431, Athens 1994.
21. Y. G. Saridakis, "Optimally Repartitioned SOR Iterative Methods for p-Cyclic Collation Matrices", Proceedings 2nd Hellenic-European Conference on Mathematics and Informatics (HERMIS'94), Athens, 1994.
22. E. P. Papadopoulou and Y. G. Saridakis, "Multisplitting Iterative Methods on Fixed-Size VLSI Architectures", Computing Systems in Engineering **6** (4/5), pp 477-484, 1995.
23. E. P. Papadopoulou and Y. G. Saridakis, "Modular Fixed-Size VLSI Arhthitures for General Multisplitting Iteration", Parallel Algorithms and Applications **7**, pp 177-191, 1995.
24. Y. G. Saridakis, C. G. Sifniotopoulos, and D. A. Sotiropoulos, "Finite Element Collocation Approximation of the Characteristic Exponent in BVPs with Periodic Coefficients", Journal of Computational and Applied Mathematics **70**, pp 1-14, 1996.
25. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "Mapping Parallel Iterative Algorithms for PDE Computations on a Distributed Memory Computer", Parallel Algorithms and Applications **8**, pp 141-154, 1996.
26. Y. G. Saridakis, "Regions of Exact Convergence of the USSOR method applied on Generalized Ordered Matrices", Numerische Mathematik , 1996.
27. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "AOR Iterative Method for Collocation Equations on Real and Virtual Parallel Machines", Proceedings of HERMIS'96 International Conference, Athens, 1996
28. Y. G. Saridakis and M.S. Zakyntinaki, "Towards the Improvement of the ALOPEX II Stochastic Optimization Algorithm", Proceedings of HERMIS'96 International Conference, pp 251-258, Athens, 1996
29. T.E. Kalogeropoulos, Y. G. Saridakis, and M. Zakyntinaki, "Improved Stochastic Optimization Algorithms for Adaptive Optics", Computer Physics Communications **99**, pp 255-269, 1997
30. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "Non-stationary Iterative Schemes for the Solution of Elliptic Collocation Systems", Proceedings HERCMA'98 Conference, Athens, 1998
31. T.E. Kalogeropoulos, Y. G. Saridakis, and M. Zakyntinaki, "Wavefront Correction by Use of Zernike Polynomials and ALOPEX Stochastic Optimization", Journal of Applied Science and Computation **5** (3), pp 252-274, 1999
32. Y.G. Saridakis, M. Zakyntinaki and D. Ballianou, "Archeological Electronic Dictionary for Cretan Amphorae", Conference on Advance Technology Applications in Archeological Research, Rethymno, 2000 (software application)
33. Y.G. Saridakis and M. Zakyntinaki, "ALOPEX IIa : An Improved Stochastic Optimization Algorithm for Adaptive Optics", SIAM Conference on Computational Science and Engineering, Washington, 2000
34. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "Stationary and Non-stationary Iterative Schemes for Collocation Systems", 5th IMACS Conference on iterative methods in Scientific Computing, Heraklio, 2001
35. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "BiCGSTAB for Collocation systems on Distributed Memory Parallel Architectures", ENUMATH 2001, Ischia, Naples, 2001
36. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, "BiCGSTAB for Collocation systems on Shared Memory Parallel Architectures", International Conference on Numerical Algorithms, Marrakesh, 2001
37. Y.G. Saridakis and M. Zakyntinaki, "Adaptive real-time wavefront correction by use of ALOPEX stochastic optimization algorithm", International Conference on Numerical Algorithms, Marrakesh, 2001

38. D. Ellinas, E.P. Papadopoulou and Y.G. Saridakis, “Quantization of Soliton Cellular Automata”, Journal of Nonlinear Mathematical Physics, **8** (1-7), 2001
39. M. Zakyntinaki and Y.G. Saridakis, “Stochastic Optimization for Adaptive Real-time Wavefront Correction”, Numerical Algorithms, **33** (1), pp 509-520, 2003
40. M. Zakyntinaki and Y.G. Saridakis, “Stochastic Optimization for a Tip-Tilt Adaptive Correcting System”, Computer Physics Communications **150** (3), pp 274-292, 2003
41. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, “Iterative Solutions of Elliptic Collocation Systems on a Cognitive Parallel Computer”, Computers & Mathematics with Applications, **48** (5-6), pp 951-970, 2004
42. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, “Preconditioning for solving Hermite Collocation by the Bi-CGSTAB”, Transactions on Mathematics, **5** (7), pp 811-816, 2006
43. A. Sifalakis, E. P. Papadopoulou and Y. G. Saridakis, “Numerical Study of Iterative Methods for the Solution of the Dirichlet-Neumann Map for Elliptic PDEs on Regular Polygon Domains”, Int. J. of Applied Mathematics & Computer Science, **4** (3), pp 173-178, 2007
44. A. Sifalakis, S.R. Fulton, E. P. Papadopoulou and Y. G. Saridakis, “On the Iterative Analysis of the Dirichlet-Neumann Map for Linear Elliptic PDEs”, Proceedings NUMAN’07, pp 129-132, Kalamata 2007
45. A. Sifalakis, A.S. Fokas, S.R. Fulton, and Y. G. Saridakis, “The Generalized Dirichlet-Neumann Map for Linear Elliptic PDEs and its Numerical Implementation”, J Computational & Applied Mathematics, **219** (1), pp 9-34, 2008
46. A. Sifalakis, E. P. Papadopoulou and Y. G. Saridakis, “Parallel Solution of the Generalized Dirichlet-Neumann Map for Elliptic PDEs on Regular Polygon Domains”, Proceedings ECCOMAS’08, Venice, Italy, 2008
47. A. Sifalakis, S.R. Fulton, E. P. Papadopoulou and Y. G. Saridakis, “Direct and Iterative Solution of the Generalized Dirichlet-Neumann Map for Linear Elliptic PDEs on Square Domains”, J Computational & Applied Mathematics, **227**, pp 171-184, 2009
48. M. Papadomanolaki, E.P. Papadopoulou and Y. G. Saridakis, “*p*-Cyclic SOR for BVPs with Periodic Boundary Conditions”, Applied Numerical Mathematics, 2009, [doi:10.1016/j.apnum.2009.08.006](https://doi.org/10.1016/j.apnum.2009.08.006)
49. M. Papadomanolaki and Y. G. Saridakis, “Hermite-Collocation for one dimensional tumor invasion model with heterogeneous diffusion”, Proceedings 9th HERCMA Conference, Athens, Greece, 2009 and Hermis Journal, **11**, 2009 - http://www.aueb.gr/pympe/hermis/hermis-volume-11/HERMIS-VOL-11-PAPERS/PAPADOMANOLAKI-SARIDAKIS-1D_Tumor_Collocation-11.pdf
50. M.G. Papadomanolaki and Y. G. Saridakis, “Collocation with discontinuous Hermite elements for a tumor invasion model with heterogeneous diffusion in 1+1 dimensions”, Proceedings of NUMAN 2010, pp 214-221, Chania, Greece, 2010
51. Y. G. Saridakis, A. Sifalakis and E. P. Papadopoulou, “Efficient Numerical Solution of the Generalized Dirichlet-Neumann Map for Linear Elliptic PDEs on Regular Polygon Domains”, (submitted) 2010
52. E. Mathioudakis, E. P. Papadopoulou and Y. G. Saridakis, “Krylov Subspace methods for the Schur Complement Solution of the Collocation Equations”, (in preparation), 2010

Citations

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