January 2003

CURRICULUM VITAE

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3. Education:	1965-72 Tel-Aviv University Tel-Aviv, Israel B.Sc, M.Sc, Ph.D., Applied Mathematics
4. Professional Appointments:	1996- 1999 : Chair, Division of Applied Mathematics, Brown University, Providence, RI 1993- : Ford Foundation Professor Brown University. 1985- : Professor, Division of Applied Mathematics, Brown University, Providence, RI 1983-85 : Professor and Chairman, Department of Applied Mathematics, Tel-Aviv University, Israel 1982-86 : Professor, Department of Applied Mathematics, Tel-Aviv University, Israel 1978-82 : Associate Professor,

Department of Applied Mathematics,
Tel-Aviv University, Israel

1976-77 : Senior Lecturer,
Department of Applied Mathematics,
Tel-Aviv University, Israel

1975-76 : Research Scientist,
ICASE, NASA Langley Research Center,
Hampton, VA

1972-75 : Instructor and Lecturer
Department of Applied Mathematics
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1974- 1998 : Associate Member,
ICASE, NASA Langley Research Center,
Hampton, VA

5. Publications :

5a. Books:

1. Numerical Analysis of Spectral Methods—Theory and Applications, with S. Orszag, CBMS-SIAM No. 26, 1977, 170 pages.

5a. Editor of Books:

1. Spectral Methods for Partial Differential Equations, edited with R. Voigt and M.Y. Hussaini, SIAM 1984.
2. Special Issue of Applied Numerical Mathematics, 1993. Including papers from the Workshop "Advanced Scientific Computing in the 90's".
3. Proceedings of the Fourth International Conference on Spectral and High Order Methods (ICOSAHOM 1998), a special volume of Applied Numerical Mathematics, May 2000.

5c. Refereed Journal Article

1. The Reduction of Linear Ordinary Differential Equations with Constant Coefficients(with S. Breuer), Journal fo Math. Anal. Appl. 32,(1970),62-76.
2. Solution of Problems in Nonhomogeneous Elasticity,(with S. Breuer),Journal of Math. Anal. Appl. 32(1970),235-245.
3. Explicit Characterization of Spherical Curves, (with S. Breuer), Proc. Am.Math. Soc.27,(1971), 126-127.
4. Upper and Lower Bounds on Solution of Initial Value Problems, (with S.Breuer),Journal of Math. Anal. Appl. 36, (1971), 283-300.
5. Upper and Lower Bounds on Eigenvalue of Sturm-Lioville Systems, (with S. Breuer),Journal of Math.Anal.Appl.36,(1971),465-476.
6. Separation of Roots and Oscillation in Ordinary Differential Equations of Second Order,(with S.Breuer),Proc. Am. Math.Soc. 29,(1971),487-493.
7. Strang Type Difference Schemes for Multi-Dimensional Problems,SIAM Journal Num.Anal.Vol.9,No.4,(Dec.1972),650-661.

8. Numerical Stabilizers and Computing Time for Second Order Accurate Schemes,(with G.Zwas and B.Eilon),Journal of Comp. Physics,(1972) 387-397.

9. Higher Order Accuracy Finite Difference Algorithm for Quasi-Linear Conservation Law Hyperbolic Systems,(with S. Abarbanel) Math. of Comp.,Vol.27,No.123(July 1973),505-523.

10. Hille Wintner Type Oscillation Criteria for Linear Ordinary Differential Equations of Second Order, (with S.Breuer), Annales Polonici Mathematici,30.3,(1975) 257-262.

11. Phase Error and Stability of Second Order Methods for Hyperbolic Problems (with E.Turkel),Journal of Comp. Physics,Vol.15,NO.2 (June 1974),251-265.

12. On the Stability of the N Cycle Scheme of Lorenz,(with M.Israeli),Monthly Weather Review, Vol.102,No.3,(March 1974), 251-256

13. On the Stability of Rusanov's Third Order Scheme, Journal of Comp. Physics,Vol.15,No.3.,July(1974) 421-426.

14. On Proving Stability for Multidimensional Schemes(with S. Abarbanel).Linear Algebra and applications, Vol.II,No.3 (1975), 247-250.

15. Difference Schemes with Fourth Order Accuracy for Hyperbolic Equations I, SIAM Journal of Applied Math.,Vol.29,(1975) 329-351.

16. Generalized Du-Font-Frankel Methods for Parabolic Initial Boundary Value Problems(with B. Gustafsson),ICASE Report No.75-5,1975,SIAM Journal on Numerical Analysis,Vol.13, No.1, 129-144.

17. On the Navier Stokes Equations with Constant Total Temperature,ICASE Report No.75-12,1975 (with B.Gustafsson), Studies in Applied Mathematics,55, 167-185(1976)

18. Multidimensional Difference Schemes with Fourth Order Accuracy,(With S.Abarbanel and E.Turkel),J. Comp.Physics, Vol.21,No.1,85-113.

19. A Note on the Leap-Frog Scheme in Two and Three Dimensions,ICASE Report No.75-21,1975,(with S.Abarbanel), Journal Comp.Physics,(1976) Vol.21,No.3,351-355.

20. Dissipative Two-Four Methods for Time Dependent Problems,ICASE Report No 75-22 (with E. Turkel) Math. of Comp. No. 136, October 1976,703-723.

21. On the Matrix Equations $AH+HA^*=A^*H+HA=1$,ICASE Report No.76-12, 1976(with M.Gunzburger),Linear Algebra and it's Application, Vol.17,277-282,(1977).

22. Boundary Conditions for Multistep Finite Difference Methods for Time Dependent Problems,(with E.Turkel), Journal of Computational Physics, Vol.26,No.2,February, (1978),181-196.

23. On the Acceleration of MacCormack Scheme,(with E.Turkel),Journal of Computational Physics, Vol.26,No.2, February,(1978) 252-256

24. Stability of Two-Dimensional Initial Boundary Value Problems Using L.F. Scheme,(with S.Abarbanel), Math. of Computation, Vol.No.148, October 1979,1145-1155.

25. High Resolution Spectral Calculations of Inviscid Compressible Flows, (with S.Orszag),in Approximation Methods for Navier-Stokes Problems, Lecture Notes in Math.,No.771,(1980)381-382

26. On Time Discretization for Spectral Methods, (with E. Turkel) Studies in Applied Mathematics, Vol.63,(1980), 67-86.

27. The Stability of Pseudospectral-Chebyshev Methods, Math. of Computation, Vol.36 No.153, January 1981. pp. 107-118.

28. On Improving the 2-4 Two-Dimensional Leap-Frog Scheme, (with S. Abarbanel), SIAM Journal on Scientific and Statistical Computing.Vol.1,No.4,(1980), pp.426-430.,

29. Stability of Pseudospectral and Finite Difference Methods for Variable Coefficient Problems,(with S.Orszag and E.Turkel),Math. of Comp.,Vol.37,No.156,(1981) pp293-305.

30. Optimal Time Splitting Methods for the Navier Stokes Equations in Two and Three Space Variables,(with S.Abarbanel),Journal of Computational Physics, Vol.41,no. 156 May,1981, pp. 1-33.

31. Spectral Calculations of One Dimensional Inviscid Flows with Shocks(with S.Orszag and L.Lustman) SIAM Journal on Scientific and Statistical Computing, Vol.2, Sept.1981, pp.296-310.

32. On Numerical Boundary Treatment of Hyperbolic Systems for Finite Differences and Finite Element Methods, (with M.Gunzburger and E.Turkel),SIAM Journal of Numerical Analysis, Vol.19,No.4 (1982).pp. 671-682.

33. The Du-Fort Frankel Chebyshev Method for Parabolic Initial-Boundary Value Problems,(with L.Lustman),Computers and Fluids, Vol.II,No.2, 1983, pp.107-120.

34. The Spectrum of the Chebyshev Collocation Operator for the Heat Equation(with L.Lustman)- ICASE Report 82-12, S.I.A.M. Journal on Numerical Analysis, Vol.20, No.5, Oct.1983. pp. 909-921.

35. Spectral Methods for Time Dependent Partial Differential Equations (with E.Turkel), Proceedings of 3rd 1983 C.I.M.E. Series Conference on Numerical Methods in Fluid Dynamics,Como. Lecture Notes in Math. Vol.1127, Springer-Verlag, pp.115-155

36. Spectral Methods for Two-Dimensional Shocks (with L. Lustman and C.L.Street),Proceedings of the Spectral Methods Conference for PDE's, SIAM,1984 pp.79-96.

37. Theory and Applications of Spectral Methods (with M.Y. Hussaini and S.A.Orszag), Proceedings of the Spectral Methods Conference for PDE's, SIAM,1984,pp 1-54.

38. Spectral Methods for Compressible Flow Problems- Ninth international conference on numerical methods in fluid dynamics in Lecture Notes in Physics 218, Springer-Verlag 1985, pp.48-61.

39. Recovering Pointwise Value of Discontinuous Data within Spectral Accuracy(with E. Tadmor), in the U.S.- In Progress and Supercomputing in CFD- Murman,Abarbanel(ed.)pp.357-376, Birkhauser Boston,(1985).

40. Information Content in Spectral Calculations (with S.Abarbanel), In Progress and Supercomputing in CFD - Murman,Abarbanel (ed.), pp.345-356, Birkhauser Boston, (1985).

41. Multiple Steady States for Characteristic Initial Value Problems (with M.D. Salas and S. Abarbanel), Applied Numerical Math, Vol.2, No.3-5,(1986) pp.181-193.

42. Improving the convergence rate of a parabolic ADI methods, with S. Abarbanel and D.L. Dwoyer, J. Comput. Phys., vol.67 no. 1 November 1986. pp. 1-18 v67 (1986), pp.1-18.

43. Stability analysis of intermediate boundary conditions in approximate factorization schemes, with J.C. South and M.M. Hafez, Appl. Numer. Math., v2 (1986), pp.161-180.

44. Spectral methods for discontinuous problems, with S. Abarbanel and E. Tadmor, in "Numerical Methods for Fluid Dynamics II", ed. by N.W. Morton and M.J. Baines, Oxford University Press, (1986), pp.128-153.

45. Stability analysis of spectral methods for hyperbolic initial boundary value problems, with L. Lustman and E. Tadmor, SIAM J. Numer. Anal., v24, (1987), pp.241-256.

46. Convergence of spectral methods for hyperbolic initial boundary value problems, with L. Lustman and E. Tadmor, SIAM J. Numer. Anal., v24, (1987), pp.532-537.

47. A new method of imposing boundary conditions in pseudospectral approximations of hyperbolic equations, with D. Funaro, Math. Comput., v51 no. 184 (1988) pp.599-613.

48. Splitting methods for low Mach number Euler and Navier-Stokes equations, with S. Abarbanel and P. Dutt, Computer and Fluids, Vol. 17 No. 1 pp. 1-12. (1989)

49. An adaptive pseudospectral method for reaction diffusion problems, with A. Bayliss, B.J. Matkowsky and M. Minkof, J. Comput. Phys., v81 (1989), pp.421-443.

50. Parallel pseudospectral domain decomposition techniques, with R. Hirsh, J. Sci. Comput., v6 no. 4 (1989) pp. 309-325.

51. Essentially non-oscillatory spectral Fourier methods for shock wave calculations, with W. Cai and C.-W. Shu, Math. Comput., v52 (1989), pp.389-410.

52. Spectral simulations of an unsteady compressible flow past circular cylinders, with W.S. Don,in "Spectral and high order methods for partial differential equations" Comput. Methods Appl. Mech. Engrg no. 1-3 (proceedings of ICOSAHOM 89) Ed. Canuto and Quarteroni, North Holland, (1990) pp. 39-59.

53. Quadratures imposition of compatibility conditions in Chebyshev methods, with C. Streett, Journal of Scientific computing. Vol. 5 No. 3, September 1990 pp. 223-239.

54. Convergence results for psuedospectral approximations of hyperbolic systems by a penalty type boundary treatment. with D. Funaro, Math. Comput, Vol 57,no.196, October 1991, pp. 585-596.

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56. The CFL condition for spectral approximations to hyperbolic initial-boundary value problems, (with E. Tadmor)Math. of Comp. Vol.56, No. 194, April 1991 . pp.565-588.

57. Spurious frequencies as a result of numerical boundary treatments, (with S. Abarbanel) In the Proceedings of the third international conference on hyperbolic problems 1991 (B. Gustaffson and B. Engquist editors)pp 19-31.

58. Cell averages Chebyshev methods for Hyperbolic problems, with W. Cai and A. Harten, Computer and Math with Application. Vol 24, No. 5-6 pp. 37-49. (1992)

59. On one sided filters for spectral Fourier Approximations of Discontinuous functions (with W. Cai and C.W. Shu) SIAM Journal on Numerical Analysis, Vol.29 no. 4, pp 905-916, (1992).

60. On the Gibbs phenomenon I: Recovering Exponential accuracy from the Fourier partial sum of non-periodic analytic function using Gegenbauer polynomials (with C.W. Shu), Journal of Computational and Applied Math, vol. 43, pp 81-98 (1992).

61. The stability of numerical boundary treatments for compact high order finite difference schemes. (with M. Carpenter and S. Abarbanel) ICASE report 91-71, JCP. Vol.108 No.2 October 1993. pp. 272-295

62. Stable and accurate boundary treatments for compact, high order finite difference schemes (with M. Carpenter and S. Abarbanel). Applied Numerical Mathematics 12 (1993) pp. 55-87.

63. Resolution Properties of The Fourier Method for Discontinuous Waves, (with C.W. Shu), Computer Methods in Applied Mechanics and Engineering 116,(1994) 27-37

64. Issues in The Application of High Order Schemes, in *Algorithmic Trends in Computational Fluid Dynamics* (Hussaini-Kumar-Salas editors) Springer Verlag (1993) pp.195-218.

65. Time stable boundary conditions for finite difference schemes solving hyperbolic systems. (with M. Carpenter and Saul Abarbanel) Journal of Computational Physics, Vol. 11 no.2 (1994) 220-236.

66. Implementation of the Nonlinear Galerkin Method with psuedospectral (collocation) discretizations (with R. Temam). Applied numerical mathematics, Vol. 12, 1-3. (1993) pp. 119-134.

67. The Chebyshev-Legendre Method: Implementing Legendre methods on Chebyshev points. (with W.S. Don) SIAM Journal on Numerical Analysis,31 no. 6 (1994) pp. 1519-1534.

68. On the superconvergence of Galerkin Methods for Hyperbolic IBVP, (with B. Gustafsson,P. Olsson, B. Strand) SIAM Num. Anal. vol 33 No. 5 October (1996) pp. 1778-1797.

69. On the Gibbs Phenomenon III: Recovering Exponential Accuracy in a Sub-Interval from a Spectral Partial Sum of a Piecewise Analytic Function. (with C.W. Shu) SIAM Journal on Numerical Analysis, Vol 33,No. 1 pp. 280-290 February 1996.

70. A Nonlinear Galerkin Method: The Two Level Fourier Collocation Case, (with L. Dettori and R. Temam). Journal of Scientific Computing, Vol. 10 No. 4 371-389.

71. The theoretical Accuracy of Runge-Kutta Time Discretizations for the Initial Boundary Value Problem: a Study of the Boundary Error, (with M.H. Carpenter,S. Abarbanel, and W.s.Don) SIAM Journal on Scientific Computing, vol. 16(1995) , pp. 1241-1252 .

72. On the Gibbs Phenomenon IV: Recovering Exponential Accuracy in a Sub-Interval from a Gegenbauer Partial Sum of a Piecewise Analytic Function. (with C.W. Shu) Mathematics of Computations 64 (1995) no. 211, pp. 1081-1095.

73. On the Gibbs Phenomenon V: Recovering Exponential Accuracy From Collocation Point Values of a Piecewise Analytic Function. (with C.W. Shu) Numerische Mathematic 71 (1995) no. 4 pp. 511-526.

74. On the Removal of Boundary Errors Caused by Runge-Kutta Integration of Nonlinear Partial Differential Equation , (with S. Abarbanel and M, H. Carpenter) SIAM Journal on Scientific Computing, vol. 17(1996) pp. 777-782.

75. A Stable Penalty Method for the Compressible Navier - Stokes Equations. I: Open Boundary Conditions, (with J. Hesthaven) SIAM Journal on Scientific Computing, Vol. 17, no.3 , pp.592-612.

76. Spectral methods for arbitrary grids, (with Mark carpenter), JCP, vol, 129 74-86 (1996) .

77. Comparisons of staggered and non staggered schemes for Maxwell's equations, (with B. Yang) 12th Annual Review of Progress in Applied Computational Electromagnetics pp.1122-1131 (1996)

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79. On the optimal number of subdomains for hyperbolic problems on parallel computers, (with P. Fischer) *Int. J. of Supercomp. Appl. and High Perf. Comp.* **11** 65-76 (1997).

80. On the Gibbs phenomenon and its resolution (with C.-W. Shu,) SIAM Review. vol. 39 No.4, pp 644-668, (December 1997).

81. Optimal Strategy in domain decomposition spectral methods, (with C.E. Wassberg,) The Ninth International Conference on Domain decomposition Methods.

82. Wind set up relaxation on a sloping beach, (with A. Gelb and N. Paldor) JCP, 138, 644-664 (1997).

83. High Order Methods for Complicated Flows Interacting with Shock Waves, (with W.S. Don), AIAA 97-0538, Reno Nevada.

84. A Mathematical Analysis of PML Methods (with S. Abarbanel). JCP, no.134 pp.357-363, 1997.

85. Spectral Simulations of Electromagnetic Wave Scattering (with Baolin Yang and Jan Hesthaven). JCP, no. 134,pp.216-230 1997.

86. The Resolution of the Gibbs Phenomenon for Spliced Functions in One and Two Dimensions.(with Anne Gelb) Computers and Mathematics Vol. 33 no.11 pp.35-58, 1997. tem

87. Stable Spectral Methods for Conservation Laws on Triangles with Unstructured Grids, (with J. Hesthaven) Comput. Methods Appl. Mech. Engin. 175 (1999) pp.361-381.

88. Spectral Simulations of Supersonic Reactive Flows, (with W.S. Don), SIAM Journal on Numerical Analysis, vol35, no.6 , December 1998, pp 2370-2384.

89. Optimal Decomposition of the Domain in Spectral Methods for Wave Like Phenomenon (with C.E. Wasberg) SISC Vol.22 no.2 (2000) pp. 617-632.

90. Mathematical Analysis and Optimization of Infiltration Processes (with H.C. Chang, M. Marion and B. Sheldon), Journal of Scientific Computing , Vol 13, no.3 September 1998, pp. 303-322.

91. On the Construction and Analysis of Absorbing Layers in CEM (with S. Abarbanel), Proceeding of the 13th Annual Review of Progress in Applied Computational Electromagnetics, pp.876-883.

92. On the Use of PML ABC's in Spectral Time-Domain Simulations of Electromagnetic Scattering, (with B. Yang and J. Hesthaven) Proceeding of the 14 Annual Review of Progress in Applied Computational Electromagnetics. Hesthaven).

93. A Stable and Conservative Interface Treatment of Arbitrary Spatial Accuracy, (with M. Carpenter and J. Nordstrom) JCP vol.48 pp.341-365 (1999).

94. A general theory for the resolution of the Gibbs phenomenon, Accademia Nazionale Dei Lincey, ATTI Dei Convegni Lincey 147, 1998. pp 39-48.

95. On the direct Fourier method for computer tomography. (with B. Gustafsson). IEEE Transactions on Medical Imaging, Vol.19, No. 3 pp.223-232 (March 2000)

96. On the Construction and Analysis of Absorbing layers in CEM, (with S. Abarbanel), Applied Numerical Mathematics 27 (1998) ,331-340

97. Wellposed Perfectly Matched Layers for Advective Acoustics, (with S. Abarbanel and J. Hesthaven) JCP, 154,266-283 (1999).

98. Analysis of the Error for Approximations to Systems of Hyperbolic Equations, (with S. Abarbanel and E. Turkel), JCP, 151,997-1007 (1999).

99. Time Marching Techniques for the Nonlinear Galerkin Method, (with R. Temam B. Costa and L. Detorri) SISC, Vol. 23, Number 1, pp. 46-65 (2001).

100. Optimization of Chemical Vapor Infiltration with Simultaneous Powder Formation, (With B. Sheldon and A. Ditkowski) Journal of Materials Research, Vol 15, No.12, Dec 2000.

101. On the Mathematical Analysis and Optimization of Chemical Vapor Infiltration in Materials Science (With B. Sheldon and A. Ditkowski) in M^2AN, Vol. 34 no. 2 (March/April 2000), pp (337-352).

102. Spectral Methods for Hyperbolic Problems, (with Jan Hesthven) , J. Comput. Appl. Math. vol. 128(1-2), pp. 83-131, (2001).

103. Long Time Behavior of the Perfectly Matched Layer Equations in Computational Electromagnetics, (with S. Abarbanel and Jan Hesthaven, JSC , Vol. 17 pp. 405-422 (December 2002)

104. On the Conservation and Convergence to Weak Solutions of Global Schemes (with M. Carpenter and C.W. Shu), accepted to JSC.

105. A Multidomain Method for Supersonic Reactive Flows, (with W.S Don and J.H. Jung) accepted in JCP.

106. Multi-domain spectral method approach to supersonic combustion of recessed cavity flame-holders, (with W.S. Don and J.H. Jung), the proceeding of JANNAF-2002.

107. On the Convergence of the Fourier Approximation of Eigenvalues and Eigenfunctions of Discontinuous Problems (with M.S. Min) accepted SINUM.

108. Spatial Discretization of the Dusty Gas Model (with R. Temam), accepted in Quarterly of Applied Mathematics.

109. On the Engquist Majda Absorbing Boundary Conditions for Hyperbolic Equations, (with A. Ditkowski) Contemporary Mathematics 330,(2003) pp 55-71.

110. Numerical Convergence Study of Nearly-Incompressible, Inviscid Taylor-Green Vortex Flow, 31 pp. (with W.s Don and C.W. Shu) to appear in JSC.

111. Domain Decomposition Spectral Approximations for an Eigenvalue Problem with a Piecewise Constant Coefficient , 18 pp. (with M.S. Min) accepted in SINUM.

112. High Order Numerical Methods for the Two Dimensional Richtmyer-Meshkov Instability, Part I, (with W. S. Don, L. Jameson & C. W. Shu) to appear Conference proceeding for the International Workshop for the Physics of Compressible Turbulence Mixing, Laser and Particle Beams.

113. Spectral Methods Based on Prolate Spheroidal Wave Functions for Hyperbolic PDE's, 31 pp.(with Q.Y. Chen and J. Hesthaven).

114. Recovering High Order Accuracy in WENO Computations of Steady State Hyperbolic Systems, (with S. Gottlieb and C.W. Shu) submitted.

115. Spectral Methods for Compressible Reactive Flows, (invited paper, with S. Gottlieb) to appear in the proceeding of Euromech 446.

116. Spectral Methods for discontinuous problems (with S. Gottlieb) to appear in the proceeding of Dundee M03.

6. Awards:

1. NASA Group Achievement Award - as member of the ICASE numerical analysis and algorithms group. (1992).
2. "Docteur Honoris Causa" University of Paris VI November 23rd 1994.
3. "Honorary Doctor" University of Uppsala, May 1996.

7. Ph.D. Students:

1. Dr. Dalia Fishelov, Ph.D. Tel-Aviv University 1983. Currently at the Hebrew University Israel.
2. Dr. H. Talezer,Ph.D. Tel-Aviv University 1984. Director of Ramot Research Institue, Tel-Aviv University.
3. Dr. Nira Grobeger , Ph.D. Tel-Aviv University 1985.
4. Dr. Ernest Rothman Ph.D. Brown University 1987-. Professor salva Regina University.
5. Dr. Wei Cai Ph.D. Brown University 1988- Professor at North Carolina state U.
6. Dr. W.S. Don Ph.D. Brown University 1988- Professor (research) Brown University.
7. Dr. Kelly Black Ph.D. Brown University 1992, Assistant Professor at the University of New Hampshire.
8. Dr. Alex Solomonoff Ph.D. Brown University 1992- University of Minnesota. (Winner of SIAM best student paper award 1992).
9. Dr. Lee Jameson Ph.D. Brown University 1993- Research Scientist Mitsubishi Japan.
10. Dr. Eric Voth, Ph.D. Brown University 1994.
11. Dr.. Bruce Bauer, Ph.D. Brown University 1995. Reseach Scientist NSA.
12. Dr. Anne Gelb, Ph.D 1996 Associate Professor ASU.

13. Baolin Yang, Ph.D 1997, Industry.
14. Walter Green, Ph.D. 1999, Industry.
15. Andrew Jones, Ph.D. 1999, Assosiacte Professor at FSU .
16. H. Teng ,Ph.D. 2001, National Taiwan University.
17. J.H. Jung Ph.D. 2002. Post-Doc at IAM Vancouer Canada.
18. M.S. Min Ph.D. 2002 scientist at ANL.
19. QY Chen, finishing his Ph.D.
20. Alex Kanevsky, working on his thesis.
21. Radic sandersky, started his research towards his thesis.