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Born 9/20/1949 in Istanbul, Turkey
Citizenship: Turkey
Fluent languages: Turkish, French, English

YÖK Higher Educ. Council President Advisor and High Performers Nat. Sci. Program Coordinator
Sabancı University President (2009-16) http://webprs.khas.edu.tr/~nberker/ http://web.mit.edu/physics/berker
(see pages 30-31) **126 Mech, EM, QM, PTRG course videos:** http://webprs.khas.edu.tr/~nberker/ on web page

Married to Bedia Erim Berker, Professor of Chemistry, Istanbul Technical University
Sons: Ahmet Selim Berker, Professor of Philosophy, Harvard University;
Ratip Emin Berker, Chemistry, Physics, and Neurology, 3rd year, Harvard University

Degrees: Bachelor of Science in Physics, MIT (1971), Bachelor of Science in Chemistry, MIT (1971)
Master of Science in Physics (1972), Ph.D. in Physics (1977), University of Illinois at Urbana-Champaign

Education and Professional Experience: 1967 First place graduation from Robert College High School, Istanbul

1967-71 Undergraduate student at MIT, with Undergraduate Scholarship from MIT:
5-year double-degree program in Physics and Chemistry completed in 4 years
1968 MIT Freshman Chemistry Prize
1968-69 Operator/system advisor at the MIT Dept. of Mechanical Engineering Computer Center
1970-71 Course manager and tutor in Quantum Mechanics, MIT Education Research Center
1971 American Institute of Chemists Student Award
1971 Elected to Phi Beta Kappa Honorary Scholarship Society
1971-76 Graduate student with Professor M. Wortis, Department of Physics, University of Illinois,
fully supported by University Fellowships, Research and Teaching Assistantships
Sum. 1975 Guest Junior Research Associate, Department of Physics, Brookhaven National Laboratory
Sum. 1979 Member, USA National Academy of Science exchange group to the USSR Academy of Science
1977-79 Postdoctoral Research Fellow, Department of Physics, Harvard University
1979-04 **Assistant Professor (1979-82), Associate Professor (1982-88), Professor of Physics (1988-04), Emeritus Professor of Physics (2004-), Massachusetts Institute of Technology**
1981-82 Consultant, IBM Zürich Laboratory
1981-85 Alfred P. Sloan Fellow
1/1983 Visiting Associate Professor of Physics, Catholic University of Rio de Janeiro, Brazil
6/1984 Tenure awarded at MIT, one year ahead of schedule
1987 MIT Department of Physics Buechner Teaching Prize
4/1987 Visiting Associate Professor of Physics, Oxford University, England
1988 Science Award of the Scientific and Technical Research Council of Turkey (TÜBİTAK)
4/1988 Visiting Associate Professor of Physics, Katholieke Universiteit, Leuven, Belgium;
Solvay Lecturer in Brussels, Belgium; Ehrenfest Lecturer in Leiden, the Netherlands
1988- Fellow of the American Physical Society
1989- Consulting Professor, Bilkent University, Turkey
1993-94 Interdisciplinary Research Group Leader, Center for Materials Science and Engineering, MIT
1994, 97-99 Founder and co-chairperson, Istanbul Technical University Statistical Physics Days. Editor of Proceedings
1995 MIT School of Science Teaching Prize for Excellence in Graduate Education
1996 Outstanding Turkish Scientist Citation, given by the Academy of Sciences of Turkey
1996-04 Adjunct Professor, Bosphorus University, Turkey
1999-04 Sabbatical leave and extended leave of absence from MIT
1999-05 **Professor of Physics, Istanbul Technical University, Turkey**
2000-03 **Head of the Department of Physics, Istanbul Technical University**
2003-04 **Dean of the School of Sciences and Letters, Istanbul Technical University**
1999 Elected Full Member of the Academy of Sciences of Turkey (2008-12 Academy Council Member)
2000-11 Executive Committee (2007-11 Chairperson), TÜBITAK F. Gürsey Research Inst. for Basic Sci., Turkey
2000-04 Academic Officer, Project Interphase, MIT
2003- Founder and Director, MIT - Turkey Freshman Scholars Program
2005-08 **Professor of Physics, Koç University.** Supervised the first Physics Doctorate at Koç University.
2008- Started in Turkey univ. summer classes for high school students (F. Gürsey Inst, Sabancı U, Kadir Has U)
2007 Humboldt Research Award
2008 Best Teacher of the Year, KoçPost Student Newspaper
2009-16 **President, Sabancı University(some of tasks accomplished page 29) Renewed(2016), resigned (2016)**
2010 Founded IICEC Istanbul International Cimate and Energy Center; 2012- Energy Faculty at MIT Energy Initiative
2011 Elected to Academia Europaea
2017 - **Dean of Engineering and Natural Sciences, (2018-) Vice President, Kadir Has University**
2017- Senior Scholar, Istanbul Policy Center, Sabancı University
2017- Council of Higher Education Basic Sciences High Performers Program faculty member
2019 International Special Honor Award (2019), Honor Award (2017) of the Turkish Physical Society
2019- TÜBITAK Research Institute for Basic Sciences Executive Committee member
2020- **YÖK Higher Educ. Council President Advisor and High Performers Nat. Sci. Program Coordinator**

Theses:

1. "Solutions of Binding Site Models of Membranes"
   B.S. Thesis, 211 pages (MIT, 1971).

2. "Phase Transitions and Critical Phenomena: Universality and Global Multicritical Phase Diagrams from Position-Space Renormalization-Group Studies"
   Ph.D. Thesis, 83 pages (U. of Illinois, 1977).

Publications:

3. "Uniaxial and Biaxial Ordering in Magnetic Crystals: Molecular-Field Theory"
   J. Sivardière, A.N. Berker, and M. Wortis, Phys. Rev. B 7, 343-351 (1973).

4. "Critical Interactions for the Triangular Spin-s Ising Model by a Spin-Restructuring Transformation"
   A.N. Berker, Phys. Rev. B 12, 2752-2758 (1975).

5. "Blume-Emery-Griffiths-Potts Model in Two Dimensions: Phase Diagram and Critical Properties from a Position-Space Renormalization Group"
   A.N. Berker and M. Wortis, Phys. Rev. B 14, 4946-4963 (1976).

6. "Exact Renormalization Group with Griffiths Singularities and Spin-Glass Behavior: The Random Ising Chain"
   G. Grinstein, A.N. Berker, J. Chalupa, and M. Wortis, Phys. Rev. Lett. 36, 1508-1511 (1976).

7. "Renormalization-Group Treatment of a Potts Lattice Gas for Krypton Adsorbed onto Graphite"
   A.N. Berker, S. Ostlund, and F.A. Putnam, Phys. Rev. B 17, 3650-3665 (1978).

8. "Phase Transitions in Gases Adsorbed onto Graphite and the Position-Space Renormalization-Group Method"
   A.N. Berker, S. Ostlund, and F.A. Putnam, in Recent Advances in Engineering Science, ed. R.L. Sierakowski (University of Florida, 1978), pp. 361-365.

9. "Multicritical Phase Diagram of Gases Adsorbed on Graphite: Temperature Variation and Finite Size Effects"
   S. Ostlund and A.N. Berker, Phys. Rev. Lett. 42, 843-846 (1979).

10. "Superfluidity and Phase Separation in Helium Films"
    A.N. Berker and D.R. Nelson, Phys. Rev. B 19, 2488-2503 (1979).

11. "Two-Dimensional XY Magnets with Annealed Non-Magnetic Impurities"
    A.N. Berker and D.R. Nelson, J. Appl. Phys. 50, 1799-1801 (1979).

12. "A Binding Site Model of Membrane Transport: Binary and Cooperative Flows"
    M.H. Lee, A.N. Berker, H.E. Stanley, and A. Essig, J. Membrane Biology 50, 205-224 (1979).

13. "Renormalisation-Group Calculations of Finite Systems: Order Parameter and Specific Heat for Epitaxial Ordering"
    A.N. Berker and S. Ostlund, J. Phys. C 12, 4961-4975 (1979).

14. "First- and Second-Order Phase Transitions in Potts Models: Renormalization-Group Solution"
    B. Nienhuis, A.N. Berker, E.K. Riedel, and M. Schick, Phys. Rev. Lett. 43, 737-740 (1979).

15. "First- and Second-Order Phase Transitions of Infinite-State Potts Models in One Dimension"
    A.N. Berker, D. Andelman, and A. Aharony, J. Phys. A 13, L413-418 (1980).

16. "Structural Transitions between Epitaxially Ordered Phases in Adsorbed Submonolayers"
    S. Ostlund and A.N. Berker, Phys. Rev. B 21, 5410-5423 (1980).

17. "Island Growth and Orientational Locking of Potassium Intercalated in Graphite"
    A.N. Berker, N. Kambe, G. Dresselhaus, and M.S. Dresselhaus, Phys. Rev. Lett. 45, 1452-1456 (1980).

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    M.S. Dresselhaus, N. Kambe, A.N. Berker, and G. Dresselhaus, Synthetic Metals 2, 121-131 (1980).

19. "Commensurate Order, Multicritical Points, and Finite Sizes in Adsorbed Systems"
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20. "Honeycomb Lattice: Application to Adsorbed Systems"
    W. Kinzel, M. Schick, and A.N. Berker, in Ordering in Two Dimensions, ed. S.K. Sinha (Elsevier, New York, 1980), pp. 381-383.

21. "Ground-State Entropy and Algebraic Order at Low Temperatures"
A.N. Berker and L.P. Kadanoff, J. Phys. A 13, L259-264 (1980).
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22. "Frustrated Spin-Gas Model for Doubly Reentrant Liquid Crystals"
A.N. Berker and J.S. Walker, Phys. Rev. Lett. 47, 1469-1472 (1981).

23. "q-State Potts Models in d Dimensions: Migdal-Kadanoff Approximation"
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24. "Critical Exponents and Marginality of the Four State Potts Model: Monte Carlo Renormalization Group"
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25. "Exact Criticality Condition for Randomly Layered Ising Models with Competing Interactions on a Square Lattice"
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26. "Scaling for First-Order Phase Transitions in Thermodynamic and Finite Systems"
M.E. Fisher and A.N. Berker, Phys. Rev. B 26, 2507-2513 (1982).

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30. "Spin-Glass Behavior in Frustrated Ising Models with Chaotic Renormalization-Group Trajectories"
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32. "Amorphously Packed, Frustrated Hierarchical Models: Chaotic Rescaling and Spin-Glass Behavior"
S.R. McKay, A.N. Berker, and S. Kirkpatrick, J. Appl. Phys. 53, 7974-7976 (1982).

33. "Cratering Due to Surface Defects in the Gaussian Model"
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35. "Study of High-Order Reconstructions of the Si(100) Surface"
J. Ihm, D.H. Lee, J.D. Joannopoulos, and A.N. Berker, J. Vac. Sci. Technol. B 1, 705-708 (1983).

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37. "Oxygen Chemisorbed on Ni(100): A Renormalization-Group Study of the Global Phase Diagram"
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38. "Magnetic Susceptibilities of Cluster-Hierarchical Models"
S.R. McKay and A.N. Berker, Phys. Rev. B 29, 1315-1320 (1984).

39. "Scale-Invariant Quenched Disorder and its Stability Criterion at Random Critical Points"
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J.O. Indekeu and A.N. Berker, Phys. Rev. A 33, 1158-1162 (1986).

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A.N. Berker and J.O. Indekeu, in Incommensurate Crystals, Liquid Crystals, and Quasi-Crystals, eds. J.F. Scott and N.A. Clark (Plenum, New York, 1987), pp.205-213.

53. "Ab-Initio Statistical Mechanics of GeTe"
K.M. Rabe, J.D. Joannopoulos, and A.N. Berker, in 18th International Conference on the Physics of Semiconductors, ed. O. Engstrom (World Scientific, Singapore, 1987), Vol. 2, pp. 1221-1224.

54. "Molecular Structure and Reentrant Phases in Polar Liquid Crystals"
J.O. Indekeu and A.N. Berker, J. Phys. (Paris) 49, 353-362 (1988).

55. "Equimagnetization Lines in the Hybrid-Order Phase Diagram of the d=3 Random-Field Ising Model (invited)"
S.R. McKay and A.N. Berker, J. Appl. Phys. 64, 5785-5786 (1988).

56. "Random-Field Distributions of d-Dimensional Ising Models: Evolution under Scale Change and Fixed Distributions"
S.R. McKay and A.N. Berker, in Fractal Aspects of Materials: Disordered Systems, eds. D.A. Weitz, L.M. Sander, and B.B. Mandelbrot (Materials Research Society, Pittsburgh, 1988), pp. 215-217.

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J.F. Marko, J.O. Indekeu, and A.N. Berker, Phys. Rev. A 39, 4201-4206 (1989).

58. "Pressure Studies on Phase Transitions in 4-alkoxyphenyl-4'-nitrobenzoyloxybenzoates"
V.N. Raja, B.R. Ratna, R. Shashidhar, G. Heppke, C. Bahr, J.F. Marko, J.O. Indekeu, and A.N. Berker, Phys. Rev. A Rapid Comm. 39, 4341-4344 (1989).

59. "Random-Field Mechanism in Random-Bond Multicritical Systems"
K. Hui and A.N. Berker, Phys. Rev. Lett. 62, 2507-2510 (1989).
erratum 63, 2433 (1989).

60. "Harris Criterion for Direct and Orthogonal Quenched Randomness"
A.N. Berker, Phys. Rev. B 42, 8640-8642 (1990).

61. "Magnetization of the d-Dimensional Random-Field Ising Model: An Intermediate Critical Dimension"
S.R. McKay and A.N. Berker, in New Trends in Magnetism, eds. M.D. Coutinho-Filho and S.M. Rezende (World Scientific, Singapore, 1990), pp. 96-102.

62. "Finite-Temperature Phase Diagram of Vicinal Si(100) Surfaces"
O.L. Alerhand, A.N. Berker, J.D. Joannopoulos, D. Vanderbilt, R.J. Hamers, and J.E. Demuth, Phys. Rev. Lett. 64, 2406-2409 (1990).

63. "Phase Transitions on Misoriented Si(100) Surfaces"
O.L. Alerhand, A.N. Berker, J.D. Joannopoulos, and D. Vanderbilt, in 20th International Conference on the Physics of Semiconductors, eds. E.M. Anastassakis and J.D. Joannopoulos (World Scientific, Singapore, 1990),pp.2181-2188

64. "Finite-Temperature Phase Diagram of Vicinal Si(100) Surfaces: Alerhand et al Reply"
O.L. Alerhand, A.N. Berker, J.D. Joannopoulos, D. Vanderbilt, R.J. Hamers, and J.E. Demuth, Phys. Rev. Lett. 66, 962 (1991).

65. "Monte Carlo Mean-Field Theory and Frustrated Systems in Two and Three Dimensions"
R.R. Netz and A.N. Berker, Phys. Rev. Lett. 66, 377-380 (1991).

66. "Hard-Spin Mean-Field Theory: Formulation for Ising, XY, and Other Models"
R.R. Netz and A.N. Berker, J. Appl. Phys. 70, 6074-6076 (1991).

67. "Monte Carlo Mean-Field Theory and Frustrated Systems in Two and Three Dimensions: Netz and Berker Reply"
R.R. Netz and A.N. Berker, Phys. Rev. Lett. 67, 1808 (1991).

68. "Multicritical Phase Diagrams of the Blume-Emery-Griffiths Model with Repulsive Biquadratic Coupling"
W. Hoston and A.N. Berker, Phys. Rev. Lett. 67, 1027-1030 (1991).

69. "Dimensionality Effects on the Multicritical Phase Diagrams of the Blume-Emery-Griffiths Model with Repulsive Biquadratic Coupling: Mean-Field and Renormalization-Group Studies"
W. Hoston and A.N. Berker, J. Appl. Phys. 70, 6101-6103 (1991).

70. "Absence of Temperature-Driven First-Order Phase Transitions in Systems with Random Bonds"
A.N. Berker and K. Hui, in Science and Technology of Nanostructured Magnetic Materials, eds. G.C. Hadjipanayis and G.A. Prinz (Plenum, New York, 1991), pp. 411-417.

71. "Absence of Temperature-Driven First-Order Phase Transitions in Systems with Random Bonds (invited)"
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75. "Renormalization-Group Theory of an Internal Critical Endpoint Structure: The Blume-Emery-Griffiths Model with Biquadratic Repulsion"
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112. "Quantum-Mechanically Induced Asymmetry in the Phase Diagrams of Spin-Glass Systems"
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113. "Excitation Spectrum Gap and Spin-Wave Velocity of XXZ Heisenberg Chains:
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115. "Reentrant and Forward Phase Diagrams of the Anisotropic Three-Dimensional Ising Spin Glass"
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137. "High q-State Clock Spin Glasses in Three Dimensions and the Lyapunov Exponents of Chaotic Phases and Chaotic Phase Boundaries"
E. Ilker and A.N. Berker, Phys. Rev. E 87, 032124, 1-7 (2013).

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E. Ilker and A.N. Berker, Phys. Rev. E 90, 062112, 1-7 (2014).

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141. "Successively Thresholded Domain Boundary Roughening Driven by Pinning Centers and Missing Bonds: Hard-Spin Mean-Field Theory Applied to d=3 Ising Magnets"
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143. "The Chiral Potts Spin Glass in d=2 and 3 Dimensions"
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148. "Metastable Reverse-Phase Droplets within Ordered Phases: Renormalization-Group Calculation of Field and Temperature Dependence of Limiting Size"
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150. "Across Dimensions: Two- and Three-Dimensional Phase Transitions from the Iterative Renormalization-Group Theory of Chains"
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151. "Complete Density Calculations of q-State Potts and Clock Models: Reentrance of Interface Densities under Symmetry Breaking"
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152. "Metastable Potts Droplets"
E.C. Artun and A.N. Berker, Phys. Rev. E 103, 032102, 1-5 (2021).

153. "Spin-s Spin-Glass Phases in the d=3 Ising Model
E.C. Artun and A.N. Berker, Phys. Rev. E 104, 044131, 1-6 (2021).

154. "Fractal Measures of Sea, Lake, Strait, and Dam-Reserve Shores: Calculation, Differentiation, and Interpretation"
D. Yılmazer, A.N. Berker, and Y. Yılmaz, Physica A 579, 126106, 1-4 (2021).

155. "Phase Transitions of the Variety of Random-Field Potts Models"
A. Türkoğlu and A.N. Berker, Physica A 583, 126339, 1-6 (2021).

156. "The Effect of Weekend Curfews on Epidemics: a Monte Carlo Simulation"
H. Kaygusuz and A.N. Berker, Turk. J. Biology, COVID-19 Update 2021 Special Issue 45, 436-441 (2021).

157. "Electric-Field Induced Phase Transitions in Capillary Electrophoretic Systems"
H. Kaygusuz, F.B. Erim, and A.N. Berker, Phys. Fluids 33, 107114, 1-5 (2021).

Preprints:

158. "Superfluid Weight, Free Carrier Density, and Specific Heat of the d=3 tJ Model at Finite Temperatures"
M. Hinczewski and A.N. Berker, arXiv:cond-mat/0503631v1 [cond-mat.str-el] (2005).

159. "A Comparative Study of Interdisciplinarity in Sciences in Brazil, South Korea, Turkey, and USA"
N. Yurdakul and A.N. Berker, arXiv:1512.01420v2 [physics.soc-ph] (2015).

160. "Asymmetric Phase Diagrams, Algebraically Ordered BKT Phase, and Peninsular Potts Flow Structure in Long-Range Spin Glasses"
S.E. Gürleyen and A.N. Berker, arXiv:2112.06258 [cond-mat.dis-nn] (2021).

Scientific Citation Index citations to the above: 6011 as of 5/2021

Additionally, 37 articles have been published by undergraduate and graduate students in A.N. Berker's research group. List available on request.

A. Nihat Berker

Invited Talks at Conferences

"Phase Transitions in Gases Adsorbed onto Graphite and the Position-Space Renormalization-Group Method"
15th Annual Meeting of the Society of Engineering Science, Gainesville, Florida (1978)

"Phase Transitions in Graphite-Adsorbed Systems: Theory and Experiment"
Greater Boston Statistical Mechanics Meeting (1978)

"Epitaxial Ordering and Multicritical Phenomena in Adsorbed Monolayers: Renormalization Theory"
March Meeting of the American Physical Society, Chicago (1979)
Abstract: Bull. Am. Phys. Soc. 24, 324-325 (1979).

"Phase Transitions in Adsorbed Systems and Potts Models"
USA-USSR Condensed Matter Theory Workshop, Sevan, USSR (1979)

"Commensurate Order, Multicritical Points, and Finite Sizes of Adsorbed Systems"
International Conference on Ordering in Two Dimensions, Lake Geneva, Wisconsin (1980)

"Adsorption and Potts Models"
Nordita-Landau Institute Condensed Matter Theory Workshop, Copenhagen, Denmark (1980)

"A Frustrated Spin-Gas Model for Doubly Reentrant Liquid Crystals"
Nordita-Landau Institute Condensed Matter Theory Workshop, Göteborg, Sweden (1981)

"Restructuring and Rescaling: Adlayer Transitions in Terms of Potts Lattice Gases, Helical Potts Models, etc."
International Conference on Phase Transitions on Surfaces, Orono, Maine (1981)

"Ordering in Adsorbed Systems and in Liquid Crystals: Competing Mechanisms"
DOE Workshop on Future Trends in Condensed Matter Theory and the Role of Computation, Nantucket (1981)

"Global Phase Diagrams with Order-Disorder and Structural Transitions: Renormalization-Group Approach"
Annual Meeting of the Materials Research Society, Boston (1982)

"Commensurate-Incommensurate Phase Diagrams from the Helical Potts Model"
March Meeting of the American Physical Society, Dallas (1982)
Abstract: Bull. Am. Phys. Soc. 27, 140 (1982).

"First- and Second-Order Phase Transitions in Potts Models: Competing Mechanisms"
3rd Joint Intermag-Magnetism and Magnetic Materials Conference, Montréal (1982)

"Commensurate-Incommensurate Phase Diagrams from the Helical Potts Model"
2nd International Symposium on the Statistical Mechanics of Adsorption, Trieste, Italy (1982)

"Frustrated Spin-Gas Model for Doubly Reentrant Liquid Crystals"
International Meeting on New Type of Ordered Phase, Kyoto, Japan (1982)
Abstract: J. Phys. Soc. Jpn. 52 Suppl., 45 (1982).

"Hierarchical Models and Chaotic Spin Glasses"
Conference on Fractals in the Physical Sciences, National Bureau of Standards, Gaithersburg, Maryland (1983)

"Spin-Glasses from Chaotic Renormalization Groups"
3rd General Conference of the Condensed Matter Division, European Physical Society, Lausanne, Switzerland (1983)
Abstract: Europhys. Conf. Abs. 7b, 93 (1983).

"Frustration and Chaos in Spin-Glasses"
Nordita-Landau Institute Condensed Matter Theory Workshop, Copenhagen, Denmark (1984)

"Reentrant Melting of Krypton Adsorbed on Graphite and the Helical Potts-Lattice-Gas Model"
March Meeting of the American Physical Society, Las Vegas (1986)
Abstract: Bull. Am. Phys. Soc. 31, 570-571 (1986).

"Annealed Frustration and Partial Bilayers in Dipolar Liquid Crystals"
NATO Workshop on Incommensurate and Liquid Crystals, Boulder, Colorado (1986)

"Random-Field Magnets and Spin-Glasses"
60th Statistical Mechanics Meeting, Rutgers University (1988)

"Bicritical Phase Diagram of Polar Liquid Crystals"
Theoretical Physics Institute Workshop on the Nature of Phase Transitions in Liquid Crystals and Related Topics, Minneapolis, Minnesota (1988)

"Renormalization-Group Theory of Phase Transitions on Surfaces and in Spin-Glasses"
10th Annual Meeting of the Turkish Physical Society, Istanbul, Turkey (1988)

"The Renormalization-Group Method and Phase Transitions in Condensed-Matter Systems"
Annual Meeting of the the Scientific and Technical Research Council of Turkey, Ankara, Turkey (1988)

"Magnetic System Critical Behavior Generated by Microscopic Impurities"
NATO Advanced Study Institute on the Science and Technology of Nanostructured Magnetic Materials, Crete, Greece (1990)

"Quenched Fluctuation Induced Second-Order Phase Transitions"
March Meeting of the American Physical Society, Cincinnati (1991)
Abstract: Bull. Am. Phys. Soc. 36, 439 (1991).

"Absence of Temperature-Driven First-Order Phase Transitions in Systems with Random Bonds"
5th Joint Magnetism and Magnetic Materials-Intermag Conference, Pittsburgh (1991)

"Statistical Mechanics of Phase Transitions with a Hierarchy of Structures"
Annual Meeting of the Materials Research Society, Boston (1991)

"Microscopic Theory of Polar Liquid Crystals and Multiply Reentrant Phase Diagrams: I. Dipolar Interactions, Corrugation, and Permeation; II. Blockwise Interactions, Core Aspect Ratio, and Smectic C Ordering"
Erice School on Phase Transitions in Liquid Crystals, Italy (1991)

"Critical Behavior Induced by Quenched Disorder"
18th International Conference on Thermodynamics and Statistical Mechanics, Berlin, Germany (1992)

"Complex Phase Transition Phenomena Due to Frustration and Quenched Randomness: I. New Critical and Multicritical Phenomena Induced by Quenched Random Bonds; II. Hard-Spin Mean-Field Theory
III. Reentrances and Other Phenomena in Polar Liquid Crystals: A Microscopic Theory with Frustration"
Summer School on Recent Developments in Statistical Physics, Istanbul, Turkey (1993)

"Hard-Spin Mean-Field Theory"
Topics in Statistical Physics Meeting, Antigonish, Nova Scotia, Canada (1993)

"Hard-Spin Mean-Field Theory"
70th Statistical Mechanics Meeting, Rutgers University (1993)

"Finite-Temperature Phase Diagram of the Three-Dimensional tJ Model of Electronic Conduction"
Istanbul Technical University Statistical Physics Days (1994)

“Quenched Randomness and Helium Mixtures in Porous Media”
Institute for Theoretical Physics Workshop on Vortex Phases, Santa Barbara (1994)

“Strong Violation of Universality under Quenched Randomness and Helium Mixtures in Aerogel”
Symposium on Quantum Fluids and Solids, Cornell (1995)

“Strong Violation of Universality under Quenched Randomness and Helium Mixtures in Aerogel”
International Meeting on Recent Advances in the Theory of Disordered Systems, Saclay, France (1995)

“Strong Violation of Universality”
Istanbul Technical University Statistical Physics Days (1996)

“Quenched Randomness: Strong Violation of Universality and Helium Mixtures in Aerogel”
March Meeting of the American Physical Society, Saint Louis, Missouri (1996)
Title: Bull. Am. Phys. Soc. 41, 218 (1996).

“Renormalization-Group Theory of an Electron Conduction Model with Explicit Quantum Mechanical Dynamics”
Workshop on Interface Dynamics and Non-Equilibrium Phase Transitions, TÜBITAK Feza Gürsey Research Institute for Basic Sciences, Istanbul, Turkey (1998)

"Finite-Temperature Phase Diagram of the Hubbard Model of Electronic Conduction"
80th Statistical Mechanics Meeting, Rutgers University (1998)

"Phase Diagrams of Electronic Conduction Models from Renormalization-Group Theory"
IX. Regional Conference on Mathematical Physics, Istanbul, Turkey (1999)

"Renormalization-Group Theory in the Statistical Mechanics of Fluids"
3rd National Liquid-State Physics Symposium, Istanbul, Turkey (1999)

"Renormalization-Group Solution of Electronic-System Phase Diagrams"
18th Annual Meeting of the Turkish Physical Society, Adana, Turkey (1999)

"Complete Phase Diagram of the 3-d Hubbard Model"
March Meeting of the American Physical Society, Minneapolis, Minnesota (2000)
Abstract: Bull. Am. Phys. Soc. 45, 757 (2000).

"Finite-Temperature Phase Diagram of the tJ and Hubbard Models in d=3 from Renormalization-Group Theory"
21st IUPAP International Conference on Statistical Physics, Cancun, Mexico (2001)

"From tJ to Hubbard: an Excursion in Phase Diagram Space"
88th Statistical Mechanics Meeting, Rutgers University (2002)

"Trajectories and Phases for Friends and Electrons"
Conference in Honor of M. Hortaçsu, Istanbul Technical University (2003)

"Phase Diagrams, Superfluid Weights, and Thermodynamic and Conduction Properties of
Isotropic and Anisotropic Electronic Conduction Models at Finite Temperatures: Renormalization-Group Theory"
22nd Annual Meeting of the Turkish Physical Society, Bodrum, Turkey (2004)

"BCS and BEC Superconducting Phases, Superfluid Weights, and Carrier Densities of
Electronic Conduction Models: Renormalization-Group Theory"
Istanbul Technical University Statistical Physics Days (2005)

"BCS and BEC Superconducting Phases, Superfluid Weights, and Carrier Densities of
Electronic Conduction Models: Renormalization-Group Theory"
Erzurum Physics Days, Erzurum, Turkey (2005)

"BCS and BEC Superconducting Phases, Superfluid Weights, and Carrier Densities of
Electronic Conduction Models: Renormalization-Group Theory"
III. National Superconductivity Symposium, Abant, Turkey (2005)

"New Phases, Superfluid Weights, and Free Carrier Densities:
Renormalization-Group Theory of Electronic Models"
94th Statistical Mechanics Meeting, Rutgers University (2005)

"Superconducting Phases, Superfluid Weights, and Carrier Densities in Electronic Lattice Models"
Conference in Honor of M. Tomak, Middle East Technical University (2005)

"Personalities, Scales, and Electrons"
Erdal İnönü Days, Bosphorus University (2006)

"Strong Frienships and Strongly Correlated Electrons"
Conference in Honor of İ.H. Duru, Izmir High Technology Institute (2006)

"New Phases, Superfluid Weights, Free Carrier Densities, Impurity Effects:
Renormalization-Group Theory of the tJ and Hubbard Models"
2nd Bilateral Workshop on Solid State and Materials Chemistry, Dresden, Germany (2006)

"Ab Initio Enthusiasm and High Principles Physics"
Conference in Honor of J.D. Joannopoulos, Massachusetts Institute of Technology (2007)

"Frustration and Chaos in Spin Glasses"
Workshop on Disordered Systems: Theory and Application, Izmir (2007)

"Quantum Surprises: Cross-Component Spin Correlations,
Spin-Glass Ferromagnetism, and Superconductor/Antiferromagnet Reverse Impurity Effects"
14th Ankara Condensed Matter Physics Meeting, Hacettepe University (2007)

"Thermal/Geometrical Crossovers, Inverted KBT Transitions, and Local Order-Parameter Tulips:
Renormalization-Group Studies of Networks with Quenched Disorder"

Workshop on Complex Systems, Seoul National University, Korea (2008)

"Quantum Surprises: Cross-Component Correlations, Spin-Glass Ferromagnetism, and
Reverse Impurity Effects on Superconductor and Antiferromagnetic Phases"
3rd Bilateral Workshop on Novel Materials, Istanbul (2008)

"In the Steps of Erdal Inönü: To Gather Speed and to Take Off "
Conference in Memory of Erdal Inönü, Istanbul (2008)

"Phase Diagrams of the d=3 Electronic Conduction Models with Frozen Impurities: Renormalization-Group Calculations"
Summer School in Mathematical Physics: Rigorous Result in Statistical Mechanics and Quantum Field Theory, Istanbul (2008)

"Phase Diagrams of the d=3 tJ Electronic Model with Frozen Nonmagnetic Impurities,
with Application to High-Temperature Superconductivity: Renormalization-Group Theory"
International Conference on Superconductivity and Magnetism, Antalya (2008)

"Theory of High-Temperature Superconductivity and Research-Focussed Education"
Academy of Sciences of Turkey Ankara Group, Ankara (2008)

"Inverted Tricritical Phenomena and Apollonius Tulips: Ordering in Disordered Media"
26th International Physics Conference, Turkish Physical Society, Muğla (2009)

"Water: Its Physics, Nanophysics, Chemistry, and Geopolitics"
13th National Liquid-State Physics Symposium, Istanbul, Turkey (2009)

"University Undergraduate Education with Focus on Research"
University Dilemmas and Solution Paths, Erciyes University, Kayseri (December 2009)

"Inverted Tricritical Phenomena and Apollonius Tulips: Ordering in Disordered Media"
17th Statistical Physics Days, Istanbul (2010)

"Earth's Currents and Clouds, Jupiter and Saturn's Ice Moons"
17th Statistical Physics Days, Istanbul (2010)

"Education with Focus on Research and Outreach:
Augmented Mechanics, MIT, Necati Cumalı, and Superconductivity with Zinc"
Bilkent/UNICEF, Ankara (2010)

"Academic Career"
Istanbul Technical University Human Resources Summit (2010)

"Undergraduate Education with Focus on Research"
10th American Society of Mechanical Engineers Conf. on Engineering Systems Design & Analysis, Istanbul (2010)

"Anisotropy Effects and Impurity Induced Antiferromagnetism:
Renormalization-Group Theory of d=3 Electronic Models"
103rd Statistical Mechanics Meeting, Rutgers University (2010)

"Thermal/Geometrical Crossovers, Inverted KBT Transitions, and Local Order-Parameter Tulips in
Scale-Free Networks with Quenched Disorder"
Workshop on Crystallization and Melting in Two Dimensions, Budapest (2010)

"Earth's Currents and Clouds, Jupiter and Saturn's Ice Moons"
Water: Its Nanophysics and Biochemistry Workshop, Aghia Giorgi, Prince's Island, Istanbul (2010)

"Warm Friendships, Frozen Spin Glasses: Achievements of Renormalization-Group Theory,
Including Ankara Basketball and Apollonian Tulips"
Conference in Honor of E. Yurtsever, Koç University (2010)

"Multicultural Science Physics Meets at the World Cultural Capital Istanbul: Roundtable of Physicist Rectors"
Chairperson and speaker, 27. International Physics Conference, Turkish Physical Society, Istanbul (2010)

"Alcibiades and Philoctetes: Individual's Talents and Rights in Oligarchical Societies"
Academy of Sciences of Turkey Ankara Group, Ankara (2010)

"Talent and Jealousy on Water: Admiral Alcibiades and his Oligarchical Environment"
14th National Liquid-State Physics Symposium, Edirne (2010)

"Frozen Impurity and Localized/Delocalized Electron Effects in Electronic Models: Renormalization-Group Theory"

14th National Liquid-State Physics Symposium, Edirne (2010)

"Relations between Foundation Universities and the Higher Education Council"
Workshop on Upper Administration Problems in Higher Education and Solution Pathways, Academy of Sciences of Turkey (2010)

"Education with Focus on Research and Outreach"
8th Good Examples in Education Conference, Sabancı University (2011)

"Education with Focus on Research and Outreach"
1. National High School Debate Championship of the Town of Tuzla (2011)

"Robustness, Beauty, and Fragility in the Random Scale-Free World:
Apollonius Tulips and Critical Percolation Phases"
Imperial College London - Feza Gürsey Institute International Summer School and Research Workshop on Complexity, Istanbul (2011)

"University Peparation for the Real World"
4th National University-Industry Cooperation Platform Congress, Izmir (2011)

"Universities and the Future of Information Management"
10. Eskişehir Quality Fest, Eskişehir (2011)

"Education with Focus on Research and Outreach"
15th National Liquid-State Physics Symposium, Piri Reis University, Tuzla (2011)

"People, Education, Universities"
10. Industry Congress of the Istanbul Chamber of Industry (2011)

"Phase Separation and Charge-Ordered Phases in Electronic Conduction Models:
Temperature-Density-Chemical Potential Phase Diagrams from Renormalization-Group Theory"
International Conference on Superconductivity and Magnetism, Istanbul (2012)

"An Ease of Achievements in Mutual Familiarization, Understanding, and Progress:
Turkish, German, and British Scientific Collaborations"
Keynote Speech, Triangle of Knowledge: Turkish, German, and British Science and Technology Collaborations, UK Science & Innovation Network and Alexander von Humboldt Foundation, British Embassy Berlin (2012)

"Education with Focus on Research and Outreach"
8. National Congress of Physics Students, Sakarya (2012)

"Entrepreneurship and Sensitivity in Education"
Symposium of Educating-Self-Educating Teachers, Enka Schools, Adapazarı (2012)

"High q-State Clock Spin Glasses in Three Dimensions and the Lyapunov Exponents of Chaotic Phases and Chaotic Phase Boundaries"
International Workshop on Critical Behavior in Lattice Models, Beijing (2013)

"High q-State Clock Spin Glasses in Three Dimensions and the Lyapunov Exponents of Chaotic Phases and Chaotic Phase Boundaries"
International Conference on High Energy and Mathematical Physics in Honor of M. Arık, Bosphorus University (2013)

"High q-State Clock Spin Glasses in Three Dimensions and the Lyapunov Exponents of Chaotic Phases and Chaotic Phase Boundaries"
Francqui Symposium "Fluctuation-Induced Phenomena" in honor of M. Kardar, Katholieke Universiteit Leuven, Belgium (2013)

"Academia, Knowledge, Enlightenment, and Friendship: The German – Turkish Progress"
Turkey Focus Initiative of the Alexander von Humboldt Foundation and the Joachim Herz Foundation, German Embassy, Ankara (2013)

"Education Focussed on Research, the Individual, and Success"
Physics and Innovative Technologies Symposium, Recep Tayyip Erdoğan University, Rize (2014)

"Internationalization Experiences at the National Level"
Community of Mediterranean Universities Workshop, Ondokuz Mayıs University, Samsun (2014)

"Order in the Presence of Frozen Disorder and Controlled Chaos in Spin Glasses"
Humboldt Kolleg German-Turkish Cooperation in Physics: New Challenges in Science Conference, Ankara (2014)

"Cross-Cultural Academic Engagements, Collaborations, and Results: Mentoring and Metrics"

TÜBA-ERC-TÜBITAK Conference "Excellence in Science: ERC Enables Young Researchers", Istanbul (2014)

"Education Focussed on the Individual and Success"
Academy of Sciences of Turkey Istanbul Group, Istanbul (2014)

"Frustration and Chaos, Critical Phases and Critical Dimension in Spin Glasses"
5. Physics Workshop of the Istanbul University Physics Club (2015)

"Au Lendemain des Élections Législatives en Turquie"
Fondation Jean Jaurès Workshop, Paris (2015)

"Global Turkey in Europe: Concluding Remarks"
Istituto Affari Internazionali – Stiftung Mercator – Istanbul Policy Center Conference, Berlin (2015)

"Gender Studies in Universities and Society and Adressing/Eliminating Cultural Barriers"
Workshop on Women in Higher Education and Research, Community of Mediterrannean Universities, Trabzon (2015)

"Education, Years, and Friendship"
MIT Alumni in Turkey Year-End Meeting, Istanbul (2015)

"Controlled Frustration and Chaos, Critical Phases, and Lower-Critical Dimension in Spin Glasses"
5th International Conference on Superconductivity and Magnetism, Fethiye (2016)

"Controlled Frustration and Chaos, Critical Phases, Lower-Critical Dimension in Spin Glasses and Chiral Spin Glasses"
12th International Workshop on Magnetism and Superconductivity at the Nanoscale, Barcelona (2016)

"Chiral Spin-Glass Phases, Fibrous Microreentrances, Nano-Controlled Frustration, Multiple Chaos, and Holywood Goes to Statistical Mechanics"
20th National Liquid-State Physics Symposium, Piri Reis University, Tuzla (2016)

"Manipulated Frustration, Multiple Chaos, and Critical Phases in Spin Glasses"
116th Statistical Mechanics Meeting, Rutgers University (2016)

"Outside Evaluation Process Experiences"
Board of Higher Education Institutional Outside Evaluator Education Workshop (2016)

"Phase Transitions between Different Spin-Glass Phases and between Different Chaoses in Quenched Random Chiral Systems"
34th International Physics Conference, Turkish Physical Society, Bodrum (2017)

"Insistence and Success in Academic Life: Sciences, Engineering, Social Sciences, Administration"
Career Summit 2017, Gedik University, Istanbul (2017)

"Receiving and Providing Education, Career Success"
Pole Star II IEEE Conference, Yıldız Technical University (2017)

"Due Diligence and Responsibility in Academia and Everywhere Else"
11. Traditional International Mirror Conference Statistical and Condensed Matter Physics – Social Responsibility, Kadir Has University (2017)

"Spin Glasses, Renormalization Group, and Phase Transitions between Chaoses"
8. Physics Workshop, Istanbul University (2018)

"Importance of Social Sciences for Engineers and Scientists"
Social Sciences Workshop, Prof. Dr. Mümtaz Tarhan Social Sciences High School (2018)

"Education, Research, Success: In High School and University"
3. Beşiktaş Career Days, Istanbul (2018)

"Education, Research, Success, and Happiness"
Feyziye Schools Foundation Cultural Conferences (2018)

"New (Chiral) Spin Glass and Phase Transitions between Chaoses"
Interscholastic Physics Students' Summit of Istanbul Technical University, Middle East Technical University, and Boğaziçi University, Istanbul (2018)

"Academic Entrpreneurship and Effectivess, Team Work and Success"
The Great Get-Together '18: Mega Trends, Economy and Management Club, Sabancı University (2018)

"Education in English at Universities? and Always Unrelenting Success"
Use of English as Education Language at Universities: A Holistic Approach Workshop, Kadir Has University (2018)

"Physics, Literature, Student/Teacher Motivation, Success, and Happiness"
Teachers' Professional and Personal Development Workshop, Üsküdar District National Education Directorship (2018)

"Simone de Beauvoir and Social Consciousness Taught by a Physicist Engineering Dean"
Gender and Education Conference, Sabancı University, Istanbul (2018)

"Simone de Beauvoir and the Devil's Staircase"
Hindsights and Foresights in Statistical Physics: A Symposium in Honour of Joseph Indekeu and Carlo Vanderzande on Occasion of Their 60th Anniversary, KU Leuven (2018)

"The CPS Phenomenon: Helicity (Chirality) Propelled Science and Friendship"
Fascination with Fluctuations, Correlations, and Disorder: Symposium in Honor of Mehran Kardar, MIT (2018)

"Simone de Beauvoir, Reşat Nuri Güntekin, Augmented Mechanics, Research- and Student-Centric Education"
Columbia University Istanbul Center, Istanbul (2018)

"All-Temperature Ordering in Maximally Random Systems, Lower Lower-Critical Spin-Glass Dimension, and Continuously Variable Physical Dimension"
120th Statistical Mechanics Meeting, Rutgers University (2018)

"Education, Research, High Success, and Happiness"
1. International Symposium on Graduate Research in Science, Istanbul University (2018).

"Research- and Individual-Oriented Education, High Success, and Happiness"
Searching the Future: Preservation of the Academic Heritage in the Middle East, YÖK-SUNY Conference, New York (2018).

"Science, Life, Success, and Happiness"
Scientists Speak Conference, Izmir High Technology Institute,Izmir (2019)

"Chiral Spin Glasses, Chaos, and Spin-Glass Lower-Critical Dimension from Continuously Variable Dimensional Realizations"
Provost's Grand Challenges Initiative, University of Minnesota (2019).

"Education, Research, High Success, Indices"
Sailing Towards the Nobel Conferences, Bahçeşehir University, Istanbul (2019)

"Lowered Spin-Glass Lower-Critical Dimension:
New Systems with Continuously Variable Dimension and Exact Solution"
Istanbul Condensed Matter Physics Conference, Istanbul University (2019)

"Chiral Spin Glasses, Chaos, and Spin-Glass Lower-Critical Dimension from Continuously Variable Dimensional Realizations"
Complex Systems and Data Science Workshop, Kadir Has University (2019)

"Talent, Courage, and Treason in Our Own Waters: Alcibiades and Philoctetes"
23th National Liquid-State Physics Symposium, Piri Reis University (2019)

"Mathematics and Physics, Mathematician Ratip and Physicist Nihat, and Some Renormalization-Group Theory"
Mathematics for Everybody Seminars, Bilim Üsküdar (2019)

"Critical Size and Magnetic Field of Metastable Droplets"
10. Physics Workshop, Istanbul University Physics Club (2020)

"Science, Life, Success, and Happiness"
Scientists Speak Conference, Izmir High Technology Institute, Izmir (2020)

"Top Student in the Faculty of Law than Housewife My Mother, Reactionary Patterns, La Belle Époque, High Performers"
World Women's Day, Turkish Universitarian Womens' Association Meeting, Istanbul (7 March 2020)

"Online Physics and Mathematics Doctorate Instruction and Examination: Sustainable and Invigorated Practices"
Mathematics Education in Engineering Conference, Acıbadem University, Istanbul (2021).

"Reentrance in Chaos and in Interfaces, Social Sciences and Literature in Physical Sciences, Instigating Precocious Successes"
11. Physics Workshop, Istanbul University Physics Club (2021)

"Trabzon, Of, Rize: Powerful Dynamos of the Narrow Coastal Strip"
25. Ulusal Sıvıhal Konferansı, Piri Reis Üniversitesi (2021)

"Deterministic Chaos and Exiting Chaos through Increased Degrees of Freedom"
SPIE Society of Photo-Optical Instrumentation Engineers and OSA The Optical Society (2021)

In addition to the 145 invited conference talks listed above, number of contributed papers to conferences: 188
Also, ANB gave outside his university: **401** invited colloquia and seminars in 1978-2021. Most recently:

"Yüksek Sıcaklık Süperiletkenli Faz Diyagramları, Süperakışkanlık Yoğunluğu ve Ağır Fermiyonlar:
Mikroskopik Renormalizasyon Grubu Kuramı"
[197] Balıkesir University, 22 October 2004
[198] TÜBITAK Feza Gürsey Institute, 11 November 2004
[199] Boğaziçi University, 24 November 2004
[200] Sabancı University, 7 December 2004
[202] Erciyes University, 17 December 2004

"Bir Üniversite Nasıl Olmalıdır?"
[203] TOBB Economy and Technology University, 24 February 2005

"Italo Calvino, J.-P. Sartre, Oryantalizm, G. Vizyenos: Mühendishanede bir Fenci Toplumbilim Okutuyor"
[201] Sabancı University, 7 December 2004
[206] Koç University, 26 April 2005

"Phase Diagrams with Two Superconducting Phases, Superfluid Weights and Free Carrier Densities:
Renormalization-Group Theory of Electronic Conduction Models"
[204] Saclay Research Center, Paris, 5 April 2005
[205] Koç University, 21 April 2005
[208] ETH Zürich, 12 May 2005
[209] Münich Technical University, 13 May 2005

"İki Tür Süperiletkenli Faz Diyagramları, Serbest Taşıyıcı ve Süperakışkanlık Yoğunluğu:
Mikroskopik Renormalizasyon Grubu Kuramı"
[207] Eskişehir Anadolu University, 6 May 2005

"New Phases, Superfluid Weights, and Free Carrier Densities:
Renormalization-Group Theory of Electronic Conduction Models"
[210] École Normale Supérieure, Paris, 27 October 2005
[211] University of California, Santa Barbara, 1 November 2005
[212] Stanford University, 3 November 2005

"New Phases, Superfluid Weights, Free Carrier Densities, Impurity Effects:
Renormalization-Group Theory of the tJ and Hubbard Models"
[213] Ohio State University, 6 March 2006
[214] University of Michigan, 9 March 2006
[215] Boston University, 6 April 2006

"Renormalization-Group Solution of Electronic Models and High T_c Superconductivity"
[216] Black Sea Technical University, 14 April 2006

"Renormalization-Group Theory of d=3 Electronic Systems Including Quenched Random Impurities:
Phase Diagrams, Superconductivity, and Antiferromagnetism"
[217] Tokyo Institute of Technology, 17 October 2006
[219] Tohoku University, 24 October 2006
[220] Tokyo University, 25 October 2006
[221] Tokyo Science University, 26 October 2006
[223] Bilkent University, 11 December 2006
[230] University of Athens, 21 June 2007

"Exact Renormalization-Group Theory on Hierarchical Lattices with Applications to Quenched Random Systems"
[218] Tokyo Institute of Technology, 19 October 2006
[222] Kyushu University, 27 October 2006
[232] University of Athens, 27 June 2007

"Phase Transitions, Renormalization-Group, Electronic Systems, and Small-World Networks"
[224] Erzurum Atatürk University, 10-12 January 2007 (An intensive course of 10 hours, completed by 102 students)
[226] Kayseri Erciyes University, 9-12 March 2007 (An intensive course of 21 hours, completed by 23 students)
[233] TÜBITAK Feza Gürsey Institute, 8-19 July 2007 (An intensive course of 54 hours, completed by 46 students)
[247] TÜBITAK Feza Gürsey Institute, 13-24 July 2008 (An intensive course of 54 hours, 66 students accepted)

"Italo Calvino, J.-P. Sartre, Oryantalizm, G. Vizyenos: Mühendishanede bir Fencinin Toplumbilim Dersleri"
[227] Bosphorus University, Western Languages Dept. and Physics Dept. Joint Seminar, 19 April 2007

"From Z to Electronic System Phase Diagrams and Metropolitan Istanbul Lojistics"
[228] Istanbul University Kortel Seminars, 11 May 2007
[229] National Institute of Standarts, Gebze, 14 May 2007

"Phase Transitions and Renormalization-Group Theory"
[231] University of Athens, 25-27 June 2007 (Lectures, 6 hours)

"Ord. Prof. Dr. Ratip Berker and his Code"
[234] Istanbul Technical University School of Mechanical Engineering, 30 November 2007
[236] Işık University, 20 February 2008
[242] Istanbul Mathematical Society Karaköy Seminars, 5 May 2008

"Quantum Surprises: Cross-Component Spin Correlations,
Spin-Glass Ferromagnetism, and Superconductor/Antiferromagnet Reverse Impurity Effects"
[235] Işık University, 20 February 2008
[243] Yıldız Technical University, 22 May 2008
[246] Münich Technical University, 27 June 2008
[249] University of Athens, 14 November 2008

"Sciences, Engineering, and Social Sciences in Higher Education"
[225] ITU Ekrem Elginkan High School, 22 January 2007
[237] Üsküdar American High School, 26 March 2008
[238] Robert Kolej High School, 26 March 2008
[240] Galatasaray High School, 18 April 2008
[241] Getronagan High School, 30 April 2008
[245] TEV Inanç Türkeş High School, 16 June 2008
[250] Zoğrafyon High School, 26 November 2008
[264] Kayseri Science High School, 22 October 2009

"High-Temperature Superconductivity Theory and Education with Focus on Research"
[239] Istanbul Technical University, 16 April 2008
[244] Yıldız Technical University, 22 May 2008
[257] Chamber of Physics Engineers, Kadıköy, 13 March 2009
[259] Hacettepe University, 16 April 2009

"Augmented Mechanics", an intensive course of 54 hours for high school students
[248] TÜBITAK F. Gürsey Institute, 17-28 August 2008 (Registered by 100 students from 25 high schools)
[262] TÜBITAK F. Gürsey Institute, 12-23 July 2009 (Registered by 120 students from 65 high schools)
[284] TÜBITAK F. Gürsey Institute, 4-15 July 2010 (Registered by 130 students from 79 high schools)

"Renormalization-Group Theory of d=3 Electronic Systems with Spatial Anisotropy and Quenched Random Impurities"
[251] Seoul National University, 23 December 2008

"Quantum Asymmetry, Inverted Tricritical Points, and Quenched-Vacancy-Induced Random Order in Spin Glasses"
[252] Korea Institute for Advanced Study, 26 December 2008
[253] Münich Technical University, 19 January 2009
[254] University of Mainz, 2 February 2009
[255] University of Oldenburg, 5 February 2009

"Thermal/Geometric Crossovers, Inverted KBT Transitions, and Local Order-Parameter Tulips"
[256] Münich Technical University, 9 February 2009

"High Temperature Superconductivity, Education with Focus on Research, Nano Water"
[258] Robert Kolej High School, 26 March 2009
[260] Koç University, 22 April 2009

"Inverted Tricriticality and Apollonian Tulips: New Results on Quenched Randomness"
[261] Saclay Research Center, Paris, 27 April 2009
[270] Universidad Complutense de Madrid, 5 February 2010

"Education with Focus on Research"
[263] Kayseri Erciyes University, 22 October 2009
[265] Istanbul University, 3 December 2009
[266] Kadir Has University, 10 December 2009
[267] Marmara University, 13 January 2010
[268] Okan University, 19 January 2010
[276] Doğuş University, 16 April 2010
[281] Yonca-Onuk Shipyard, 2 June 2010

"Anisotropy Effects and Impurity Induced Antiferromagnetism:
Renormalization-Group Theory of d=3 Electronic Models"
[269] Leipzig University, 29 January 2010
[272] Beijing Normal University, 12 March 2010
[273] Hong Kong University of Science and Technology, 15 March 2010

"Inverted Tricriticality and Apollonian Tulips in
A Plenitude of Exactly Soluble Statistical Mechanics with Quenched Randomness"
[271] Institute of Physics Chinese Academy of Sciences, 11 March 2010
[274] University of Athens, 26 March 2010
[278] University of Rome, 24 May 2010
[288] Université Paris-Sud, 15 October 2010
[290] Oxford University, 28 October 2010

"Education with Focus on Research and Communication: Augmented Mechanics, MIT, Necati Cumalı, and Superconductivity with Zinc"
[275] Ankara Science High School, 7 April 2010
[289] Rotary Club of Şişli, Istanbul, 19 October 2010

"Education with Focus on Research and Communication"
[277] Tekirdağ Namık Kemal University, 5 May 2010
[279] Sivas Cumhuriyet University, 27 May 2010
[291] Hisar High School, 24 November 2010

"Inverted Tricriticality and Apollonian Tulips: Ordering in the Presence of Frozen Disorder"
[280] Sivas Cumhuriyet University, 28 May 2010
[285] TÜBITAK Feza Gürsey Institute, 4 August 2010

"From High School to University: Responsive Education with Focus on Research"
[282] Adapazarı Enka Anadolu High School, 10 June 2010

"Graduation Speech"
[283] Robert College High School, 28 June 2010
[302] Irmak High School, 29 July 2011

"Electronic Systems Phase Diagrams and Impurity Effects: Renormalization-Group Theory"
[286] TÜBITAK Feza Gürsey Institute, 16 August 2010

"Inverted Tricriticality, Apollonian Tulips, and Strong Violation of Universality:
Ordering Phenomena Enriched by Frozen Disorder"
[287] Istanbul Technical University, 1 October 2010
[293] Istanbul University, 9 December 2010
[295] University of Wuerzburg, 12 January 2011
[297] Kayseri Erciyes University, 21 February 2011

"Alcibiades ve Philoctetes: Individual's Talents and Rights in Oligarchical Societies"
[292] Istanbul Technical University, 6 December 2010
[320] Doğuş University, 10 April 2013

"Education with Focus on Research and Outreach"
[294] Tuzla Township High Schools, 10 December 2010
[296] Irmak High School, 18 January 2011
[298] Robert College High School, 24 February 2011
[299] Marmara University Institute of Neurological Sciences, 8 April 2011
[300] Üsküdar American High School, 14 April 2011
[301] Kocaeli University, 3 May 2011
[303] Higher Education Council, Ankara, 21 September 2011
[306] Konya Selçuk University, 30 November 2011
[307] Bahçeşehir College Kocaeli High School, 28 December 2011
[308] Turkish Naval Academy, 10 January 2012
[313] Dokuz Eylül University, 12 April 2012
[314] Abdullah Gül University, 19 April 2012
[315] Uşak National Education Directorate, 1 June 2012
[316] Şehir University, 8 November 2012
[317] Izmir High Technology Institute, 20 December 2012
[318] Tuzla Municipality High School University, 15 January 2013

"Travails and Travailles of a Reverse-Brain-Drainer: 12 Years in Istanbul, after 24 Years at MIT"

[304] Massachusetts Institute of Technology, 20 October 2011

"Impurity Effects, Charge Ordering, and Phase Separation in Electronic Systems"
[305] Free University of Berlin, 7 November 2011
[312] Northwestern University, 5 April 2012

"Research and Outreach Underpinnings for Sustainable and Competitive Education"
[309] Chamber of Mechanical Engineers, Denizli, 8 February 2012

“Inverted Tricriticality and Apollonian Tulips: Contributions of Frozen Disorder to Disorder and the Plenitude of Exactly Soluble Interesting Systems in Statistical Mechanics”
[310] Doğuş University, 16 February 2012

“Quantum Repulsion in Electronic Systems: Sublattice Separation and Charge Ordering in the Absence of Interaction”
[311] Istanbul Technical University, 23 March 2012

“Sensitivity, Outreach, Competitiveness, and Vertical Integration in Education with a Focus on Research ”
[319] Thrace University, Edirne, 6 March 2013

“Education, Entrepreneurship, Life”
[321] Fulya Turkuaz Rotary Club, 17 September 2013

“Academic Entrepreneurship: Research and Student-Focused Vertical Education”
[322] Eskişehir Anadolu University, 7 March 2014
[323] Abdullah Gül University, 12 March 2014

“Person-Focused and Entrepreneurial Education/Research”
[324] Kadir Has University, 24 April 2014

“Entrepreneurship, Success, and Happiness in Academic Life”
[325] Gedik University, 25 September 2014

“Education with Focus on Research and Individual”
[326] Mersin University, 8 December 2014

“Entrepreneurial Education and Research with Focus on the Individual”
[327] Istanbul Culture University, 11 December 2014

“The Inevitability of Literature and Social Sciences in Education and in All of Life”
[328] Erenköy Işık High School, 17 December 2014

“Education and Success”
[329] Üsküdar American Academy, 21 January 2015
[330] Dilovası Enka Technological Anatolian High School, 12 February 2015
[340] Anakent College, 9 November 2015

“Controlled Frustration and Chaos, Critical Phases, and Lower-Critical Dimension in Spin Glasses”
[331] Istanbul Technical University, 13 March 2015
[332] Marmara University, 27 March 2015
[333] Koç University, 11 May 2015
[334] Coventry University, 3 June 2015
[341] Bilkent University, 2 December 2015

“Education and Success in Turkey and abroad”
[335] Robert College High School, 17 June 2015

“Closing Speech”
[336] Emine Durukanoğlu Summer Program for Primary School Students, Kılavuzköy Village, Of, 23 August 2015

“Research, Education, Empathy”
[337] Işık University, 7 September 2015
[339] Acıbadem University, 3 November 2015
[342] Bilkent Erzurum Laboratory School, 19 February 2016
[347] Sakıp Sabancı High School, 11 and 18 April 2017

“Physics, Empathy, Success”
[338] Kartal Anadolu İmam Hatip High School, 2 October 2015

“Chiral Spin-Glass Phases, Fibrous Microreentrances, Nano-Controlled Frustration, Multiple Chaos, and Holywood Goes to Statistical Mechanics”
[343] Bilkent University, 14 December 2016
[344] University of Crete, 23 February 2017
[345] Yıldız Technical University, 15 March 2017

[346] Massachusetts Institute of Technology, 3 April 2017
[348] Istanbul University, 14 April 2017

"Chateaubriand, Simone de Beauvoir, MIT, and Augmented Mechanics: Education and Research across 3 Cultures"
[349] Galatasaray University, 29 November 2017

“Entrepreneurship, Success, and Happiness in Academic Life”
[350] MEV Basınköy Anadolu High School, 6 December 2017

“New (Chiral) Spin Glass and Phase Transitions between Chaoses”
[351] Boğaziçi University, 20 December 2017

“Person-Centered Education, Research, Success”
[352] German High School, 15 January 2018
[355] Kadıköy Anatolian High School, 7 March 2018

“Challenged Comfort Zones, Entrepreneurial Education, Success, and Happiness”
[353] İstanbul (Boy’s) High School, 16 January 2018

“Fantasy, Reality, Science, Society”
[354] Rector’s Current Science Conference, Yaşar University, 9 February 2018

“Education, Research, High Success, Happiness”
[356] Egean High School, 30 March 2018
[357] Yaşar Acar Science High School, 2 May 2018
[358] Bahçeşehir College, 3 May 2018
[359] Kadıköy Atatürk Science High School, 9 May 2018
[360] Çapa Science High School, 17 May 2018
[361] Avcılar District National Education Directorate, 11 September 2018
[362] Bartın University School Year Opening Class, 8 October 2018
[363] Italian High School, 20 November 2018
[364] Tuzla District National Education Directorate, 28 November 2018
[365] Üsküdar District National Education Directorate, 5 January 2019
[366] Acarkent High School, 11 January 2019
[367] Istanbul Technical University Energy Institute, 15 February 2019
[369] TEV Inanç Türkeş High School, 13 March 2019
[371] Karabağlar Izmir District National Education Directorate, 3 April 2019
[374] Ayazağa Işık Science High School, 25 April 2019
[375] Kandilli Girl’s High School, 2 May 2019
[376] Italian High School, 25 November 2019
[378] Kandilli Girl’s High School, 4 December 2019
[379] Validebağ Science High School, 10 December 2019
[382] Galileo Galilei Italian High School, 16 January 2020

“MIT, Spin Glasses, and French Literature”
[368] Saint Joseph French High School, 28 February 2019
[373] Notre Dame de Sion French High School, 5 April 2019

“Education, Research, High Success, Happiness from Kadıköy”
[370] Haydarpaşa Anatolian High School, 20 March 2019

“Education, Research, Student Success and Happiness Starting from High School: Spin Glasses, Reşat Nuri Güntekin, Simone de Beauvoir"
[372] TED University Ankara, 4 April 2019

“Education and Research in the Natural and Social Sciences”
[377] Sabahattin Zaim University, 27 November 2019

“Science and Engineering, Success and Happiness”
[380] Koç University Industrial Engineering Club, 17 December 2019

“Physicist Life”
[381] German High School, 15 December 2020

“Education and Research, Success and Happiness: Fixing Our Own Future”
[383] Mürüvvet Evyap Schools, 11 February 2020
[384] Eyüboğlu College, 4 March 2020

[385] TED Izmir College, 14 May 2020
[386] Eyüp Anatolian High School, 22 May 2020
[387] Robert College, 27 July 2020
[388] Üsküdar American High School, 27 July 2020
[389] İstanbul Erkek High School, 4 August 2020
[390] Beşiktaş Atatürk Anatolian High School, 5 August 2020
[391] Austrian High School, 11 August 2020

"Reentrance in Chaos and in Interfaces, Social Sciences and Literature in Physical Sciences, Instigating Precocious Successes"
[392] Kandilli Girl's High School, 1 December 2020
[394] Antalya Bilfen High School, 24 December 2020
[395] Kayseri İstem College, 7 January 2021
[396] Adana Science High School, 13 January 2021
[397] Vefa High School, 17 January 2021
[398] İzmir Ege High School, 16 February 2021
[399] Yıldız Technical University, 10 March 2021
[400] Hacettepe University, 25 March 2021
[401] Haydarpaşa High School, 9 April 2021

"YÖK TEBIP High Performers in the Natural Sciences Program is high performing"
[393] Cağaloğlu Anatolian High School, 17 December 2020

The **1 August 2010 issue of the scientific journal Physica A** has been dedicated to A.N. Berker for his 60th birthday (Physica 389 (15) 2865-3012 (2010))**.** This 157-page book contains, in addition to information on Berker's career and achievements, photographs and map of Istanbul and Kadıköy, research articles on statistical, condensed matter, fluid, and biological physics by D.P. Aalberts, M. Aizenman, D. Andelman, M.C. Dökmeci, S. Durukanoğlu, M.E. Fisher, C. Güven, R.B. Hallock, S. Havlin, M. Hinczewski, J.O. Indekeu, A. Kabakçıoğlu, C.N. Kaplan, M. Kardar, M. Kaufman, D.P. Landau, J.L. Lebowitz, A. Malakis, J.F. Marko, S.R. McKay, D. Mukamel, R.R. Netz, H. Nishimori, M. Ohzeki, H. Orland, E. Orlandini, S. Östlund, J.A. Plascak, O.S. Sarıyer, H.E. Stanley, R.H. Swendsen, Y. Şengün, and others. This book is based on the Berker-Fest conference organized at MIT on October 17, 2009.

The Berker-Fest organized at Istanbul Technical University on November 14-15, 2009 is reflected in another book: the 130-page book **"Studies in Science, the Individual, and Society: A Memorial Book"** (ISBN 978-605-4348-21-3). This interdisciplinary book contains articles by M. Şahin, Y. Yılmaz, Ö. Pekcan, İ.H. Duru, A.N. Aliev, M.Y. Şengül, M.C. Güçlü, Z. Aycan, B. Karaçam, R. Reid, A. Oğuz, S.A. Uysal, E. Yurtsever, İ. Yılgör, E. Yılgör, A. Sevgen, F.B. Erim Berker, M. Keskin, M. Ertaş, A. Alpar, Y. Şengün, S. Durukanoğlu, S. Erkan, H. Özbek, S. Yıldız, Ö.F. Dayı, O.T. Turgut, and C. Saçlıoğlu.

Some of the Invited Talks at Conferences Given by Junior Collaborators on Joint Work with ANB

"The Frustrated Spin-Gas Model for Doubly Reentrant Liquid Crystals"
J.S. Walker, Gordon Conference on Liquid Crystals, New Hampshire (1983)

"Chaotic Spin Glasses: An Upper Critical Dimension"
S.R. McKay, 29th Annual Conference on Magnetism and Magnetic Materials, Pittsburgh, Pennsylvania (1983)

"Reentrant Liquid Crystal Phases in Systems of Polar Molecules"
J.O. Indekeu, Liquid Crystal Days Conference, Leuven, Belgium (1984)

"Molecular Tail Lengths, Dipole Pairings, and Multiple Reentrance Mechanisms of Liquid Crystals"
J.O. Indekeu, 16th International Conference on Thermodynamics and Statistical Mechanics, Boston (1986)

"Equimagnetization Lines in the Hybrid-Order Phase Diagram of the d=3 Random-Field Ising Model"
S.R. McKay, 4th Joint Intermag-Magnetism and Magnetic Materials Conference, Vancouver, Canada (1988)

"Hybrid-Order Phase Transition and Intermediate-Critical Dimension of the Random-Field Ising Model"
S.R. McKay, New Trends in Magnetism Meeting, Recife, Brazil (1989)

"Phase Transitions on Semiconductor Surfaces"
O.L. Alerhand, 20th International Conference on the Physics of Semiconductors, Thessaloniki, Greece (1990)

"Finite-Temperature Phase Diagram of Vicinal Si(100) Surfaces"
O.L. Alerhand, Winter Epitaxy Workshop, Obertraun, Austria (1990)

Some of the Invited Talks at Conferences Given by Junior Collaborators on Joint Work with ANB, continued

"Finite-Temperature Equilibrium Properties of Steps on Si(100) Surfaces"
O.L. Alerhand, March Meeting of the American Physical Society, Cincinnati (1991)
Abstract: Bull. Am. Phys. Soc. 36, 587 (1991).

"Renormalization-Group Calculation of Local Magnetizations and Correlations:
Random-Bond, Random-Field, and Spin-Glass Systems"
D. Yeşilleten, Istanbul Technical University Statistical Physics Days (1997)

"Renormalization-Group Study of Helium Mixtures Immersed in a Porous Medium"
A. Lopatnikova, March Meeting of the American Physical Society, Los Angeles (1998)
Abstract: Bull. Am. Phys. Soc. 43, 515 (1998).

"Renormalization-Group Calculation of Local Magnetizations and Correlations:
Random-Bond, Random-Field, and Spin-Glass Systems"
D. Yeşilleten, March Meeting of the American Physical Society, Los Angeles (1998)
Abstract: Bull. Am. Phys. Soc. 43, 835 (1998).

"Hard-Spin Mean-Field Theory: A Self-Consistent Theory for Fluctuation-Dominated Systems"
A. Kabakçıoğlu, Istanbul Technical University Statistical Physics Days (1999)

"Sequential Phase Transitions in Liquid Crystals: A Photon Transmission Study"
H. Özbek, Istanbul Technical University Statistical Physics Days (2000)

"Renormalization-Group Theory of Electronic Conduction Models"
M. Hinczewski, Istanbul Technical University Statistical Physics Days (2003)

"Critical Behavior of Liquid Crystals via the Optical Transmission Method"
S. Yıldız, Istanbul Technical University Statistical Physics Days (2003)

"Phase Diagrams and Crossover in Spatially Anisotropic d=3 Ising, XY Magnetic and Percolation Systems:
Exact Renormalization-Group Solutions of Hierarchical Models"
A. Erbaş, 2nd Bilateral Workshop on Solid State and Materials Chemistry, Dresden, Germany (2006)

"Renormalization-Group Theory of d=3 tJ Models with Frustrated
Next-Nearest-Neighbor Antiferromagnetic and Electron-Hopping Interactions"
C.N. Kaplan, 2nd Bilateral Workshop on Solid State and Materials Chemistry, Dresden, Germany (2006)

"Renormalization-Group Theory of Electronic Models: Finite-Temperature Phase Diagrams and
the Effects of Spatial Anisotropy and Quenched Disorder"
M. Hinczewski, 6th International Conference of the Balkan Physical Union, Istanbul (2006)

"Unusual Phase Transitions in Complex Networks"
M. Hinczewski, 11. National Liquid-State Physics Symposium, Istanbul (2007)

"Connection between Geometry and Thermal Correlations:
Small-World and Community Effects in Scale-Free Hierarchical Networks"
M. Hinczewski, 3rd Bilateral Workshop on Novel Materials, Istanbul (2008)

"Water Flow through Carbon Nanotubes: Charge-Controlled Gating"
O.S. Sarıyer, Water: Its Nanophysics and Biochemistry Workshop, Minerva Han, Istanbul (2010)

"Water Flow through Carbon Nanotubes: Ionic Concentration Effects"
V.O. Özçelik, Water: Its Nanophysics and Biochemistry Workshop, Minerva Han, Istanbul (2010)

"Spinless Falicov-Kimball Model in d = 3: Global Phase Diagram by Renormalization-Group Theory"
Ozan Sarıyer, 18. Istanbul Statistical Physics Days, Sabancı University (2011)

"Controlling Frustration, Chaos, and Novel Ordering in Spin Glasses"
Efe Ilker, 22. Istanbul Statistical Physics Days, Istanbul Technical University (2015)

Doctorate Students Supervised by A.N. Berker

a) At Harvard University

S. Ostlund, Ph.D. 1980, "Statistical Mechanics of Two-Dimensional Systems"
The first half of this thesis was supervised by ANB.
After Ph.D.: Research Associate, Cornell University
Currently: Professor of Physics (tenured), Chalmers University, Sweden

b) At Massachusetts Institute of Technology

M. Kardar, Ph.D. 1983, "Ordering Phenomena under Competing Interactions in Adsorbed Layers and in Spin Systems"
After Ph.D.: Junior Fellow, Harvard University Society of Fellows
Currently: Professor of Physics (tenured), Massachusetts Institute of Technology

D. Andelman, Ph.D. 1984, "Multicritical Phenomena in Systems with Quenched and Annealed Impurities"
After Ph.D.: Research Associate, Collège de France, Paris
Currently: Department Head and Professor of Physics (tenured), Tel Aviv University

R.G. Caflisch, Ph.D. 1984, "Phase Transitions in Adsorbed Layers, Binary Fluids, Liquid Crystals, and Cubic Crystals"
After Ph.D.: Research Associate, Schlumberger-Doll Research, Connecticut
Currently: Analyst, Clear Systems, Inc., Texas

S.R. McKay, Ph.D. 1986, "Chaotic Spin-Glass Phases and Random-Field Ferromagnets"
After Ph.D.: Assistant Professor of Physics, University of Maine
Currently: Professor of Physics (tenured), University of Maine

K. Hui, Ph.D. 1989, "Quenched Disorder and Competing Interactions in Spin Systems"
After Ph.D.: Research Associate, University of California, Berkeley
Currently: Analyst, Barra Financial Consulting Firm, Berkeley

J.F. Marko, Ph.D. 1989, "On Structure and Scaling at First- and Second-Order Phase Transitions"
After Ph.D.: Research Associate, University of Chicago
Currently: Professor of Physics (tenured), Northwestern University, Evanston

D.P. Aalberts, Ph.D. 1994, "Phase Transition Phenomena in Quantum Spin Systems and in Polyampholyte Gels"
After Ph.D.: Research Associate, University of Leiden
Currently: Department Head and Professor of Physics (tenured), Williams College

A. Falicov, Ph.D. 1994, "Phase Transition Phenomena in Electronic Systems and in Systems with Quenched Field and Bond Randomness"
After Ph.D.: Research Associate, University of California, San Francisco
Currently: M.D.Ph.D. Surgeon, Seattle Orthopaedic and Fracture Clinic, Washington

A. Kabakçıoğlu, Ph.D. 1999, “Scaling Studies of Frustrated Systems, Random-Field Tricriticality, Electronic Conduction Models, and Interface Delocalization”
After Ph.D.: Research Fellow, Weizmann Institute of Science
Currently: Associate Professor of Physics, Koç University

G. Migliorini, Ph.D. 1999, “Renormalization-Group Studies of Disordered Magnetic Systems, Strongly Correlated Electronic Systems, and Polymeric Systems”
After Ph.D.: Research Associate, Max Planck Institute, Mainz
Currently: Research Associate, Aston University, Birmingham

M. Hinczewski, Ph.D. 2005, “Renormalization-Group Theory of Correlated Electron Systems”
After Ph.D.: Postdoctoral Researcher, TÜBITAK F. Gürsey Research Institute for Basic Sciences
Currently: Assistant Professor of Physics, Case Western Reserve University

c) At Istanbul Technical University

H. Kaya, Ph.D. 1999, “Scaling Behavior in Stochastic Growth Models Exhibiting Dynamical Phase Transitions and Degenerate Spin-Glass Order in Diluted Frustrated Systems”
(Degenerate Spin-Glass Order in Diluted Frustrated Systems was directed by A.N. Berker)
After Ph.D.: Postdoctoral Researcher, University of Toronto
Currently: Associate Professor of Physics, Atatürk University, Erzurum

Doctorate Students Supervised by A.N. Berker, continued

d) At Koç University

O.S. Sarıyer, Ph.D. 2011, "Renormalization-Group Theory of Quantum Particulate Systems"
After Ph.D.: Postdoctoral Researcher, University of North Carolina at Chapel Hill
Currently: Assistant Professor of Physics, Piri Reis University

e) At Sabancı University

E. İlker, Ph.D. 2015, "Differentiated Chaos in Phases and Phase Boundaries, Overfrustrated/Underfrustrated Repressed/Induced Spin-Glass Order, Asymmetric Phase Diagrams, and Critical Phases in Spin-Glass Systems"
After Ph.D.: Postdoctoral Researcher, Case Western Reserve University
Currently: Postdoctoral Researcher, Institut Curie, Paris

T. Çağlar, Ph.D. 2017, "Chiral Spin Glasses, Continuum of Devil's Staircases, and Thesholded Roughening from Frozen Impurities"
This research won Dr. Gürsel Sönmez Research Award of Sabancı University (2017).
After Ph.D.: Already has received record number of 11 postdoctoral offers from the USA (6), Europe (2), Korea (1), and Turkey (2).

f) At Kadir Has University

C. Artun, doctoral research continuing.

Master's Thesis Students Supervised by A.N. Berker

a) At Massachusetts Institute of Technology

W. Hoston, M.S. 1991, "Multicritical Phase Diagrams of the Blume-Emery-Griffiths Model with Repulsive Biquadratic Coupling: Mean-Field and Renormalization-Group Studies"

R.R. Netz, M.S. 1991, "Frustration in Magnetic, Liquid Crystal, and Surface Systems: Monte Carlo Mean-Field Theory"

b) At Istanbul Technical University

H. Kaya, M.S. 1994, "Phase Transitions in Systems with Quenched Randomness: The Hard-Spin Mean-Field Theory Approach" (Chapter in thesis)

O.S. Sarıyer, M.S. 2007, "Quantum Phenomena in Anisotropic XXZ Heisenberg Spin Chains with Ferromagnetic and Antiferromagnetic Interactions: Renormalization Group Calculations"

A. Tuncer, M.S. 2007, "Lower-Critical Dimension and Quenched Probability Scaling of Ising Spin Glasses: Renormalization-Group Study in Non-Integer Dimensions"

B. Yücesoy, M.S. 2007, "Non-Equilibrium Behavior of a Complex Ordering System: Hysteresis in the d=3 Ising Spin-Glass from Hard-Spin Mean-Field Theory"

V.O. Özçelik, M.S. 2008, "Global Phase Diagrams of BEG Spin-Glass and Spinless Fermion Systems"

c) At Koç University

A. Erbaş, M.S. 2007, "Two Statistical Physics Problems: Phase Diagram Calculation of Spatially Anisotropic, Surfaced d=3 Layered Systems by Renormalization-Group Theory and Vehicle and Route Optimization with Traffic Factors for Migros Home Delivery System by Simulated Annealing"

B. Renklioğlu, M.S. 2007, "Stepwise Positional and Orientational Ordering in the Spin-3/2 Ising Model: A Plastic Crystal Phase Diagram from Renormalization-Group Theory"

C. Güven, M.S. 2008, "Reentraant and Forward Phase Diagrams of the Anisotropic d=3 Ising Spin Glass"

C.N. Kaplan, M.S. 2008, "Renormalization-Group Theory of Classical and Quantum Systems with Frozen Disorder"

d) At Sabancı University

B. Atalay, M.S. 2018, "Maximally Random Systems, Maximally Degenerate Ordering, and Lower Lower-Crtical Spin-Glass Dimension"

Undergraduate Thesis Students Supervised by A.N. Berker

a) At Massachusetts Institute of Technology

H. Chou, B.S. 1981, "Binary Fluid Mixtures with Three Critical Points due to Orientational Correlations"
D.A. Seibert, B.S. 1981, "Asymmetric Closed-Loop Phase Diagrams in Binary Fluid Mixtures: A Renormalization-Group Approach"
J.E. Simko, B.S. 1982, "Searching for Fisher Renormalization Effects: The Triangular Ising Lattice"
R.E. Goldstein, B.S. 1983, "Molecular Theory of Reentrant Phase Transitions in Binary Liquid Mixtures" *
This research won the Orloff Research Award of the MIT Physics Department (1983).
This research won the Apker Award of the American Physical Society (1983).
R.J. Lenk, B.S. 1983, "Phase Diagrams and Critical Behavior of a Generalized Helical Potts Model on the Triangular Lattice"
S.I. Chase, B.S. 1985, "Renormalization-Group Analysis of the q-State Potts Model" *
W.V. Wang, B.S. 1985, "Surface Free Energy of the Two-Dimensional Ising Models and Universality of Finite-Size Scaling Amplitudes by the Method of Pfaffian and Dimer Statistics" *
J.E. Hilliard, B.S. 1989, "Monte Carlo Simulation of a One-Dimensional Ising System with Competing Interactions Using Domain Walls"
G.T. Pickett, B.S. 1989, "Asymptotic Behavior of the Spectrum of Generalized Dimensions in Multifractal Tree Growth"
A.A. Naqvi, B.S. 1994, "Frustrated Systems and Hard-Spin Mean-Field Theory"
A. Lopatnikova, B.S. 1997, "Renormalization-Group Theory of Superfluidity and Phase Separation of Helium Mixtures Immersed in Aerogel" *
This research won the Orloff Research Award of the MIT Physics Department (1997).
This research won the Apker Award of the American Physical Society (1997).**
D. Yeşilleten, B.S. 1997, "Renormalization-Group Calculation of Local Magnetizations and Correlations: Random-Bond, Random-Field, and Spin-Glass Systems" (Chapter in thesis) *
This research won the Orloff Research Award of the MIT Physics Department (1997).

b) At Istanbul Technical University

A. Erbaş, B.S. 2004, "Heat Capacities of Anisotropic Ising Models" *
O.S. Sarıyer, B.S. 2004, "Renormalization-Group Theory of the Excitation Spectrum Gap and Spin-Wave Stiffness in Isotropic and Anisotropic Quantum Heisenberg Magnets" *
A. Tuncer, B.S. 2004, "Renormalization-Group Theory of Spatially 2+1 Anisotropic d=3 Percolation Systems" *
B. Yücesoy, B.S. 2004, "Renormalization-Group Theory of Spatially Uniaxially Anisotropic d=3 Isıng Spin, XY Spin, and Electronic Systems" *
S.R. Baronyan, B.S. 2005, "Renormalization-Group Flows of a Hierarchical Spin Model with Competing Interactions and Thermal Vacancies"
B. Renklioğlu, B.S. 2005, "Phase Transition and Critical Exponent in a Small World Network"
N. Aral, B.S. 2006, "Spin Correlation Functions of Frustrated Systems Exhibiting Chaotic Rescaling" *
A. Doldurucu, B.S. 2006, "A Microscopic Model of Electrophoresis"
C. Güven, B.S. 2006, "A Novel Spin Glass: The d=3 Transverse Spin Glass and its Renormalization-Group Transformation"
C.N. Kaplan, B.S. 2006, "İkinci Komşu Manyetik ve Elektron Etkileşmeli d=3 tJ Modelinin Renormalizasyon Grubu Çözümü" *
V.O. Özçelik, B.S. 2006, "Termal ve Donmuş Düzensizlikleri Olan bir Spin Sisteminde Renormalizasyon Grubu Dönüşümü"

* **Undergraduate research led to publication in refereed journal.**

** **A.N. Berker thereby became the first faculty supervisor to have two undergraduate research students on separate years win the Apker Award of the American Physical Society. This feat was subsequently equalled by A.N. Berker's doctorant (see page 24) Prof. D.P. Aalberts of Williams College.**

Undergraduate Thesis Students Supervised by A.N. Berker, continued

c) At Koç University

Ş. Namırtı, "Simulated Annealing, Quantum Hamiltonian Evolution, and other Statistical Physics Methods Applied to Flexible Route Optimization for Migros e-Market" (undergraduate research project)
E. İlker, "XY Spin-Glasses in Three Dimensions" (undergraduate research project) *
T. Çağlar, "Interface-Roughening Phase Diagram of the Three-Dimensional Ising Model for All Interaction Anisotropies from Hard-Spin Mean-Field Theory" (undergraduate research project) *

d) At Sabancı University

M. Demirtaş, "Lower-Critical Spin-Glass Dimension from 23 Sequenced Hierarchical Models" (undergraduate research project) *
Y. Ezber (Boğaziçi University student), "Spin-Glasses with Long-Range Frustration" (undergraduate research project)
Ç. Yunus (Boğaziçi University student), "Stepwise Positional-Orientational Order and the Multicritical-Multistructural Global Phase Diagram of the s=3/2 Ising Model from Renormalization-Group Theory" (undergraduate research project) *
G. Akdeniz (Robert College high school student), Ersin Arıoğlu (Koç Lisesi high school student) "Interdisciplinary Scientific Referencing: A Comparative International Data Analysis" (high school research project)
N. Yurdakul, E. Akdere, R.E. Berker, K. Ertaş, N. Köylüoğlu (Robert College high school students), M. Cezairli (Üsküdar American Academy high school student) "A Comparative Study of Interdisciplinarity in Sciences in Brazil, South Korea, Turkey, and USA" (high school research project)
Y.E. Bahar, "Flexible Arbitrary Rescaling Renormalization-Group Transformations and Interface Roughening from Local Magnetizations Calculated by Renormalization-Group Theory"

e) At Kadir Has University

Y.E. Bahar (Sabancı University student), "Local Densities and Local Hopping Averages from the Renormalization-Group Solution of the tJ Model of Electronic Conductivity"
M. Özen (Istanbul University student), "Non-Integer Resaling Renormalization-Group of Spin Glasses"
E. Tunca (Sakıp Sabancı Anadolu High School student), "Non-Integer Rescaling Renormalization-Group of Spin Glasses"
C. Artun (Yeditepe University student), "Potts Metastable Droplets" *
E. Duman (Sabancı University student), "Random Connectivity Rescaling"
E. Eren (Boğaziçi University student), "Renormalization-Group Theory of Metastable Droplets" *
İ. Keçoğlu (Boğaziçi University student) "Across Dimensions: Two- and Three-Dimensional Phase Transitions from the Iterative Renormalization-Group Theory of Chains" *
A. Türkoğlu (Boğaziçi University student) "Frustrated Potts: Multiplicity Eliminates Chaos via Reentrance" *
U.E. Usturalı (Boğaziçi University student), "Renormalization-Group Theory of Mixed Spins"
D. Yılmazer (YÖK TEBİP Outstanding Performers Program), "Coastal Fractal Dimensions of Seashores, Lakes, and Dam Reservoirs" *
M.B. Topal (YÖK TEBİP Outstanding Performers Program), "Topological Phase Transitions and Position-Space Renormalization-Group Theory"
S.E. Gürleyen (ITU MS student) "Long-Range Spin Glass"
K. Akın (Boğaziçi University student) "Maximally Random-Field Potts and Random-Field XY"

* **Undergraduate research led to publication in refereed journal.**

Courses Taught by A.N. Berker

In 20 years at MIT:

31 semesters lecturing 9 courses, 5 semesters recitations, and 7 intensive 1-month course lecturing:

8.04	Undergraduate Quantum Physics I	(Lectures and Recitations)
8.05	Undergraduate Quantum Physics II	(Lectures and Recitations)
8.07	Undergraduate Electromagnetism II	(Lectures)
8.231	Undergraduate Physics of Solids I	(Lectures and Recitations)
8.232	Undergraduate Physics of Solids II	(Lectures)
8.235	Superconductivity	(Lectures)
8.236	Phase Transitions and Renormalization-Group Theory	(Lectures)
8.237	Neural Networks and Simulated Annealing	(Lectures)
8.581	Entropy, Information and the Brain	(Co-lecturer)
8.321	Graduate Quantum Theory I	(Lectures)
8.322	Graduate Quantum Theory II	(Lectures)
8.333	Graduate Statistical Mechanics I	(Lectures and Recitations)
8.334	Graduate Statistical Mechanics II	(Lectures and Recitations)
8.392	Graduate Statistical Mechanics III	(Lectures)

Received the MIT Department of Physics Buechner Teaching Prize (1986-7) for his teaching of the graduate statistical mechanics sequence 8.333, 8.334, and 8.392 .

Received the MIT School of Science Teaching Prize for Excellence in Graduate Education (1995).

At Istanbul Technical University:

FIZ111, FIZ101T	Physics I: Mechanics	(Lectures and Recitations)
FIZ132, FIZ102T	Physics II: Electricity and Magnetism	(Lectures and Recitations)
KIM101E	General Chemistry I	(Lectures)
FN607, FIZ621	Fluctuations, Scaling, and Universality	(Lectures)
FN608	Graduate Statistical Mechanics	(Lectures)
ITB016E	Science and Engineering from the Humanist: Italo Calvino	(Lectures)
ITB027E	Estrangement/Involvement in 5 Works by Camus and Sartre	(Lectures)
ITB143E	Durrell and Said: Orientalism Practiced and Theorized	(Lectures)
ITB179E	Literatures of Intimate Separacies: Vizyenos, Seyfettin, Armen	(Lectures)
ITB179	İçiçe Ayrılıkların Edebiyatları: Vizyenos, Seyfettin, Armen	(Lectures)

At the TÜBITAK Feza Gürsey Research Institute,
Erzurum Atatürk University, Kayseri Erciyes University:

Phase Transitions and Renormalization-Group Theory	(Lectures)
Augmented Mechanics, a course designed for high school students	(Lectures)

At Koç University:

PHYS101	Physics I: Mechanics	(Lectures)
PHYS102	Physics I: Electricity and Magnetism	(Lectures)
PHYS301	Undergraduate Statistical Physics	(Lectures)
PHYS409/509	Phase Transitions and Renormalization-Group Theory	(Lectures)
PHYS506	Graduate Quantum Statistical Mechanics	(Lectures)

At Bosphorus University:

SCI 102 module	Water: Its Physics, Nanophysics, Chemistry, and Geopolitics	(Lectures)
HUM 101,102 module	Alcibiades & Philoctetes: Individual's Talents and Rights in an Oligarchical Society	(Lectures)

At Sabancı University:

IF200	Fantasy, Reality, Science, and Society	(Lectures)
NS210	Water: Its Physics, Nanophysics, Chemistry, and Geopolitics	(Lectures)
NS220	World Energy Outlook: The Coming Year	(Lectures)
PHYS412	Statistical Mechanics	(Lectures)
PHYS438/538	Phase Transitions and Renormalization-Group Theory	(Lectures)
SPS325	Alcibiades and Philoctetes: Individual's Talents and Rights in an Oligarchical Society	(Lectures)
SULYO FN01	Quantum Mechanics and Nano Science (Summer School for High School Students)	(Lectures)
SULYO FN05,6	Augmented Mechanics 1, 2 (Summer School for High School Students)	(Lectures)
Sakıp Sabancı Museum Full Semestre Public Course	Durrell&Said: Orientalism Practiced and Theorized	(Lectures)

At Kadir Has University:

Full Semestre Open-to-Public Course: Durrell&Said: Orientalism Practiced and Theorized (Lectures)
Full Semestre Open-to-Public Course: Literatures of Intimate Separacies: Vizyenos/Papadiamantis, Seyfettin/Cumalı, Armen (Lectures)
Full Semestre Open-to-Public Course: Relations and Estrangement/Engagement in 7 Works by Sartre, Beauvoir, Camus (taken by 107 women and men uniformly covering a 50-year time-span 1954-2002 of birthdates) (Lectures)
Full Semestre Open-to-Public Course: Women's Rights Given by Legislation and Taken Back by Literature: Reşat Nuri Güntekin (Lectures)
Full Semestre Open-to-Public Course: Alcibiades and Philoctetes: Individual's Talents and Rights in an Oligarchical Society (Lectures)
Full Semestre Open-to-Public Course: Consciousness, Survival, Terminating or Being Terminated in Love and Life: Orhan Pamuk, Ahmet Ümit, Italo Calvino, Stanislaw Lem (Lectures)
Full Semestre Open-to-Public Course: Post-1984 Uto/Dystopia: George Orwell, Aldous Huxley, Ursula Le Guin, Stanislaw Lem, Bengüsu Özkan (Lectures)
Full Semestre Open-to-Public Course with On-Site Visit: **Kayseri: Dynamo!** (Lectures)
Full Semestre Open-to-Public Course: **Eskişehir: Dynamo!** (Lectures)
Full Semestre Open-to-Public Course: **Trabzon, Of, Rize: Dynamos!** (Lectures)
"Alcibiades" (161 pages), "Kayseri: Dynamo!" (595 pages) and "Eskişehir: Dynamo!" (424 pages), "Trabzon, Of, Rize: Dynamos!" course books can be downloaded from: http://webprs.khas.edu.tr/~nberker/, http://web.mit.edu/physics/berker/

Phase Transitions and Renormalization-Group Theory (Full semester Saturday School) (Lectures)
Augmented Mechanics (Summer School for High School Students) (Lectures)
Augmented Electricity and Magnetism (Summer School for High School Students) (Lectures)
Quantum Mechanics (Summer School for High School Students) (Lectures)
Mandelbrot, Feynman, D'Arcy Thompson, Lavoisier: Advanced English Readings in the Fundamental Sciences (Summer School for High School Students) (Lectures)
CH201 Materials Science (Lectures)
GE200 Fantasy, Reality, Science, Society, and Law (Lectures)
PH121 Mechanics (Lectures)
FENS201 Mechatronics Department Applied Engineering Mathematics I (Lectures)
FENS201 Mechatronics Department Applied Engineering Mathematics II (Lectures)
KHAS101: Origins and Consequences: Cosmology (Lectures)

YÖK Higher Education Council, High Performers Natural Sciences Program – Istanbul University (for topmost Natural Sciences students from all of Turkey):

Augmented Mechanics (Lectures)
Electricity and Magnetism (Lectures)
Mandelbrot,Feynman,D'Arcy Thompson,Lavoisier: Advanced English Readings in Fundamental Sciences (Lectures)
World Literature I (Lectures)

Nihat Berker's Course Videos Available to Everybody (102 course videos)
http://webprs.khas.edu.tr/~nberker/ http://web.mit.edu/physics/berker on web pages click upper left.
Augmented Mechanics (47 course videos)
Electricity and Magnetism (44 course videos)
Quantum Mechanics (10 course videos)
Phase Transitions and Renormalization Group (25 course videos)

Some of the Funding and Administrative Activities Conducted by A.N. Berker

Principal Investigator of Research Grants from the National Science Foundation, Army Research Office, Joint Services Electronics Program, Department of Energy, U.S.A; Intevep Petroleum Company, Alfred P. Sloan Foundation; 1979-2002, totalling approximately $2 500 000 .
Principal Investigator of Research Grants from TÜBITAK Basic Sciences Research Group, Migros KÜMPEM, MIT Physics Department, 2002-
MIT Undergraduate and Graduate Admissions. MIT Physics Department General Examination Committees
Chairperson of the MIT Condensed Matter Physics Seminars (1980-89)
Faculty Search Committee for the New Head of the MIT Physics Department (1981)
Co-Chair, Dept. Energy Workshop (1981):"Future Trends in Condensed Matter Theory and the Usage of Computation"

Some of the Funding and Administrative Activities Conducted by A.N. Berker, continued 1

Reporter for the Visiting Committee of the MIT Physics Department (1982)
Co-founder of the Center for Theoretical Condensed Matter Physics at MIT (1982)
Chairperson of the MIT Herman Feshbach Lecture Series (1986-89)
MIT-Lincoln Laboratories Faculty Liaison Committee (1987-88)
Chairperson of the MIT Harris Lecture Series (1992-97)
Interdisciplinary Research Group Leader at the MIT Center for Materials Science and Engineering (1993-94)
Chairperson of the Committee for a New Booklet for the MIT Physics Department (1994-95)
Founder and co-chairperson, Istanbul Technical Univ. Statistical Physics Days. Editor of the Proceedings (1994, 97-99). Yearly conference still continues.
TÜBITAK Feza Gürsey Research Institute for Basic Sciences Advisory Committee (1997-99), Executive Committee (2000-11), Chairperson of the Executive Committee (2007-2011)
Chairperson of Search Committeee for New Director of TÜBITAK F. Gürsey Research Inst. for Basic Sciences (1999)
Chairperson of the ITU Physics Colloquia (1999-2000)
Founder and Editor, Istanbul Physics Calendar (1999-2001). Weekly calendar still continues.

Head of the Physics Department, Istanbul Technical University (2000-03); has restructured the Physics Department course program and the university-wide Physics I,II courses (approximately 2400 students each semester).
Distinguished Lectures Committee, Academy of Sciences of Turkey (2000-01)
Ethics Committee, Academy of Sciences of Turkey (2001); "Ethics and its Issues in Scientific Research", C. Ertekin, N. Berker, A. Tolun, and D. Ülkü, 70 pages, Academy of Sciences of Turkey Publications (2002)
Editor-in-Chief, ARI – Bulletin of the Istanbul Technical University (2002-04)
International Union of Pure and Applied Physics, Commission on Statistical Physics (2002-08)
Head of the Engineering Physics Program, ITU (2002-05)
Dean of the School of Sciences and Letters, Istanbul Technical University (2003-04); has restructured the university-wide Chemistry I, Mathematics I,II, Differential Equations, Linear Algebra courses (approximately 6000 students each semester).
Founder and Director, MIT - Turkey Freshman Scholars Program (2003-)
Academy of Sciences of Turkey TÜBA, Award Program for Highly Successful Young Scientists (GEBİP): Astronomy-Physics-Mathematical Sciences Area Evaluation Committee member (2006-09,2013), chairperson (2007-09)
Council Member, Academy of Sciences of Turkey TÜBA (2008-12)
TÜBITAK Feza Gürsey Research Institute Summer School for High School Students Founder and Director (2008-2011); Sabancı University Summer School for High School Students Founding President (2012-2017); Kadir Has University Summer School for High School Students Founder and Director (2017-)
Faculty Council Member and Faculty Governing Council Member, Faculty of Sciences, Koç University (2008)
Kadir Has University External Advisory Board (2008), Faculty of Engineering, Natural Sci. Ext. Advis. Brd. (2014-16)
ITU-LARF: Founded the ITU Undergraduate Students Research Opportunities Program (2008)
Vice President, Sabancı University (1-7/2009)

President, Sabancı University (2009-2016): Sabancı University was redesigned and moved up to the category top universities in Turkey, working with foremost Vice Presidents Prof. Sondan Durukanoğlu Feyiz (now President of Kadir Has University) and Prof. Hasan Mandal (now President of TÜBİTAK the Scientific and Technical Research Council of Turkey), and the wide participation and efforts of faculty members, administrative staff, students, and alumni: Founded SUNUM Sabancı University Nanotechnology Research and Application Center, IICEC Istanbul International Climate and Energy Center, SU Integrated Manufacturing Technologies Center. Started SU-Mercator Foundation Turkish-German high school/university student youth bridge, MIT-SU strategic collaborations. Outside funding of projects increased importantly every year starting the beginning of presidency. Journal publications by faculty members were motivated and increased considerably. Student academic success and therefore grades have improved importantly. Started, under the Inter-Faculty IF code, truly interfaculty undergraduate courses. Brought departmental specialization to the end of the first undergraduate year, cutting down the previous unnecessarily two-year waiting period. Started faculty advisors from the first day of undergraduate education. Started 55 different double-degree programs. For example in 2015 with 1308 active personal research projects conducted by undergraduate students, created a student research-oriented and generally student-focussed environment. Introduced undergraduate research advising to faculty evaluations. On most days throughout the year, as President had his lunch with students at randomly chosen dining hall tables. Started free, widely attended, open-access courses for the general public of all ages. With the Sabancı University – MIT Freshman Scholars program, every year SU first year students who received the top grades in their courses went to MIT for 20 hours of courses. Similarly, MIT top students came to SU. With Münich Technical University, the same program was reciprocally conducted. Coined Minerva Palace label and started her activities. With the courses "Fantasy, Reality, Science, and Society" (given by himself to over 300 students every semester), "World Energy Outlook Next Year" (given by himself), "Water: Its Physics, Nanophysics, Chemistry, and Geopolitics" (given by Vice-President Prof. Sondan Durukanoğlu Feyiz), using the Inter-Faculty code IF, started genuinely interdisciplinary courses, which became in extremely high demand

Some of the Funding and Administrative Activities Conducted by A.N. Berker, continued 2 **more President Tasks**

from the students, filling up immediately. Started SU Karaköy Science and Culture Academy for adults with strong scholarship support (and participation) for high school teachers. Started SU Conference Series Books (with books by Prof. Tosun Terzioğlu, Cem Mansur "Music, Mankind, and Peace", Kemal Derviş). Started the Dicle Koğacıoğlu Writing Award. Gave dozens of motivation/guidance seminars at high schools all over Turkey. Extending the University Summer Courses for High School Students that he had previously (2008-) brought to Turkey at the TÜBITAK Feza Gürsey Research Center, together with Vice-President Prof. Sondan Durukanoğlu Feyiz conceived and conducted the SU Summer School for High School Students, setting example to Universities throughout Turkey, at SU with each summer 1000 high school students taking over 40 university courses, and a very large net income to be still given to the SU undergraduate scholarship fund. Completely restructured continuous daily open houses for high school students and their parents during university choosing period (with, for the first time, presentations from the President and all Deans, 7 days a week), other high school outreach programs, and undergraduate scholarship offering distributions. The daily presentations are still remembered and quoted by the then university-shopping parents. **Thus dramatically improved undergraduate student entrance profiles** in every faculty. Completely restructured, thus considerably enhancing academic engagement, the Sakıp Sabancı Research Award. Together with Prof. Fuat Keyman (which he recruited) completely restructured Sabancı University Istanbul Policy Center, coming to international proeminence. Together with Neyyir Berktay and Dilek Sabancı, produced in Turkish and English two languages the study "Towards a Barrier-Free Turkey: Where Do We Stand? The Status Quo and Proposals" (309 pages). Together with Prof. Özgür Demirtaş and Suzan Sabancı, founded the SU Center of Excellence in Finance. Together with Prof. Sadık Esener and Sevil Sabancı, constructed the blueprint for the Sabancı University Faculty of Law. Developed online long-distance education for Sabancı University under the courses "Quantum Mechanics", "Astrophysics"," Water: Its Physics, Nanophysics, Chemistry, and Geopolitics". Together with Prof. Tülin Erden and Prof. Füsun Ülengin, for the Sabancı School of Management, constructed the position of Global Preeminent Visiting Professor blueprint (and found a candidate), this blueprint (and the candidate) now employed by another leading university. Started book distribution club and yearly reading workshops including authors (e.g., Richa Nagar, Orhan Pamuk, Martin Jacques) with strong joint participation from administrative personnel, students, faculty, and alumni. Started free "currently playing movie" evenings for students-faculty-staff-alumni. Started SU Alumni Association international cultural trips, with the participation and guidance of history professors. Designed and first implemented SU Emeritus Professorship, including (wooden classical) Emeritus Armchair. The Entrepreneurship and Innovation University Index given by the Ministry of Science, Industry, and Technology increased every year, being in first and seldom second place in Turkey, and during the last year of his Presidency, peaked at 95/100**. Whereas Sabancı University could not enter international rankings before his presidency, brought Sabancı University in international rankings to first-place rankings in Turkey, top rankings internationally.** etc.

During his Presidency, taught at least one course every semestre and published 15 papers in The Physical Review. Most of the important and large-scale effective practices mentioned above were, after his presidency, stopped from outside the university, unfortunately. However, he is continuing, with no interval, his projects and interactions with SU students, faculty, and alumni.

Click here for Presidency photos.

Click here for Graduation Day speeches: 2014, 2015, 2016

Editor-in-Chief, Turkish Journal of Physics (2009-10), Advisory Board (2010-)
Technical Track Leader, 10th American Soc. Mechanical Engineers Conf. Engineering Systems Design Analysis (2009)
Advisory Editor, Physica A, Elsevier (2010-)
Co-chairperson, Istanbul Statistical Physics Days (2010-12), Program Committee (2013-)
Scientific Committee Chairperson, 28. Int. Physics Conference, Turkish Physical Society (2011), Advisory Board (2012-16, 2021), Scientific Committee (2017)
Science Board, Abdullah Gül University (2011-)
International Advisory Board of Superconductor Technologies Application and Research Center, Ankara Univ. (2012-)
Scientific Board of AXA Research Fund, Paris (2012-)
Scientific Council of ICTP-Eurasian Center for Advanced Research ICTP-ECAR, Izmir High Technology Inst. (2013-)
International Advisory Committee, 4.,5. International Conferences on Superconductivity and Magnetism (2014, 2016)
International Advisory Committee, 9. International Physics Conference of the Balkan Physical Union IPCBPU-9 (2015)
Advisory Board, Turkey-Germany Youth Bridge (2014-)
International Advisory Board, University Excellence Care Project, Singapore (2014-)
Academy Awards Committee, Academy of Sciences of Turkey (2015)
Scientific Committee, International Conference on Quantum Science and Applications, Eskişehir (2016)
Board of Trustees, Robert College (2016-); Vice Chair of the Board of Trustees (2018-)
YÖK Higher Education Quality Council, Institutional External Evaluation Group Leader (2016-)

Dean of Engineering and Natural Sciences (2017-), Vice-President (2018-), Kadir Has University

Advisory Board, Center of Excellence for Gender and Women's Studies, Sabancı University (2017-)
Senior Scholar, Istanbul Policy Center, Sabancı University (2017-)
YÖK Higher Education Council, High Performers in Natural Sciences Program, Faculty Member (2017-), Program Coordinator (2017-)
YÖK Higher Education Council President Advisor (2020)
Board of Trustees, Natural Sciences Research Foundation of Turkey, Tuzla (2017-)
President, Member of Advisory Committee, Turkish Physical Society 35.,36. International Physics Congress (2019-20)
Acting Head of the Department of Mechatronics Engineering (2019-)
TÜBITAK Research Institute for Basic Sciences Executive Committee member (2019-)
TÜBITAK Scientist Support Programs Directorate, Advisory Board (2020-)
TÜBITAK Science, Special, Service, and Encouragement Awards Evaluation Commission member (2020-21)