Curriculum Vitae
Joan Adler

Date of birth: 13th June, 1950, Sydney, Australia
Nationality: Israeli, identity no. 011604030 / Australian
Marital Status: Married with two daughters, six grandchildren

ACADEMIC DEGREES

B.Sc.   1974, Mathematics/Physics, University of Sydney
Ph.D.   1980, Physics, University of N.S.W.

ACADEMIC APPOINTMENTS

2018-   Retired Senior Research Fellow, Physics, Technion
2008   Visiting Scholar, Boston University and Senior Visiting Fellow, UNSW
2000-18   Senior Research Fellow, Physics, Technion
1997   Visiting Scientist, University of Georgia
1996-7   Visiting Professor, Duke University
1991-2000   Computational Physics Engineer, Physics, Technion
1990-1991   Senior Research Associate, Physics, Technion
1989-1990   Senior Research Associate (Moreh Mada'an), Physics, Technion
1988-1989   Research Associate (Moreh Mada'an), Physics, Technion
1988-1996   (Adjunct) Tel Aviv University
1986-1988   Senior Research Asssociate, Tel Aviv University
1985-1986   Duke University and University of Washington (Visiting)
1984-1985   Research Associate, Tel Aviv University
1983-1984   Research Associate, Solid State Institute, Technion
1980-1983   Lady Davis Postdoctoral Fellow, Physics, Technion
1980   Professional Officer, University of N.S.W.

RESEARCH INTERESTS
Computational statistical mechanics, condensed matter and nanoscale physics.

TEACHING EXPERIENCE

1. **Graduate Courses**
   Phase Transitions for Experimentalists (Technion, 1982)
   Critical Phenomena (Duke University, 1985)
   Introduction to Computational Physics (Technion, 1991-9, 2000-7, 2009-17)
   Advanced Statistical Mechanics (with others, Technion, 2005)
   Student seminar course
   (Technion, 2012,13,15,16,17)
2. **Undergraduate Courses**
   Research reports by Faculty for students
   (Technion, 2012,13,15,16,17)
   Supervision of Undergraduate Research Projects
   (Technion, 1982,3,8,9, 1991,3,5-9,2001-7, 2009, 2011-18)
   Mechanics (University of Georgia, 1997)
   Physics 123 (Waves) (University of Washington, 1986)
   Introduction to Computational Physics (Tel Aviv University, 1988)
   Physics 3 (Modern Physics) (Technion, 1990-4, 2000-6, 2009,10,11)
   Statistical and Numerical Methods in Physics (Technion, 1994-5, 1995-6)
3. **Informal**
   Talks on percolation and computational physics to summer students
   Talks on computational physics to Science Education,
   Physics/CS and Physics Excellence program students in 2013
   Talks on computational physics to Moadon Mada,and Oranim students in 2016
4. **High School**
   9,10,12th Grade Physics including laboratory

TECHNION ACTIVITIES

Steering Committee of the TAMNUN Computer, Technion	2012-
Committee of the Center for Computation in Nanotechnology	2005-11
Technion Committee for Computational Mechanics	1999-
Inter-faculty Seminar on Scientific Computing	1993-6,7-2006
Seminar on Scientific Computing	2009-10
Founding Academic Head of the Technion Visualization Centre	1994-5
Computer Committee (Minerva Non-Linear Centre)	1993-2000

PUBLIC PROFESSIONAL ACTIVITIES

Vice-chair of the C20 Computational Physics Commission of IUPAP
        (International Union of Pure and Applied Physics) 2012-14, secretary 2015-7.
IUPAP representative to the IOCG (International Organization of Crystal Growth) 2010-
Member of the jury for the Berni Alder CECAM Prize in Computational Physics 2009/10

Member of the board of the EPS Division of Computational Physics 2011-
Member of the C20 Computational Physics Commission of IUPAP
      (International Union of Pure and Applied Physics) 2008-2011
Ex-officio member of the board of the EPS Division of Computational Physics 2008-10
President of the Israel Physical Society 2005-7
Member of the Council of the European Physical Society 2005-7
Vice-president and president-elect of the Israel Physical Society 2001-4
Member of Vaadat Bikoret (Auditing Committee) of the Israel Physical Society 2000
Member of the Council of the Israel Physics Society 1995
Editing:
Member of the editorial board of the IEEE/AIP Computers in Science and Engineering
(CiSE) 2016-
Member of the editorial board of Computer Physics Communications 2012-
Member of the editorial board of Communications in Computational Physics 2007-15
Co-editor of The Annals of the Israel Physical Society 1989-2004
Guest editor of an issue on "Computational Science in Developing Countries" for CiSE, 2018.
Referee for the following journals: (partial list)

Journal of Physics A and C	Zeitschrift fur Physik B
Journal de Physique	Physical Review A, B and E
Physical Review Letters	Journal of Non-Crystalline Solids
Journal of Statistical Physics	Physica Scripta
Physica A	Computers in Physics
Transport in Porous Media	Probability Theory and Related Fields

Referee for Research grants: NSF, BSF, GIF, ISF, EU Linksceem,
Lead reviwer for DFG Clusters of Excellence

MEMBERSHIP IN PROFESSIONAL SOCIETIES

Member of the Israel Physical Society, 1980-
Individual member of the European Physical Society, 2011-

HONORS

1970-1973	Commonwealth Undergraduate Scholarship
1975-1978	Australian Postgraduate Research Award
1980-1983	Lady Davis Postdoctoral Fellowship
1987	PICS French-Israeli Travel Award
2005-	Fellow of the Institute of Physics (Great Britain)

GRADUATE STUDENTS

Completed Theses

1. A. Silverman, M. Sc. 1990 (co-supervisor R. Weil) "Diffusion of Fluorine in Amorphous Silicon"
2. S. Shapira, M. Sc. 1991 "Phase Transitions in Disordered Magnets"
3. A. Silverman, D. Sc. 1994 (co-supervisor R. Kalish) "Study of the Structure and Dynamical Properties of Tetrahedrally Bonded Ternary Alloys"
4. G. Baum, M. Sc. 1995 (co-supervisor S. Lipson) "Equilibrium shapes for HCP crystals"
5. D. Saada, M. Sc. 1996 (co-supervisor R. Kalish) "Structural Transformation in Diamond induced by Ion-Impact"
6. A. Hashibon, M. Sc. 1998 (co-supervisor S. Lipson) "Higher neighbour effects on roughening transitions in ^{4}He crystals"
7. Z. Salman, M. Sc. 1998 (co-supervisor M. Moshe) "Series Expansion Analyses for Multicritical Points"
8. A. Kanigel, M. Sc. 1999 (co-supervisor E. Polturak) "The Rôle of Defects in the Melting Transition"
9. D. Saada, D. Sc. 2000 (co-supervisor R. Kalish) "Computer Simulation of Damage in Diamond and its annealing"
10. A. Hashibon, D. Sc. 2002 (co-supervisors W. Kaplan and S. Lipson) "Atomistic Simulations of Metal-Ceramic Interfaces"
11. S. Sorkin, M Sc. 2003 (co-supervisor E. Polturak) "Point Defects, Lattice Structure and Melting".
12. A. Sorkin, M Sc. 2003 (co-supervisor R. Kalish) "Computational Study of Structures of Diamond and Amorphous Carbon under Extreme Heating and Cooling".
13. O. Hershkovitz, M Sc. 2005 (co-supervisor A. Hoffmann) "Computational Study of Hydrogen in Nanodiamond".
14. N. Schreiber, M. Sc. 2005, "Monte Carlo Study of the Baxter-Wu Model".
15. S. Zommer, M Sc. 2005 (co-supervisor S. Lipson) "Adaptive Optics of the Eye".
16. A. Sorkin, D Sc. 2006 (co-supervisor R. Kalish) "Computer Simulation of the Nucleation of Diamond from Liquid Carbon under Extreme Pressures"
17. S. Sorkin, D Sc. 2006 (co-supervisor E. Polturak) "Computer Simulations of Excitations of a Quantum Solid and of the Melting Transition at High Pressure"
18. T. Mutat, M Sc. 2007 (co-supervisor M. Sheintuch) "Atomistic Simulation of Diffusion and Separation of Small Molecules in Carbon Nanotubes"
19. P. Bavli, M Sc. 2009 (co-supervisor E. Polturak) "Melting in HCP Lattices"
20. E. Warwarski, M Sc. 2009 (co-supervisor A. Hoffman) "Density of States Calculations for Carbon Allotropes and Mixtures"

21. Z. Shpilman, D Sc. 2009 (co-superviser A. Hoffman) "Interaction of Polycrystalline CVD Diamond Thin Films with Atomic Oxygen"
22. P. Pine, D Sc. 2012 (Student in RBNI Doctoral programme, co-supervisor Y. Yaish).
23. Y. Koenka, M Sc. 2012 (co-supervisor Alon Hoffman)
24. I. Paykin, M Sc. 2014 (co-supervisor E. Ribak)
25. Zippora Izraeli, M. Sc, 2016 (co-supervisor Y.Yaish).
26. Omri Adler (no relation), M.Sc 2016.

POSTDOCTORAL FELLOWS

1. Irena Rosenblum 1997-2000 (co-supervisor Simon Brandon)
2. Geri Wagner 2001
3. P. Pine, 2012 (co-supervisor Y. Yaish).

NON-TECHNION RESEARCH GRANTS

1. Low temperature investigation of layered growth of solid He on crystalline substrates, (1984-87), $33,000. (Israel Academy of Science, with S. G. Lipson and E. Polturak).
2. Aspects of crystal growth and morphology, (1989-92), $75,000. (Israel Academy of Science, with S. G. Lipson and J. Avron).
3. Experiments and calculations on crystal surfaces in solid Helium. (1993-96), $120,000. (Israel Academy of Science, with S. G. Lipson and E. Polturak).
4. New directions in the series expansion approach to critical phenomena, (1991-95), $85,0000. US-Israel Binational Science Fund, J. Adler (Technion), M. E. Fisher (Maryland).
5. New multitechnique approach to disordered systems, (1993-1996), 300,000DM. (German-Israel Foundation) J. Adler (Technion), A. Aharony (Tel Aviv), E. Domany (Weizmann) D. Stauffer (Köln), H. Herrmann (Jülich), J. Reger (Mainz)
7. A parallel approach to discrete and continuum modelling of solids and liquids, (1996-97), 95,000sh p/a, (Israel Ministry of Science, with I. Yavne, (Computer Science) and S. Brandon, (Chemical Engineering).
8. Novel Computational approach to disordered and complex systems, (1997-99), 486,000DM. (German-Israel Foundation) J. Adler (Technion), A. Aharony (Tel Aviv), E. Domany (Weizmann) D. Stauffer (Köln), W. Janke (Mainz), K. Binder (Mainz)
9. The effect of interfacial ^{3}He impurities on the morphology and growth of helium crystals, (1996-99), $150,000 + $13,800, for equipment. (Israel Science Foundation) with S. G. Lipson and E. Polturak.

10. Application of parallel algorithms to simulations for models of condensed matter physics (1997-8), 50,000 hours (HPCU Supercomputer, Israel)
11. Parallel simulation for models of condensed matter physics: applications to diamond, melting and crystal growth (1998-9), 40,000 hours (HPCU Supercomputer, Israel)
12. Learning about bulk melting with solid helium (1999-02), $150,000 + $18,800, for equipment. (Israel Science Foundation) with S. G. Lipson and E. Polturak.
13. Computer alchemy using virtual reality on internet 2 (1999-2001), 150,000 Sh/annum (Israel Ministry of Science) with W. Kaplan and R. Kalish.
14. Statistical physics of random structures with applications to life and materials sciences. (2001-2004), 363,624 Eu. (German-Israel Foundation) J. Adler (Technion), A. Aharony (Tel Aviv), E. Domany (Weizmann) D. Stauffer and T. Natterman(Köln), P. Grassberger (Wuppertal), W. Janke (Leipzig) and K. Binder (Mainz).
15. Large scale atomistic modelling of semiconductors and ceramics, (2000-2004) $75,000 (US-Israel Binational Science Fund) with S. Brandon, D. Rapaport (Bar-Ilan), and D. Landau (UGA)
16. Correct Theory for the groundstate of a quantum solid (2002-2006), $56,000/pa (Israel Science Foundation) with S. G. Lipson and E. Polturak.
17. Israeli Representative on the Steering Committee of COST Action P13, Forging the missing link: From Molecular Simulations to Nanoscale Experiment. Israeli share $2,000.
18. Search for supersolid phenomena in the cubic phase of solid helium (2006-9) 278,500sh/p/a (Israel Science Foundation) with S. Lipson and E. Polturak.
19. Search for supersolid phenomena in the cubic phase of helium4 and in helium3 /helium4 mixtures (2009-) 261,000sh/p/a (Israel Science Foundation) with E. Polturak.
20. SimPhoNy - Simulation framework for multiscale phenomena an nano and micro scaled systems. (2014-2016) Total 3,209,000 euro with A. Hashibon Fraunhofer IWM and 9 others, Technion share 270,000 euro.

TECHNION RESEARCH GRANTS

1. RBNI Nevet grant - Atomistic simulation and laboratory experiments for nan–electro-mechanical systems based on carbon nanotubes(2007-8)$40,000 with Y. Yaish.
2. UMBRELLA grant with Juelich - Simulation and visualization of molecuar adhesion to nanotubes and patterned substrates(2009-10)$14,000 with M. Bachmann(Juelich) and S. Srebnik (Technion).

3. UMBRELLA grant with Juelich - 3D Visualization of HPC simulations of atoms, molecules and solids(2010-11)$17,000 with M. Bachmann and H. Zilken(Juelich).
4. Manlam grant for excellent grade in GIF submission, 2010, $2,000
5. Manlam grant for excellent grade in BSF submission, 2011, $1,500

SIGNIFICANT PROFESSIONAL PROJECTS

1993   VGS, software package for graphical methods of series analysis.
Prepared with my student S. Shapira and I. Chang. Used by groups in Israel,
Korea, Germany and the USA.

2001- AViz, software package for Atomistic and Spin Visualization
An ongoing LINUX software project of my Computational Physics Group at the Technion,
with a GNU General Public License. Graduate and undergraduate Technion students
and postdoctoral fellow Geri Wagner developed and maintain the code.
Used by groups in the USA, Korea, Singapore and Germany.
2012- AViz 6.0 with Y.Koenka and A. Silverman
Revised and improved version
2013- AViz 6.1 with D. Peled and A. Silverman
Analglyphic stereo
2015- AViz 6.6 with A. Hashibon and N. Franklin, now on Github

PUBLICATIONS

May 2018 - Google H-index 38, i10-index 91, total citations 4,226

https://scholar.google.com/citations?/h1=en&user=aQUQU10AAAAJ

downloadable pdf at: http://phony1.technion.ac.il/~phr76ja/joancitations.pdf

(a) Theses

1. "Percolation processes", Honours Thesis (1974), University of New South Wales.
2. "Studies of higher order exchange in theoretical magnetism", Ph.D. Thesis (1979), University of New South Wales.

(b) Original papers (published)

3. J. Adler, J. Oitmaa, and A. M. Stewart, "A simple Green function approach to the biquadratic Heisenberg ferromagnet", (1976), J. Phys. C **9**, 2911-5.
4. J. Adler, J. Oitmaa and A. M. Stewart, "The Heisenberg ferromagnet with biquadratic exchange", (1977), Physica **84-88** B, 1109-10.
5. J. Adler, A. Aharony and J. Oitmaa, "Renormalization group studies of the Blume-Emery-Griffiths model in two dimensions", (1978), J. Phys. A **11**, 963-74.
6. J. Adler and J. Oitmaa, "The Heisenberg ferromagnet with higher-order exchange", (1979), J. Phys. C **12**, 575-83.
7. A. M. Stewart and J. Adler, "Some comments on the choice of decoupling scheme for the biquadratic ferromagnet", (1980) J. Phys. C **13**, 6227-33
8. G. J. Bowden and J. Adler, "Wind generator choice for a remote location", (1980), Wind Engineering **4**, 155-62.
9. G. J. Bowden, J. Adler, T. Dabbs and J. Walter "The potential of wind energy in Antartica", (1980), Wind Engineering **4**, 163-176.
10. J. Adler, "The Heisenberg ferromagnet on the H. C. P. lattice", (1981), Physica **107** B+C, 207-08.
11. J. Adler, M. Moshe and V. Privman, "Confluent singularities in directed bond percolation", (1981), J. Phys. A **14**, L363-67.
12. J. Adler and V. Privman, " Two dimensional percolation: logarithmic corrections to the critical behaviour from series expansions", (1981), J. Phys. A **14**, L463-470.
13. J. Adler and M. Silver, "Monte Carlo simulations of dispersive hopping transport with spatial disorder", (1982), Phil. Mag. B **45**, 307-15.

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14. J. Adler, M. Moshe and V. Privman, "New method for analyzing confluent singularities and its application to two dimensional percolation", (1982) Phys. Rev. B **26**, 1411-5.

15. J. Adler and V. Privman, "Series expansion analysis of corrections to scaling in the three-state Potts model", (1982), J. Phys. A **15**, L417-25.

16. J. Adler, M. Moshe and V. Privman, "An unbiased map of the temperature plane and its consequences for the d=3 Ising model", (1982), Phys. Rev. B **26**, 3958-9.

17. J. Adler, I. G. Enting and V. Privman, "Two three state Potts models: the universality of confluent corrections to scaling", (1983), J. Phys. A **16**, 1967-73.

18. J. Adler, C. G. Kuper and L. S. Schulman, "Layer-by-layer growth of solid He^4 on graphite", (1983), Jour. of Low Temperature Physics **52**, 73-79.

19. J. Adler, " Critical temperature of the d=3, s=1/2 Ising model; the effect of confluent corrections to scaling", (1983), J. Phys. A **16**, 3585-99.

20. J. Adler, "The self-avoiding walk on the honeycomb lattice", (1983), J. Phys. A **16**, l515-7.

21. J. Adler and I. G. Enting, "The two dimensional spin 1 Ising system and related models", (1984), J. Phys. A **17**, 2233-45.

22. J. Adler, "A second look at a controversial percolation exponent - is η negative in three dimensions?", (1984), Z. Physik B **55**, 227-9.

23. J. Adler, A. Aharony and A. Brooks Harris, "Percolation in $d > 4$", (1984), Phys. Rev. B **30**, 2832-8.

24. J. Adler, "Conductivity exponents from the analysis of series expansions for random resistor networks", (1985), J. Phys. A **18**, 307-11.

25. V. Gridin, J. Adler, Y. Eckstein and E. Polturak, "Integral and non-integral multilayer formation in growth of solid He^4 on graphoil", (1984) Phys. Rev. Lett. **53**, 802-5.

26. J. Adler, Comment on "Corrections to scaling for branched polymers and gels", (1985), Phys. Rev. B **31**, 4693.

27. J. Adler, A. Aharony and D. Stauffer, "First exit time of termites and random super-normal conductor networks", (1985), J. Phys. A **18**, L129-36.

28. J. Adler, A. Aharony, Y. Meir and A. B. Harris, Comment on "Dilute random field Ising models and uniform field antiferromagnets", (1986), Phys. Rev. B **34**, 3469.

29. J. W. Essam, K. De'Bell, J. Adler and F. M. Bhatti, "Analysis of extended series for bond percolation on the directed square lattice", (1986), Phys. Rev. B **33**, 1982-1986.

30. F. Leyvraz, J. Adler, A. Aharony, A. Bunde, A. Coniglio, D. C. Hong, H. E. Stanley and D. Stauffer, "Results on the one dimensional random normal super-conductor mixture", (1986), J. Phys. A **19**, 3683-92.

31. J. Adler, A. Aharony, Y. Meir and A. B. Harris, "Amplitude ratios and estimates from general dimension percolation moments", (1986), J. Phys. A **19**, 3631-43.

32. J. Adler, Comment on "Evidence for Ising like criticality in two dimensional percolation", (1986), Phys. Rev. Letters, **57**, 918.

33. J. Adler, Y. Gefen, M. Schick and W.-H. Shih, "Order propogation in dilute antiferromagnetic Potts models", (1987), J. Phys. A **20**, L227-32.

34. J. Adler, "On universality between two-dimensional Ising-like systems", (1987), J. Phys. A **20**, 3419-24.

35. J. Adler and J. A. M. S. Duarte, "Directed percolation - field exponents a test of scaling in two and three dimensions", (1987), Phys. Rev. B **35**, 7046-52.

36. J. Adler, R. G. Palmer and H. Meyer, "Transmission of order in some unusual dilute systems", (1987), Phys. Rev. Lett. **58**, 882-5.

37. J. Adler, "Re-evaluation of series expansions for the roughening transition" (1987), Phys. Rev. B. Rapid Communications **36**, 2473-6.

38. J. Adler and A. Aharony, "Diffusion Percolation", (1988), J. Phys. A **21**, 1387-1404.

39. J. Adler, J. Berger, J. A. M. S. Duarte and Y. Meir, "Directed percolation in 3+1 dimensions", (1988), Phys. Rev. B **37**, 7529-33.

40. J. Adler, Y. Meir, A. B. Harris, A. Aharony and J. A. M. S. Duarte, "Series study of random animals in general dimension", (1988), Phys. Rev. B **38**, 4941-54 .

41. J. Adler and A. Aharony, "Percolation cluster numbers", (1988), J. Stat. Phys. **52**, 509-17.

42. J. Adler, A. van Enter and A. B. Harris, "Transmission of order in a correlated spin glass", (1988), Phys. Rev. B **38**, 11405-17.

43. J. Adler, D. Stauffer and A. Aharony, "Comparison of bootstrap percolation models", (1989), J. Phys. A **22**, L397-201.

44. L. Klein, J. Adler, A. Aharony, A. B. Harris, and Y. Meir, "The dilute spin glass at zero temperature in general dimension", (1989), Phys. Rev. B **40**, 4824-32.

45. J. Adler, R. Gross and R. Warmund, "Comparison of algorithms for bootstrap percolation models", (1990), Physica A **163**, 440-6.

46. J. Adler, A. Aharony, Y. Meir, and A. B. Harris, "Series study of percolation moments in general dimension", (1990), Phys. Rev. B **41**, 9183-206.

47. A. C. D. van Enter, J. Adler and J. A. M. S. Duarte, "Finite size effects for some bootstrap percolation models", (1990), J. Stat. Phys. **60**, 323-332; A. C. D. van Enter, J. Adler and J. A. M. S. Duarte, Addendum to "Finite size effects for some bootstrap percolation models", (1991), J. Stat. Phys. **62**, 505-6.

48. A. Silverman and J. Adler "Site percolation threshold for the diamond lattice with diatomic substitution", (1990), Phys. Rev. B **42**, 1369-1375.

49. J. Adler "Solid-on-solid models: series, simulation and telescopes", (1990), Physica A **168**, 646-54.

50. E. Ribak, J. Adler and S. G. Lipson, "Telescope phasing and groundstates of solid-on solid models", (1990) J. Phys. A **23**, L809-14.

51. J. Adler and D. Stauffer, "Evidence for non-universal exponents in bootstrap percolation", (1990) J. Phys. A **23**, L1119-25.

52. C. C. Wan, A. B. Harris and J. Adler, "The dilute quantum antiferromagnet", (1991) J. Appl. Physics **69**, 5191-3.

53. L. Klein, J. Adler, A. Aharony, A.B. Harris, and Y. Meir, "Series expansions for the Ising spin glass in general dimension", (1991), Phys. Rev. B **43**, 11249-73.

54. J. Adler and D. Stauffer, "Search for liquid-gas transition above the critical temperature", (1991), Physica A **175**, 222-8.

55. Yu. L. Khait, A. Silverman, R. Weil and J. Adler, "Large picosecond energy fluctuations of single atoms observed in molecular dynamics studies of a-Si", (1991), Phys. Rev. B **44**, 8308-11.

56. (**Invited**) J. Adler, "Transmission of order in dilute magnets", (1991), Physica A **177**, 45-50.

57. J. Adler and D. Stauffer, "Monte Carlo and series study of corrections to scaling in the Baxter-Wu model", (1992), Physica A **181**, 396-405.

58. J. Wang, A.B. Harris and J. Adler, "Series approach to randomly diluted elastic networks", (1992) Phys. Rev. B **45**, 7084-93.

59. C. Munkel, D. Heermann, J. Adler, M. Gofman and D. Stauffer, "The dynamic critical exponent of the 2,3, and 5 dimensional kinetic Ising model", (1993) Physica A **193**, 540-8.

60. J. Adler, A. Aharony, R. Blumenfeld, A. B. Harris and Y. Meir, "The distribution of the logarithms of currents in percolating resistor networks. II. Series expansions", (1993) Phys Rev B, **47**, 5770-82.

61. M. Gofman, J. Adler, A. Aharony, A. B. Harris and D. Stauffer, "Series and Monte-Carlo study of High-Dimensional Ising Models", (1993) J. Stat. Phys, **71**, 1219-28.

62. M. Gofman, J. Adler, A. Aharony, A. B. Harris and M. Schwartz, "Evidence for two exponent scaling in the random field Ising model", (1993) Phys. Rev. Lett., **71**, 1569-72.[77/54] Addition P.2841,

63. J. Adler, I. Chang and S. Shapira, "Visualization of graphical methods of series analysis", (1993) International Journal of Modern Physics C, **4**, 1007-22.

64. J. Adler, C. Holm and W. Janke, "High-Temperature Series Analysis of the Classical Heisenberg and XY Model", (1993) Physica A **201**, 581-8.

65. S. Shapira, L. Klein, J. Adler, A. Aharony and A. B. Harris, "Phase diagram of the dilute Ising spin glass in general dimension", (1994) Physical Review B, **49** 8830-8841.[6/7]

66. D. Stauffer, J. Adler and A. Aharony, "Universality at the three-dimensional percolation threshold", (1994) J. Phys. A **27 L**475-9.

67. A. Silverman, A. Zunger, R. Kalish and J. Adler, "Effects of configurational, positional and vibrational degrees of freedom on an alloy phase diagram : a Monte-Carlo study of $Ga_{1-x}In-xP$", (1995) J. Phys. C **7** 1167-80;Addition 5417.

68. I. Chang, Z. Lev, A. B. Harris, J. Adler and A. Aharony, "Localization Length Exponents in Quantum Percolation", (1995) Phys. Rev. Lett. **74** 2094-7.

69. A. Silverman, A. Zunger, R. Kalish and J. Adler, "Atomic-scale structure of disordered $Ga_{1-x}In-xP$ alloys", (1995) Phys. Rev. B, **51** 10795-816.

70. J. Adler and V. Privman, "Series Analysis of Tricritical Behaviour: Mean-Field Model and Slicewise Padé Approximants", (1995) J. Phys. A , **28** 2445-56.

71. A. Silverman, A. Zunger, R. Kalish and J. Adler,
"Correlated atomic displacements in the chemically random $Ga_{1-x}In-xP$ alloy", (1995) Europhysics Letters, **31** 373-8.

72. J. Adler, A. Brandt, W. Janke and S. Shmuylian, "Three State Potts Antiferromagnet on the Triangular Lattice", (1995) J. Phys. A, **28** 5117-5129.

73. I. Chang, Z. Lev, A. B. Harris, J. Adler and A. Aharony, "Localization Transition in Quantum Percolation", "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, VIII", edited by D. Landau, Springer, (1995), 133-9.

74. S. G. Lipson, J. Adler, G. Baum, A. Geminterm and A. Hashibon, "Numerical Simulations of Roughening Temperatures in a hexagonal van-der-Waals ^{4}He Crystal", (1995) J. Low Temperature Physics, **101**, 683-8.

75. J. Adler and D. Stauffer, "Dynamical critical behaviour of the four-dimensional Ising model", (1995) International Journal of Modern Physics C, **6**, 807-12.

76. M. Gofman, J. Adler, A. Aharony, A. B. Harris and M. Schwarz, "Critical Behaviour of the Random Field Ising Model", (1996) Phys. Rev. B, **53**, 6362-84.

77. R. R. P. Singh and J. Adler, "High temperature expansion study of the Nishimori multicritical point in two and four dimensions", (1996) Phys. Rev. B. **54** 364-7.

78. R. R. P. Singh and J. Adler, "Hyperuniversal amplitude ratios and the central charge of the spin-1 Ising model", (1996) Phys. Rev. B. **54**, 2996-8.

79. D. Stauffer and J. Adler, "Logarithmic Factors, Critical Temperature and Zero Temperature Flipping in the 4D Kinetic Ising model", (1997) International Journal of Modern Physics C, **8**, 263-7.

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87. Z. Salman and J. Adler, "High and low Temperature series estimates for the critical temperature of the 3D Ising model" (1998), International Journal of Modern Physics, C, **9**, 195-209.

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89. I. Rosenblum, J. Adler and S. Brandon, "Calculation of thermal properties of diamond from simulated phonon spectra" (1998), Computational Materials Science, **12**, 9-25.

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92. I. Rosenblum, J. Adler and S. Brandon, "Parallization of implicitly long-range molecular dynamics potentials", (1999), Int. J. Mod. Phys. C, **10**, 189-204.

93. J. Adler, A. Hashibon, A. Kanigel, I. Rosenblum and D. Saada, "Visualization for molecular dynamics in solids", (1999) "Computer Simulation Studies in Condensed Matter Physics, XI", edited by D. Landau and B. Schuttler, Springer, 186-90.

94. R. Palmer and J. Adler, "Ground States for large samples of two-dimensional Ising spin glasses" (1999) Int. J. Mod. Phys. C, **10**, 667-75.

95. **(Invited)** J. Adler, "A walk in phase space: Solidification into crystalline and amorphous states", for a special theme issue of the American Journal of Physics on Thermodynamics, Statistical Mechanics and Statistical Physics, (1999), edited by H. Gould and J. Tobochnik, **67**, 1145-8.

96. D. Saada, J. Adler and R. Kalish, "A new lowest energy site for hydrogen in diamond" (2000), Phys. Rev. B, **61**, 10711.

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107. J. Adler, V. Sorkin and E. Polturak, "Visualization of Melting Simulations" in "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, XVI", (2003), edited by D. Landau, S. P. Lewis and B. Schuttler, p.177-80.

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109. V. Sorkin, E. Polturak and J. Adler, "Molecular dynamics study of melting in a bcc metal - vanadium I: mechanical melting", (2003), Phys. Rev B **68**, 174102.

110. V. Sorkin, E. Polturak and J. Adler, "Molecular dynamics study of melting in a bcc metal - vanadium II: thermodynamic melting", (2003), Phys. Rev B **68**, 174103.

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113. F. Tavazza, D.P. Landau and J. Adler, "Phase diagram and structural properties for a compressible Ising ferromagnet at constant volume", (2004) Phys. Rev. B**70**, 184103.

114. R. Hihinashvilli, J. Adler, S.H. Tsai and D.P. Landau, "Visualization of vector spin configurations", for "Recent Developments in Computer Simulation Studies

in Condensed Matter Physics, XVII", (2004) edited by D. Landau, S. P. Lewis and B. Schuttler, Springer, p. 169-73.

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116. N. Schreiber and J. Adler, "Monte Carlo study of the pure and dilute Baxter-Wu model", (2005) J. Phys A, **38**, 7253-67.

117. J. Adler and S. Rosen, "Teaching applications of AViz" for "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, XVIII", (2005) edited by D. Landau, S. P. Lewis and B. Schuttler, Springer, p. 95-9.

118. S. Zommer, E. N. Ribak, S. G. Lipson, and J. Adler, "Simulated annealing in ocular adaptive optics", (2006) Optics Letters **31**, 939-41.

119. O. Ofer, J. Adler and A. Hoffmann, "Hydrogen bonding in diamond: a computational study", (2006) Int. J. Mod. Phys. C, **17**, 959-66.

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124. A. Sorkin, R. Kalish and J. Adler, "Nanodiamond under pressure: Simulations in the presence of Hydrogen", (2008) Phys. Rev. B., **78**, 155435.

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127. A. Silverman, A. Hoffman and J. Adler, "Computational study of interstitial hydrogen atoms in nano-diamond grains embedded in an amorphous carbon shell" Communications in Computational Physics, (2011), **9**, p. 843-58.

128. T. Mutat, M. Sheintuch and J. Adler, "Prediction of small molecules transport and separation in carbon nanotubes" Journal of Chemical Physics, (2011), **134**, 044908. Also featured in Virtual Journal of Nanoscale Science and Technology, **23**, no 5 and Virtual Journal of Biological Physics Research, **21**, no 3.

129. P. Pine, Y. Yaish and J. Adler, "Simulational and vibrational analysis of thermal oscillations of single-walled carbon nanotubes", Phys. Rev. B (2011), **83**, 155410.

130. A. Silverman, J. Adler and R. Kalish, "Diamond membrane surface after ion implantation indiced graphitization for graphite removal:molecular dynamics simulation, Phys. Rev. B (2011), **83**, 224206.

131. P. Pine, Y. Yaish and J. Adler, "Thermal oscillations of structurally distinct single-walled carbon nanotubes", Phys. Rev. B (2011).**84**,245409.

132. P. Pine, Y. Yaish and J. Adler, "The affect of boundary conditions on the vibrations of single-walled carbon nanotubes", J. App. Phys., (2011), **110**, 124311, Also featured in Virtual Journal of Nanoscale Science and Technology, **25**, no 2.

133. P. Bavli, E. Polturak and J. Adler, "Molecular dynamics study of melting of the hcp metal, Mg", Phys. Rev. B (2011), **84**, 235442.

134. T. Mutat, M. Sheintuch and J. Adler, "Single species transport and self diffusion in wide SWCNTS", JCP, (2012) **136**, 23492.

135. T. Vogel, T. Mutat, J. Adler and M. Bachmann, "Morphological similarities of single-walled nanotubes and polymers adsorbed on nanowires", CiCP, (2013) **13**, 1245.

136. P. Pine, Y. Yaish and J. Adler, "Vibrational analysis of thermal oscillations of single-walled carbon nanotubes under axial strain", PRB, (2014) **89**, 115405.

137. I. Paykin, L, Yacobi, Joan Adler and E. Ribak "Phasing a segmented telescope", PRE (2015) **91** 023302.

138. Bastien Grosso, Valentino R. Cooper, Polina Pine, Adham Hashibon, Yuval Yaish and Joan Adler, "Visualization of electronic density", Computer Physics Communications (2015) **195**, 1-13.

139. A. Silverman, R. Kalish and J. Adler,"Optimization of the formation efficiency of the nitrogen vacancy center in diamond"CiCP (2016), **19**, 380.

140. J. Adler, A. Hashibon, K. Mattila and several others "Visualization in the integrated SimPhoNy multiscale simulation framework", Computer Physics Communications (2018) COMPHYComputer Physics Communications 6512, in proof.

Original papers (in preparation)

(c) Invited Reviews (published)

1. J. Adler, M. Moshe and V. Privman, "Corrections to scaling for percolation", in "Percolation Structures and Processes", edited by G. Deutscher, R. Zallen and J. Adler, Annals of the Israel Physical Society, Vol. 5 (Adam Hilger, Bristol, 1983), P. 397-423.

2. J. Adler, Y. Meir, A. Aharony, A. B. Harris, and L. Klein, "Low concentration series in general dimension" for a volume in honour of C. Domb: (1990) J. Stat. Phys. **58**, 511-38.

3. J. Adler "Bootstrap percolation", (1991) Physica A, **171**, 453-470.

4. A. Silverman and J. Adler, "Animated simulated annealing", (1992) Computers in Physics, **6**, 277-281.

5. J. Adler, "Series Expansions", (1994) Computers in Physics, **8**, 287-295.

6. J. Adler,"Modern Series Analysis Techniques and the Relation to Monte Carlo Results on Similar Models", in "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, VIII", edited by D. Landau et al, Springer, (1995), 5-17.

7. J. Adler, "Series versus Simulations", (1996) for "Annual Reviews of Computational Physics, Vol IV", edited by D. Stauffer, 241.

8. J. Adler, "Visualization Education in Israel", (1996) for a special issue of "Computer Graphics", edited by J. Brown, Vol 30, p.16.

9. J. Adler, "Visualization in Atomistic and Spin Simulations", (2003) Computers in Science and Engineering, **5**, 61-65.

10. J. Adler, "Atomistic Simulation and Visualization", ISCM newsletter, September 2007, p. 2-4 (in hebrew)

11. J. Adler and E. Mocskos, "Computational Science in Developing Countries", Introduction and issue editors, IEEE/AIP "Computing in Science and Engineering", May/June 2018, **20** Introduction, pp10-12.

(d) Books

1. "Percolation Structures and Processes", edited by G. Deutscher, R. Zallen and J. Adler, Annals of the Israel Physical Society, Vol. 5 (Adam Hilger, Bristol, 1983). Under consideration for reprinting, 2016.

2. J. Adler, "Visualization in Computational Physics/Materials Science", in preparation for Taylor and Francis, due 2017.

(e) Book reviews

1. "Chaos and Fractals", by H. Peitgen, H. Jurgens and D. Saupe, J. Stat. Phys., (1993), **73**, 807.
2. "Fractal for the Classroom", by H. Peitgen, H. Jurgens, D. Saupe, E. Maletsky, T. Perciante and L. Yunker, J. Stat. Phys.,(1993), **73**, 809.

(f) Movies

1. S. Goldberg and J. Adler, "The Schroedinger Movie".
2. I. Rosenblum, D. Saada, S. Brandon and J. Adler,"Simulations in Diamond".
3. A. Silverman and J. Adler, "Animated Simulated Annealing".
4. T. Mutat, H. Zilken and J. Adler,"Diffusion of Methane in a Nanotube", 3d Stereo, included in PRACE video, 2013.

CONFERENCES

(a) Plenary or invited talks

1. Third Bar Ilan Conference on Frontiers in Condensed Matter Physics, Conference in honour of Professor C. Domb. January 1990, Ramat Gan.
   (**Invited lecture**) "SOS models: series, simulations and telescopes".
2. Workshop on Statistical Physics of Disordered Solids, Glass and Polymers I Calcutta, December, 1991. (**Invited lecture**) unable to attend due to visa problem.
3. Conference on Teaching Modern Physics, Satellite of Statphys 18, July 1992, Badajoz, Spain,
   (**Invited participant**) "Teaching Computational Physics"
4. "Scientific Computing - Concepts and Applications", 9th Technion-Aachen-Jülich Umbrella Symposium, September 1992.
   (**Invited lecture**) "Parallel algorithm for the critical behaviour of spin glasses".
5. Workshop on Statistical Physics of Disordered Solids, Glass and Polymers II New Delhi, 1995, Satellite of Statphys 19 (**Invited lecture**).
6. "Recent Developments in Computer Simulation Studies in Condensed Matter Physics", 8th Workshop of the Center for Simulational Physics, UGA, USA, 1995.
   (**Invited lecture**) "Modern series analysis techniques and the relation to Monte Carlo results on similar models".
7. Annual meeting of the Israel Physical Society, Jerusalem, 1996,

(**Invited lecture**) "Plastic, Glass and Percolation."

8. "Interacting particle Systems and their Applications", Haifa, June, 1996, (**Invited lecture**) "Series Expansions for Percolation and Ising Models."

9. "High Performance Computing", Workshop organised by the Ministry of Science, Shefayim, February, 1997
   (**Invited lecture**) "Parallel methods for Discrete and Continuous Simulations in Solids."

10. Summer School in Honour of Prof. Aroujo, Oporto, August, 1998
    (**Series of invited lectures**) "Interactive Simulations."

11. US/Israel NGI/Internet2 Workshop, Tel Aviv Hilton, May, 1999
    (**Plenary lecture**) "Virtual Reality on an Atomic Level."

12. LT-22, Helsinki, August 1999
    (**Invited lecture**), "The Role of Point Defects in Melting of Solid ^{3}He", E. Polturak, A. Kanigel, N. Gov, T. Markovich and J. Adler. Presented by E. Polturak.

13. Workshop on Multiscale Computations, Eilat, April 2000
    (**Invited lecture**), "Visualization Techniques for Muliscale Monte Carlo and Molecular Dynamics Simulations."

14. Conference on Computational Physics, September 2001, Aachen, Germany, (**Invited lecture**), "Visualization of MD and MC Simulations for Atomistic Modeling".

15. International Workshop on Percolating Towards Ageing Through Physics, February 2003, Niteroi, Brazil, (**Invited lecture**), "Bootstrap percolation".

16. CompPhys03, 4th NTZ Workshop on Computational Physics, December 2003, Leipzig, Germany, (**Invited lecture**), "Visualizing Atomistic Simulations".

17. HPC workshop, 11th October, 2004 Technion,, (**Invited lecture**), "Nanomaterials - Computational Experiments versus Laboratory Experiments".

18. Annual Israel Grid Event, 6th December 2005, Herzliya, (**Invited lecture**), "Visualization for Atomistic Simulations".

18. ISCM22, 15th March 2007, Technion, (**Invited lecture**), "Atomistic simulation and visualization of condensed matter with examples from nanotubes and nanodiamond".

19. CompPhys07, 4th NTZ Worksop on Computational Physics, 29th November 2007, Leipzig, Germany, (**Plenary lecture**), "Simulation of nanotubes and their applications".

20. Conference on Computational Physics, August 2008, Ouro Preto, Brazil,

(**Invited lecture**), "Visualization techniques for modelling carbon allotropes"

21. CSTRC Linksceen HPC users meeting, October 2008, Tel Aviv, Israel, (**Invited lecture**), " Parallel algorithms for nanoscale atomistic simulations"

21. International LinkSCEEM High Performance Computing Conference, October 6th-8th, 2009, Paphos, Cyprus, (**Plenary lecture**), "From proposal to results: atomistic visualization and simulation on NANCO"

22. "Recent Developments in Computer Simulation Studies in Condensed Matter Physics", 24th Workshop of the Center for Simulational Physics, UGA, USA, 2011, (**Invited lecture**), "Adventures in the wonderful world of carbon"

23. Computational Physics Conference 2011 October 30 - November 3, 2011, Gatlinburg, Tennessee. (**Invited lecture**)"Webpage preparation as a tool in (Computational) Physics Education"

24. "EAST MEETS WEST", EU meeting, 1-4th September, 2012(**Invited lecture**)"Remote visualization of results from atomistic HPC simulations", presented by A. Silverman due to illness.

25. "LINKSCEEM meeting", 3rd September, 2012 (**Keynote presentation**) "Helping the casual PC user transform to the world of parallel HPC", presented by A. Silverman due to illness.

26. VIIth Brazilian Meeting on Simulational Physics, 5th-10th August 2013, Joao Pessoa, Brazil, **Invited Lecture** "Simulation and Visualization of Implatation in Diamond"

27. InTOP 2015, Jyvaskyla, Finland, 28th-29th May, 2015 "Vizualization of electronic density of nanotubes"

28. Recent Advances in Computational Modelling for Energy Applications, Technion, 7th July, "Visualization of Electronic Density from Quantum Espresso Calculations".

29. Phase transitions and critical phenomena (PTCP), "Percolation in Education and Application in the 21st Century" Conference in honour of Wolfhard Janke's 60th Birthday, April, 2016, Coventry, England.

30. Master class on Computational Physics Education, Moscow, 15-17th May, 2017 HSE Moscow.

(b) Contributed presentations

1. Fifteenth International Conference on Thermodynamics and Statistical Mechanics, July 1983, Edinburgh,

"The "non-universality" of corrections to scaling in exactly solved models in two dimensions".

2. Statistical Mechanics Meeting, Rutgers University, May 1986,
"Transmission of order in some unsusual dilute systems" with R. G. Palmer and H. Meyer.

3. Sixteenth International Conference on Thermodynamics and Statistical Mechanics, August 1986, Boston,
"Absence of order in some quenched dilute magnets above p_c " with R. G. Palmer and H. Meyer,
"Diffusion percolation " with A. Aharony,
"Generalized Roskies' transform for inhomogeneous differential approximants" with J. J. Rehr,
"Order propagation and non-local constraints in dilute AFM Potts models" with Y. Gefen, M. Schick and W.-H. Shih.

4. Statistical Mechanics Meeting, Rutgers University, December 1987,
"Transmission of order in a dilute spin glass" with A. van Enter and A. B. Harris.

5. Gentner Symposium on Science and Computation, Neve Ilan, March 1989,
"Exact series expansions" with A. Aharony, A. B. Harris, Y. Meir and L. Klein.

6. Seventeenth International Conference on Thermodynamics and Statistical Mechanics, August 1989, Rio de Janeiro,
(**Refereed Oral**)"Correlated Percolation",
"Telescope phasing and groundstates of solid-on-solid models" with E. Ribak and S. G. Lipson,
"New results from exact series expansions for general dimension"   with A. Aharony, A. B. Harris, Y. Meir and L. Klein.

7. Eighteenth International Conference on Thermodynamics and Statistical Mechanics, July 1992, Berlin,
"New Graphical Methods for Series Analysis" with Iksoo Chang.
(**Refereed Oral**) "Animated Simulated Annealing" with Amihai Silverman.
"Roughening Transitions on the HCP Lattice"   with Gideon Baum and S. G. Lipson.

8. Twentieth International Conference on Thermodynamics and Statistical Mechanics, July 1998, Paris,
"Groundstates of Large Samples of two-dimensional Ising Spin Glasses " with Richard Palmer.

9. CCP2007 (Conference on Computational Physics, 2007, Belgium.) "Flow in nanotubes", with Tali Mutat and Moshe Sheintuch.

10. CCP2009 (Conference on Computational Physics, December 2009, Taiwan.) (**Refereed Oral**) "Visualization of hydrogen atom wavefunctions"

11. CCP2010 (Conference on Computational Physics, June 2010, Trondheim, Norway.) (**Refereed Oral**)"Simulation and visualization of nanodiamond and nanographite", with J. Zaffran, A. Silverman, A. Sorkin, O. Cohen and R. Kalish.

12. CCP2012 (Conference on Computational Physics, October 2012, Kobe, Japan.) (**Refereed Oral**)
'3D Visualization of atomistic simulations on every desktop'", with D. Peled and A. Silverman.

13. CCP2013 (Conference on Computational Physics, August 2013, Moscow, Russia.) (**Refereed Oral**) "Simulation and visualization of ion-implantation in diamond" with Amihai Silverman, Niv Ierushalmi, Anastassia Sorkin and Rafi Kalish,

14. CCP2013 (Conference on Computational Physics, August 2013, Moscow, Russia.) (**Refereed Oral**) "How do I simulate problem X?", with Yaron Artzi, Liron ben Bashat, Tzipora Yael Izraeli, Meital Kreif, Ido Lavi, Alexander Leibenzon, Adam Levi, Itai Schlesinger, Elad Toledano, Uria Peretz, Yonatan Weisler and Alon Yagil,

15. Extended oral presentation at the 27th Workshop on Simulational Physics in February 2014, Athens, GA, USA, "A "Rosetta stone" for AViz", with Hila Glanz, and Nadir Izrael.

16. CCP2014 (Conference on Computational Physics, August 2014, Boston, USA.) (**Refereed Oral**) "Phasing a segmented Telescope" with Irina Paykin, Lee Yacobi and Erez Ribak.

17. Oral presentation at the 28th Workshop on Simulational Physics in February 2015, Athens, GA, USA," Electronic density vizualization and measurement of the nanotube width", with P. Pine, Y. Yaish, B. Grosso, V.C. Cooper, A. Hashibon and O. Adler,

18. Oral presentation at the 29th Workshop on Simulational Physics in February 2016, Athens, GA, USA,"Simulation and Visualization of the Wulff Construction and Surface Energy for Adjoined Crystals", with L. Saltoun and E. Polturak.

19. Oral presentation at CCP2016, 10-14th July, 2016, South Africa, "GPUs in a Computational Physics Course", (**Refereed Oral**) with Gal Nissim and Ahmad Kiswani.

20. Plugfest presentation at CECAM-IRL - Multiscale Simulation: from materials through to Industrial Usage "AViz".

21. Oral presentation at the 30th Workshop on Simulational Physics in February 2016, Athens, GA, USA, "A study of vibrating nanotubes with additional adsorbed mass or "How to stick stuff onto nanotubes" with Omri Adler.

22. Oral presentation at CCP2017, 10-14th July, 2017, Paris, "Groundstates of liquid crystals with Colloids, with Oshri Halimi and Priel Aharonian.

(c) Refereed papers in conference proceedings

1. E. Ribak, J. Adler and S.G. Lipson, "Telescope phasing by simulated annealing", Proceedings of the SPIE Conference on Astronomical Telescopes and Instrumentation for the 21st Century, Tucson, Arizona, February, 1990.

2. A. Silverman, J. Adler and R. Weil, "Computer model for diffusion of fluorine in amorphous silicon", Proceedings of the 8th International Conference on Thin Films, Thin Solid Films, 1990, J. Thin Films, 193/194, 571-6.

3. Yu. L. Khait, A. Silverman, R. Weil and J. Adler, "Large picosecond energy fluctuations of single atoms in a-Si revealed by molecular dynamics", Proceedings of the 14th International Conference on Amorphous Semiconductors, 1991, J. Non-crystalline Solids.

4. J. Adler, "Visualization in Condensed Matter Research and Education", Proceedings of the Scientific Visualization Conference, Jerusalem, November 1995, 59-62.

5. "Ion beam-induced Damage in Diamond: Fundamental Understanding and Practical Applications", R. Kalish, S. Prawer, C. Uzan-Saguy, Joan Adler and David Saada, Diamond Films and Technology **6**, 337 (1996); Recent progress in "Diamond Electronics" edited by Shlomo Rotter and Akio Hirski, (1996), p. 179.

6. "Ion-Implantation Induced Defects in Diamond and Their Annealing: Experiment and Simulation", R. Kalish, A. Reznik, S. Prawer, D. Saada and J. Adler, phys. stat. sol. (1999) **174**, 83-99.

7. "The Role of Point Defects in Melting of Solid He", E. Polturak, A. Kanigel, Nir Gov, Tuvy Markovitch and Joan Adler ", Physica B, (2000), **200** 142-5.

8. "Visualization Techniques for Debugging, Control and Presentation of Multiscale Monte Carlo and Molecular Dynamics Simulations", Joan Adler in Multiscale Computational Methods in Chemistry and Physics, Volume 177 Nato Science Series: Series III Computer and Systems Sciences, Edited by A. Brandt, J. Bernholc and K. Binder (2001), p. 315-8.

9. "Monte Carlo Simulations of Compressible Ising Models: Do we understand them?", D. P. Landau, B. Dunweg, M. Laradji, F. Tavazza, J. Adler, L. Cannavaccioulo, Xiaoliang Zhu, (2006) in Computer Simulations in Condensed Matter Systems: From Materials to Chemical Biology, Vol. 2, Lecture Notes in Physics **704**, 127-38.

10. "Monte Carlo Simulations of a Compressible Ising Ferromagnet at Constant Volume", D. P. Landau, F. Tavazza and J. Adler, Computer Physics Communications, (2005), **169**, 149-52.

11. "Visualization Techniques for Modelling Carbon Allotropes", J. Adler and P. Pine, Computer Physics Communications, (2009), **180** , 580-2.

12. Joan Adler, A. Sorkin and R. Kalish, "Visualization of nanodiamond formation in molten carbon under pressure"in "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, XVV", (2007) edited by D. Landau, S. P. Lewis and B. Schuttler, Physics Procedia, (2010),**7**, 2-6.

13. Joan Adler and Or Cohen, "Solid Hydrogen - New twists on an old problem" "Recent Developments in Computer Simulation Studies in Condensed Matter Physics, X", edited by D. Landau, S. P. Lewis and B. Schuttler, Physics Procedia, (2010), **6**, 2-6.

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15. P. Bavli and Joan Adler "Parallel codes for simulating elastic constants and melting in Ar and Mg," Physics Procedia, (2010), **4**, 3-7.

16. J. Adler, J. Zaffran, A. Silverman, A. Sorkin, O. Cohen and R. Kalish, "Simulation and visualization of nanodiamond and nanographite", Computer Physics Communications, (2011), **182**, 2009.

17. J. Adler, Y. Koenka and A. Silverman, "Adventures in carbon visualization with AViz", Physics Procedia, (2011), **15**, 7-16.

18. T. Vogel, T. Mutat, J. Adler and M. Bachmann, "Groundstate structures of polymers strongly adsorbed on nanocylinders" Physics Procedia, (2011), **15**, 87-91.

19. P. Pine, Y. Yaish and J. Adler, "Simulation of nanosensors based on single walled carbon nanotubes", IOP Conference Series, (2012) **402**, p.012002.

20. D. Mazvovsky, G. Halious and J. Adler, "The role of projects in (Computational) Physics Education", Physics Procedia, (2012) **34**, 1-5.

21. D. Peled, A. Silverman and J. Adler, "3D visualization for atomistic simulations on every desktop", IOP Conference Series, (2013) **454**, p. 012076.

22. J. Adler, "Educating the next generation of Computational Physicists", Physics Procedia, (2014) **53**, p. 2-6.

23. Joan Adler, Amihai Silverman, Niv Ierushalmi, A. Sorkin and Rafi Kalish, "Simulation and visualization of ion-implantation in diamond", IOP Conference Series, (2014) **487**, 01215.

24. Joan Adler, Yaron Artzi, Liron ben Bashat, Tzipora Yael Izraeli, Meital Kreif, Ido Lavi, Alexander Leibenzon, Adam Levi, Itai Schlesinger, Elad Toledano, Uria Peretz, Yonatan Weisler and Alon Yagil, "How do I simulate problem X?", IOP Conference Series, (2014) **510**, 012003.

25. Joan Adler, Hila Glanz, and Nadir Izrael, "A "Rosetta stone" for AViz", Physics Procedia, (2014), **57c** pp 2-6. (DOI10.1016/j/phpro.2014.08.122)

26. Joan Adler, Omri Adler, Meytal Kreif, Or Cohen, Bastien Grosso Adham Hashibon, Valentino R. Cooper, "Mini-review of Electron Density Visualization" (2015) Physics Procedia, 68, p. 26.

27. Phase transitions and critical phenomena (PTCP), "Percolation in Education and Application in the 21st Century" Springer Festschrift for the 60th Birthday of Wolfhard Janke, Eur. Phs. J. Special Topics, DOI10.1140/epjst/e2016-60277-y

28. Joan Adler, L. Saltoun and E. Polturak, "Simulation and Visualization of the Wulff Construction and Surface Energy for Adjoined Crystals", (2016) IOP Conference Series**750**, 012011.

29. Joan Adler, Gal Nissim and Ahmad Kiswani, "GPUs in a Computational Physics Course", (2017) J. Phys.: Conf. Ser. 905 012017

30. Joan Adler and Omri Adler "A study of vibrating nanotubes with additional adsorbed mass or "How to stick stuff onto nanotubes" (2017) IOP Conf. Series: Journal of Physics: Conf. Series **921** 012008.

31. Joan Adler, Oshri Halimi and Priel Aharonian, "Groundstates of liquid crystals with Colloids, in press.

(d) Conference organisation

1. Organiser of session on Computational Physics at the (Israel Physical Society) IPS meeting, Jerusalem, May, 1990.

2. Organiser of the 1st Israel One-Day meeting on Computational Physics, Technion, June, 1992.

3. Member of the organising committee for "Scientific Computing - Concepts and Applications", 9th Technion-Aachen-Jülich Umbrella Symposium, Sept, 1992.

4. Co-organiser of the 2nd Israel One-Day meeting on Computational Physics, Bar-Ilan, December, 1992.

5. Co-organiser of One-Day workshop on Advances in Interacting Spin and Electron Systems, Technion, June, 1993.

6. Organiser of the 3rd Israel One-Day meeting on Computational Physics, Technion, November 1993.

7. Organiser of workshop on New Developments in Series Expansions, Insititute of Theoretical Physics, Technion, June, 1994.

8. Member of organising committee and organiser of session on Computational Physics at the IPS meeting, Haifa, May, 1994.

9. Organiser of session on Computational Physics at the IPS meeting, Bar-Ilan, April, 1995.

10. Member of organising committee, 1st Israeli Conference on Scientific Visualization, Jerusalem, November, 1995.

11. Organiser of session on Simulations, Workshop on Interacting Particle Systems, Institute of Advanced Studies in Mathematics, Technion, June, 1996.

12. Chair of organising committee, 2nd Israeli Conference on Scientific Visualization, Haifa, June, 1996.

13. Organiser of session on Computational Physics at the IPS meeting, Rehovot, April, 1998.

14. Organiser of "Conversations about Computational Physics", Technion, October 1999.

15. Chair of Organising Committee of the 46th annual meeting of the Israel Physical Society, May, 2000 and organiser of the session on Computational Physics.

16. Member of the Organising Committee and chair of session for the French-Israel Conference on Teaching over Internet-2, November, 2000, Tel Aviv.

17. Member of the International Programme Committee of the Conference on Computational Physics, September 2001, Aachen, Germany.

18. Member of Organising Committee and Co-organiser and chair of session on Computational Physics at the 47th annual meeting of the Israel Physical Society, Tel Aviv, December 17th, 2001.

19. Co-organiser of a One-Day meeting on "Atomistic and Nanoscale Simulations", Technion, January, 2003.

20. Member of Organising Committee and Organiser and Chair of session on Computational Physics at the 49th annual meeting of the Israel Physical Society, Bar Ilan, December 21st, 2003.

21. Chair of Organising Committee and Organiser of the session on Computational Physics at the 50th annual meeting of the Israel Physical Society, Technion, December 9th, 2004.

22. Member of Committee for HPC workshop at the Technion, October 11th, 2004.

23. Organiser of Carbon Day Workshop - Physics, Technion, 24th May 2005.

24. Member of Organising Committee and Organiser of the session on Computational Physics at the 51st annual meeting of the Israel Physical Society, Ort-Braude December 29th, 2005.

25. Member of Scientific Organising Committee, Organiser of the session on Computational Physics and Chair of the Graduate Student Prize committee at the 52nd annual meeting of the Israel Physical Society, Jerusalem, December 17th, 2006.

26. Member of the International Programme Committee of the Conference on Computational Physics, September 2007, Brussells, Belgium.

27. Co-chair of a workshop on Computation in Nano-technology, Technion, 9-10th May, 2007.

28. Member of Scientific Organising Committee, Organiser of the session on Computational Physics and Chair of the Graduate Student Prize committee at the 53rd annual meeting of the Israel Physical Society, Rehovot, December 9th, 2007.

29. Member of the International Programme Committee of the Conference on Computational Physics, August 2008, Ouro Preto, Brazil.

30. ICMAT2009, Member of Organising Committee of the Symposium on Computational Materials Design at all Scales: From Theory to Application in Singapore, June-July, 2009.

31. Member of the Advisory Committee of the Conference on Computational Physics, December 2009, Taiwan.

32. Co-chair of the 2nd workshop on Computation in Nano-technology, Technion, 21-22nd April, 2009.

33. Organiser of a Mini-Symposium on Computational Physics, 13th October, 2009, Technion.

34. Co-organiser of 2nd Israeli CSTRC Users Meeting, Technion, 1st December, 2009.

35. Member of the Scientific Advisory Board of CCP2010(Conference on Computational Physics, 2010), Trondheim, Norway June 23-26, 2010.

36. Member of the Scientific Advisory Board of CCP2011(Conference on Computational Physics, 2011), Gatlinburg, USA, October, 2011.

37. Organiser of session on Computational Physics at the IPS meeting, Technion, December, 2011.

38. Member of the Scientific Advisory Board of CCP2012(Conference on Computational Physics, 2012), Kobe, Japan, October, 2012.

39. Member of the Scientific Advisory Board of CCP2013(Conference on Computational Physics, 2013), Moscow, Russia, August, 2013.

40. Member of the Scientific Advisory Board of CCP2014(Conference on Computational Physics, 2014), Boston, USA, August, 2014.

41. Member of the Scientific Advisory Board of CCP2015(Conference on Computational Physics, 2015), Gujwarti, India, December, 2015.

42. Member of the Scientific committee for INTOP2015, 28th-29th May 2015, Jyvaskyla, Finland.

43. Member of the Scientific Advisory Board of HPC Applications in Physical Sciences, (A part of the 11th International Conference on Parallel Processing and Applied Mathematics PPAM 2015, organized in Krakow, Poland, on September 6-9, 2015)

44. Organiser of an EU FP7 collaboration SimPhoNy training workshop, Technion, February 2016.

45. Member of the Scientific Advisory Board of CCP2016 (Conference on Computational Physics, 2016), Pretoria, South Africa, July, 2016.

46. Co-organiser of the CECAM-IRL "CECAM-IRL - Multiscale Simulation: from materials through to Industrial Usage, EU FP7 Cluster meeting, Dublin, September 4th-7th 2016.

47. Member of the organising committee of PRACE workshop Tel Aviv, 5-9 February, 2017.

48. Member of the Scientific Advisory Board of HPC Applications in Physical Sciences, (A part of the 12th International Conference on Parallel Processing and Applied Mathematics PPAM 2017, organized in Lublin, Poland, on September 10-13, 2017)

45. Member of the Scientific Advisory Board of CCP2017 (Conference on Computational Physics, 2017), Paris, France, July, 2017.

(e) Public Lectures

1. Australian Institute of Physics,
Public Lecture, August 2006,
"Atomistic Simulation and
Visualization of Condensed Matter".
2. First LIGHT conference
To encourage high school students to study STEM.
Lod, Israel, "Percolation"

Email: phr76ja@technion.ac.il

Web Address: http://phycomp.technion.ac.il