CURRICULUM VITAE (July30, 2025)

NAME: Sakir Ayik

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FAMILY STATUS: Married, two children

EDUCATION:

B.S.	Physics, Ankara University, Turkey, 1969
Ph.D.	Physics (theoretical nuclear), Yale University, 1974
	Thesis: "Operator Averages and Applications in Light Nuclei" Advisor: Professor Joseph N. Ginocchio
Habilitation	Theoretical Nuclear Physics, Ankara University, Turkey, 1981.
(Thesis required for Associate Professorship in Europe)	Thesis: 'Transport Theory of Dissipative Nuclear Collisions." Prepared at: Gesellschaft fur Schwerionenforschung (GSI), Darmstadt, W. Germany, 1978-81

EMPLOYMENT HISTORY:

(a) EMPLOYMENT INVOLVING TEACHING

July 2022: Prof. Emeritus, Tennessee Technological University, Cookeville, TN, USA

1985-2022: Professor of Physics, Tennessee Technological University, Cookeville, TN, USA.

1984-1985: Associate Professor of Physics, Western Kentucky University, KY, USA

(b) EMPLOYMENT INVOLVING RESEARCH

1982-1984: Research Associate, University of Maryland, College Park, MD, USA (with Professor J. J. Griffin)

1981-1982: Research Physicist, Technical University of Munich, Munich, West Germany (with Professor K. Dietrich)

1978-1981: Research Physicist, Gesellschaft fur Schwerionenforschung (GSI), Darmstadt, West Germany (with Professor W. Norenberg)

1977-1978: Guest Scientist, Chalk River Nuclear Laboratory, Chalk River, Ontario, Canada (with Professor M. Harvey)

1974-1977: Postdoctoral Fellow, Heidelberg University and Max-Planck Institute for Nuclear Physics, Heidelberg, West Germany (with Professor W. Norenberg)

PROFESSIONAL ACTIVITIES

(a) GENERAL AREAS OF EXPERTISE

Generalized Langevin Description of Heavy-Ion Fusion Reactions

Stochastic Mean-Field Approach for Heavy-Ion Collisions

Stochastic Nuclear Transport Theory, Boltzmann-Langevin Model
(Dynamical Description of Density Fluctuations in Nuclear Collisions)

Spinodal Instabilities of Nuclear Matter, Nuclear Multifragmentation

Transport Description of Nuclear Giant Resonance Excitations
(Coherent Mechanism and Collisional Damping Mechanism)

Phenomenological Approaches to Low-Energy Heavy-Ion Reactions
(Deep-Inelastic Collisions, Quasi-Fission, Orbiting)

Transport Description of Large Amplitude Nuclear Collective Motion
(One-Body and Two-Body Dissipation Mechanisms)

Spectral Properties of Large Shell Model Spaces

(b) RESEARCH CREDENTIALS
See Appendix for documentation.

(c) FUNDED RESEARCH
Funding Source: Joint Institute for Heavy Ion Research at Oak Ridge, TN
Title of Project: "Analysis of Orbiting Processes in Nuclear Collisions."
Funded Amount: $7,300 for a period of ten weeks starting June 1, 1986.

Funded Amount: $2,500 for a period of six weeks starting August 1, 1988.

Title of Project: "Interpretation of Data Taken by HILI Detector."

Funded Amount: $6,000 for a period of two months starting June 26, 1989.

Funding Source: Oak Ridge National Laboratory Research travel contract
up to 60 days per year from 1985-1996.

Funding Source: U. S. Department of Energy
Title of Project: "Studies of Dissipation and Fluctuation Processes in Nuclear Collisions."
Funded Amount: $79,000 for a three-year period starting August 15, 1989.
Funded Amount: $90,000 for a three-year period starting August 15, 1992.
Funded Amount: $100,000 for a three-year period starting August 15, 1995.

Funded Amount: $100,000 for a three-year period starting August 15, 1998.

Funded Amount: $106,000 for a three-year period starting August 15, 2001.

Funded Amount: $54,000 for a two-year period starting April 1, 2005.

Funded Amount: $110,000 for a three year period starting from April 1, 2007

Funded Amount: $114,000 for a three year period starting from April 1, 2010

Funded Amount: $67,000 for a two year period starting from April 1, 2013

Funding Source: U. S. Department of Energy
Title of Project: "Studies of Heavy-Ion Collisions in Stochastic Mean-Filed Approach"

Funded Amount: $115,000 for a three year period starting from May 1, 2016

Funded Amount: $130,000 for a three year period starting from May 1, 2019

(d) RESEARCH RELATED VISITS

Oak Ridge National Laboratory, Oak Ridge, TN, June-July 1985 (Contacts: Drs. D. Shapira and J. B. McGrory).

GSI Nuclear Research Laboratory, Darmstadt, Germany, July-August 1987; July 1988; July 1990; May 1991; May-June 1992; June 1993 and June 1995 (Contact: Prof. W. Norenberg); June 2017 (Contact: Prof. H. Feldmeier)

GANIL Nuclear Research Laboratory, Caen, France, April-June 1988; September-October 1989; August 1990; May 1991; June 1993; November 1994; June and December 1995; April and July 1996; May and June 1997; March and May-June 1998; May-June 1999; June 2000; June-July 2001, May 2002, June 2003, December 2005, June 2007, December 2007, September-December 2008, October 2010, January 2012 (Contacts: Drs. C. Gregoire, E. Suraud, S. Harrar and Ph. Chomaz, D. Lacroix).

LawrenceBerkeley Laboratory, Berkeley, CA, August 1988; July 1993 and March-April 1994 (Contact: Dr. J. Randrup).

Brookhaven National Laboratory, Long Island, NY, May-June 1989 (Contact: Dr. S. Kahana).

MichiganStateUniversity, East LansingMI, June-July 1991 (Contact: Prof. G. F. Bertsch).

University of P. Sabatier, Toulouse, France, June 1993 (Contact: Prof. E. Suraud).

INFN-Catania, Italy, June 1994; May 1995; December 1998 (Contacts: Drs. A. Bonasera and M. diToro).

University of Rostock, Rostock, Germany, December 1994 (Contact: Prof. Ropke).

Institute for Nuclear Theory, Seattle, WA, September-October, 1994 (Contact: Prof. G. F. Bertsch), March, 2012 (Contact: Prof. A. Bulgac).

IPN, University Paris-Sud, Orsay, March, 2013; June, 2014; October, 2014; October, 2015;June, 2016; June 2017; June 2018 (Dr. D. Lacroix)

ISN-Grenoble, France, April 1996 (Contact: Prof. P. Schuck).

University of Bielefeld, Germany, April 1996 (Contact: Dr. V. Kondratiev).

Middle East Technical University, Ankara, Turkey, May-June and December 1996; July 1997; April and July 1998; July 1999; July 2000; July 2001, July 2002, December 2002, June - July and December 2003, June - July 2004, June - July and December 2005, May - July and December 2006, May-July, 2007, December 2007, May-July 2008, December 2008, May-July 2009, December 2009, May-July 2010, December 2010,

May - July, 2011; December 2011; May-July, 2012; May-July, 2013;
December 16-31, 2013. May-July, 2014; December, 2014;May-July, 2015; December, 2015, May-July, 2016; December, 2016; May-July, 2017; May-July, 2018; December, 2018; May-July, 2019; December, 2019; May-July, 2021 (Contact: Prof. O. Yilmaz).
Yukawa Institute for Theoretical Physics, Kyoto, Japan, March-May 2000, June 2001. (Contact: Prof. Y. Abe)
Texas A&M University, March, 2011. (Contact: Prof. Che-Ming Ko)

(e) DISSERTATIONS AND THESES SUPERVISED

I have worked together and co - supervised the following students:

Name	Institute	Period
M. Prahovic	TTU undergraduate	1986-87
K. L. Selvidge	TTU undergraduate	Summer 1988
B. Shivakumar	Graduate student at Yale University/ORNL	1986-88

Ph.D. Thesis title: "Equilibration in Orbiting Collisions Between Heavy-Ions"

M. Belkacem Graduate student at GANIL 1989-92
Ph.D. Thesis title: "Subthreshold Kaon Production in Heavy-Ion Collisions"

D. Boilley Graduate student at GANIL 1990-93
Ph.D. Thesis title: "Stochastic Description of Nuclear Fission"

B. Jacquot Graduate student at GANIL 1993-96
Ph.D. Thesis title: "Spinodal Instabilities in Nuclear Systems at Low Density"

D. Lacroix Graduate student at GANIL 1997-99
Ph.D. Thesis title: "Quantum Transport Approach to Nuclear Dynamics

S. Yildirim Graduate student at METU/Turkey 1997-00
Ph.D. Thesis title: "Collisional Damping of Giant Resonance Excitations"

K. Bozkurt Graduate student at METU/Turkey 1999-00
Master Thesis title: "Isovector Response Function of Nuclear Matter"

K. Bozkurt Graduate student at METU/Turkey 2000-03
Ph.D. Thesis title: "Collisional Effects in Isovector Response of Nuclei"

D. Kaya Graduate student at METU/Turkey 2003-04
Master Thesis title: "Quantal Effects on Growth of Instabilities in Nuclear Matter"

M.T. Ataol Graduate student at METU/Turkey 2003-04
Master Thesis title: "Multidimensional Quantum Tunneling: O-16 and U-238"

V. Tanriverdi Graduate student at METU/Turkey 2003-04
Master Thesis title: ”Nuclear Dissipative Dynamics in Langevin Approach”

B. Yilmaz Graduate student at METU/Turkey 2004-07
Ph.D. Thesis title: ”Stochastic Approach to Fusion Dynamics”

N. Er Graduate student at METU/Turkey 2007-09
Ph.D. Thesis title: ”Spinodal Instabilities in Asymmetric Nuclear Systems”

F. Acar Graduate student at METU/Turkey 2010-11
Master Thesis title: ”Spinodal Instabilities in Symmetric Nuclear Matter within Non-Linear Relativistic Mean-Field Approach”

B. Danisman Graduate student at METU/Turkey 2010-11
Master Thesis title: ”Spinodal Instabilities in Symmetric Nuclear Matter within Density Dependent Relativistic Mean-Field Approach”

F. Acar Graduate student at METU/Turkey 2011-17
Ph. D. Thesis title: ”Spinodal Dynamics in Charge-Asymmetric Nuclear Matter within Stochastic Relativistic Mean-Field Approach”

M. Arik Graduate student at METU/Turkey 2022-24
Master Thesis title: “An Analysis of Multinucleon Transfer Reactions within the Framework of Stochastic Mean-Filed Approach”

A. Erbayri Graduate student at METU/Turkey 2021-24
Master Thesis title: “Application of Quantal Diffusion Approach Based on the Stochastic Mean-Field Theory”

E. Kayaalp Graduate student at METU/Turkey 2021-24
Master Thesis title: “Multinucleon Transfer for 160Cd+186W in the Stochastic Mean-Field Approach”

FELLOWSHIPS AND AWARDS:

NATO University Fellowship, 1965-69.
Yale University Predoctorate Fellowship, 1969-74.
Atomic Energy of Canada Postdoctorate Fellowship, 1977-78.
Tennessee Tech University Sigma Xi Research Award, 1993.
Non-Instructional Faculty Assignment 1994-95
Nominated for the “Research Award” of Turkish Research and Technology Council, 2003
Tennessee Tech University Caplenor Research Award, 2010.
Non-Instructional Faculty Assignment 2008-09

MISCELLANEOUS PROFESSIONAL ACTIVITIES:

Referee for Physical Review Letters, Physical Review C and Nuclear Physics A.
Member of the Society of Sigma Xi.
Member of the Society of Sigma Pi Sigma.
Member of American Physical Society.
In collaboration with O. Yilmaz and A. Gokalp of METU, organized "Summer School I on Nuclear Dynamics" in July 2002, "Summer School II on Nuclear Dynamics" in July 2004, "Summer School III on Nuclear Dynamics" in June 2006, "Summer School IV on Nuclear Dynamics" in June 2008, Summer School V on Nuclear Dynamics" in July 2010 at F. Gursey Institute on Theoretical Physics, Istanbul, Turkey and "Summer School VI on Nuclear Dynamics" in June 2012 at Yildiz Technical University, Istanbul, Turkey (please see http://www.physics.metu.edu.tr/nuclear/school-ncd6/).
In collaboration with M. Ploszajczak and D. Lacroix, organized a FUSTIPEN workshop "Challenges in Microscopic Description of Nuclear Large Amplitude Collective Dynamics", in October 2014, GANIL, Caen, France.

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APPENDIX: DOCUMENTATION OF RESEARCH:

(a) PUBLICATIONS IN REFERRED JOURNALS

1. Configuration Averaging of Operators; S. Ayik and J. N. Ginocchio, Nucl. Phys. **A221** (1974) 285.

2. Shell Model Level Densities for Light Nuclei; S. Ayik and J. N. Ginocchio, Nucl. Phys. **A234**(1974) 13.

3. Microscopic Transport Theory of Heavy-Ion Collisions: I. Transport Coefficients for Symmetric Fragmentation; S. Ayik, B. Schurmann and W. Norenberg, Z. Physik **A277** (1976) 299.

4. Microscopic Transport Theory of Heavy-Ion Collisions: II. Transport Coefficients for Asymmetric Fragmentation and Generalized Einstein Relations; S. Ayik, B. Schurmann and W. Norenberg, Z. Physik **A279** (1976) 145.

5. Microscopic Transport Theory of Heavy-Ion Collisions: VI. Transport Coefficients Including Angular Momentum; S. Ayik, G. Wolschin and W. Norenberg, Z. Physik **A286** (1978) 271.

6. Generalized Master Equation for Heavy-Ion Collisions; S. Ayik, Phys. Lett. **63B** (1976) 22.

7. Transport Theory of Dissipative Heavy-Ion Collisions: I. Basic Formulation; S. Ayik and W. Norenberg, Z. Physik, **A288** (1978) 401.

8. Dynamical Description of Dissipative Heavy-Ion Collisions in Adiabatic Representation; S. Ayik, Z. Physik **A292** (1979) 257.

9. Transport Theory of Dissipative Heavy-Ion Collisions: II. Markov Approximation in the Limits of Weak and Strong Coupling; S. Ayik and W. Norenberg, Z. Physik **A297** (1980) 55.

10. Mean Field Theory and Statistical Treatment of Residual Interactions; S. Ayik, Z. Physik, **A298** (1980) 83.

11. Damping of Nuclear Collective Motion in Extended Mean Field Theory; S. Ayik, Nuclear Phys. **A370** (1981) 317.

12. Time-Dependent Shell Model Theory of Dissipative Heavy-Ion Collisions; S. Ayik and W. Norenberg, Z. Physik, **A309** (1982) 191.

13. Extended Time-Dependent Hartree-Fock Theory in Adiabatic Limit; S. Ayik, Nuclear Phys. **A422** (1984) 331.

14. Dissipation of Collective Motion by Extended TDHF; S. Ayik and M. Dworzecka, Nuclear Phys. **A440** (1985) 424.

15. Role of Memory Effects on the Spreading Width of Collective States in Extended TDHF; S. Ayik and M. Dworzecka, Phys. Rev. Lett. **54** (1985) 534.

16. Nuclear Response Functions in Mori Formalism; S. Ayik, Phys. Rev. Lett. **56**(1986) 38.

17. An Equilibrium Model for Fusion and Orbiting; B. Shivakumar, S. Ayik, B. H. Hormon and D. Shapira, Phys. Rev. **C35** (1987) 1730.

18. Nucleon Transport Induced by Two-Body Collisions; S. Ayik, Phys. Rev. **C35** (1987) 2086.

19. $^{28}Si + ^{14}N$ Orbiting Interaction; B. Shivakumar, D. Shapira, P. H. Stelson, S. Ayik, B. A. Harmon, K.Teh and D. A. Bromley, Phys. Rev. **C37** (1988) 652.

20. A Transport Description for Capture Processes in Nuclear Collisions; S. Ayik, D. Shapira and B. Shivakumar, Phys. Rev. **C38** (1988) 2610.

21. Fluctuation of Single-Particle Density in Nuclear Collisions, S. Ayik and C. Gregoire, Phys. Lett. **B212** (1988) 269.

22. Transport Theory of Fluctuation Phenomena in Nuclear Collisions; S. Ayik and C. Gregoire, Nucl. Phys. **A513** (1990) 187.

23. From One-Body to Collective Transport Models; S. Ayik, E. Suraud, J. Stryjewski and M. Belkacem, Z. Phys. **A337** (1990) 413.

24. Boltzmann-Langevin Equation Derived from the Real-Time Path Formalism; P. G. Reinhard, E. Suraud and S. Ayik, Ann. Phys. **213** (1992) 204.

25. Relativistic Boltzmann-Langevin Model for High Energy Heavy-Ion Collisions: S. Ayik, Phys. Lett. **B265** (1991) 47.

26. Application of Boltzmann-Langevin Equation to Nuclear Collisions: E. Suraud, S. Ayik, M. Belkacem and J. Stryjewski, Nucl. Phys. **A542** (1992) 141.

27. Damping of Collective Vibrations in a Memory-Dependent Transport Model; S. Ayik and D. Boilley, Phys. Lett. **B276** (1992) 263; **B284** (1992) 482E.

28. K^+ Production Below Free Nucleon-Nucleon Threshold in Heavy-Ion Collisions, M. Belkacem, E. Suraud and S. Ayik, Phys. Rev. **C47** (1993) R16.

29. Nuclear Fission with a Langevin Equation, D. Boilley, E. Suraud, Y. Abe and S. Ayik, Nucl. Phys. **A556** (1993) 67.

30. On Transient Effects in Violent Nuclear Collisions, E. Suraud, S. Ayik, M. Belkacem and F.-S. Zhang, Nucl. Phys. **A580** (1994) 323.

31. Stochastic Multi-Fluid Models for Intermediate-Energy Heavy-Ion Collisions, S. Ayik, Y. B. Ivanov, V. N. Russkikh and W. Norenberg, Nucl. Phys. **A578** (1994) 640.

32. Simplified Nuclear Boltzmann-Langevin Simulation, J. Randrup and S. Ayik, Nucl. Phys. **A572** (1994) 489.

33. Long-Range Correlations in Boltzmann-Langevin Model, S. Ayik, Z. Phys. **A350**(1994) 45.

34. A Bohr-Mottelson Model of Nuclei at Finite Temperature, D. Boilley, Y. Abe, S. Ayik and E. Suraud, Z. Phys. **A349** (1994) 119.

35. Effect of Memory Time on the Agitation of Unstable Modes in Nuclear Matter, S. Ayik and J. Randrup, Phys. Rev. **C50** (1994) 2947.

36. Non-Markovian Approach to Damping of Giant Monopole Resonances in Nuclei, S. Ayik, M. Belkacem and A. Bonasera, Phys. Rev. **51 C**(1995) 611.

37. Quantal Effects on Growth of Instabilities in Nuclear Matter, S. Ayik, M. Colonna and Ph. Chomaz, Phys. Lett. **B353** (1995) 417.

38. Medium-Modified Interaction Induced by Fluctuations, Y. B. Ivanov and S. Ayik, Nucl. Phys. **A593** (1995) 233.

39. Collisional Damping of Giant Resonances in a Non-Markovian Approach, M. Belkacem, S. Ayik and A. Bonasera, Phys. Rev. **C52** (1995) 2499.

40. Analysis of Boltzmann-Langevin Dynamics in Nuclear Matter, S. Ayik, Ph. Chomaz, M. Colonna and J. Randrup, Z. Phys. **A 335** (1996) 407.

41. Fluid Dynamical Approach to Spinodal Instabilities in Finite Nuclear Systems, B. Jacquot, S. Ayik, Ph. Chomaz and M. Colonna, Phys. Lett. **B 383** (1996) 247.

42. On Stochastic Approaches of Nuclear Dynamics, Y. Abe, S. Ayik, P.-G. Reinhard and E. Suraud, Phys. Rep. **275** (1996) 49.

43. RPA Instabilities in Finite Nuclei at Low Density, B. Jacquot, M. Colonna, S. Ayik and Ph. Chomaz, Nucl. Phys. **A 617** (1997) 356.

44. Critical Evolution of Hot Van der Waals Droplets, V.N. Kondratyev, H.O. Lutz and S. Ayik, J. Chem. Phys. **106** (1997) 7766.

45. Quantum and Statistical fluctuations in Dynamical Symmetry Breaking, W. Wen, P. Chau Huu-Tai, D. Lacroix, Ph. Chomaz and S. Ayik, Nucl. Phys. **A637** (1998) 15.

46. Finite Temperature Nuclear Response in Extended RPA, D. Lacroix, Ph. Chomaz and S. Ayik, Phys. Rev. **C58** (1998) 2154.

47. Collisional Damping of Nuclear Collective Vibrations in a Non-Markovian Transport Approach, S. Ayik, O. Yilmaz, A. Gokalp and P. Schuck, Phys. Rev. **C58** (1998) 1594.

48. On the Simulation of Extended TDHF Theory, D. Lacroix, Ph. Chomaz and S. Ayik, Nucl. Phys. **A651** (1999) 369.

49. Fragmentation and Damping of Collective Response in Extended RPA, S. Ayik, D. Lacroix and Ph. Chomaz, Phys. Rev. **C61** (1999) 014608.

50. Collisional Damping and Collisional Coupling in Collective Response, Ph. Chomaz, D. Lacroix, S. Ayik and M. Colonna, Phys. Rev. **C62** (2000) 024307.

51. Collisional Effects in Finite Temperature Dipole Response of Sn-120 and Pb-208, D. Lacroix, Ph. Chomaz and S. Ayik, Phys. Lett. **B489** (2000) 137.

52. On the Collisional Damping of Giant Dipole Resonance, O. Yilmaz, A. Gokalp, S. Yildirim and S. Ayik, Phys. Lett. **B472** (2000) 258.

53. Extended TDHF with a Coherent Collision Term, S. Ayik, Phys. Lett. **B493** (2000) 47.

54. Stochastic One-Body Transport and Coupling to Mean-Field Fluctuations, S. Ayik and Y. Abe, Phys. Rev. **C64** (2001) 024609.

55. Collective Response of Nuclei: Comparison Between Experiments and Extended Mean-Field Calculations, D. Lacroix, S. Ayik and Ph. Chomaz, Phys. Rev. **C63** (2001) 064305.

56. Collisional Damping of Giant Monopole and Quadrupole Resonances, S. Yildirim, A. Gokalp, O. Yilmaz and S. Ayik, Eur. Phys. J. **A10** (2001) 289.

57. Mechanical and Chemical Spinodal Instabilities in Finite Quantum Systems, M. Colonna, Ph. Chomaz and S. Ayik, Phys. Rev. Lett. **88** (2002) 122701.

58. Collisional Effects in Isovector Response Function of Nuclear Matter at Finite Temperature, S. Ayik, A. Gokalp, O. Yilmaz and K. Bozkurt, Acta Physica Polonica **B34** (2003) 4229.

59. Nuclear Collective Vibrations in Extended Mean-Field Theory, D. Lacroix, S. Ayik and Ph. Chomaz, Prog. in Particle and Nuclear Physics, **52** (2004) 497.

60. Quantum Effects in Diffusion Along a Potential Barrier, N. Takigawa, S. Ayik, K. Washiyama and S. Kimura, Phys. Rev**. C69** (2004) 054605.

61. Quantum Statistical Effects on Fusion Dynamics of Heavy-Ions, S. Ayik, B. Yilmaz, A. Gokalp, O. Yilmaz and N. Takigawa, Phys. Rev. **C71** (2005) 054611.

62. Method for Numerical Simulation of Two-Term Exponentially Correlated Noise, B. Yilmaz, S. Ayik, Y. Abe, A. Gokalp and O. Yilmaz, Phys. Rev**. E73** (2006) 046114.

63. Non-Markovian Diffusion Over a Parabolic Potential Barrier: Influence of Friction Memeory Function, B. Yilmaz, S. Ayik, Y. Abe and D. Boilley, Phys. Rev. **E 77** (2008) 011121.

64. A Stochastic Mean-Field Approach For Nuclear Dynamics, S. Ayik, Phys. Lett. **B 658** (2008) 174.

65. Isovector Response of Nuclear Matter at Finite Temperature, S. Ayik, K. Bozkurt, A. Gokalp and O. Yilmaz, Acta Physica Polonica **B 39** (2008) 1413.

66. Quantal Effects on Spinodal Instabilities in Charge Asymmetric Nuclear Matter, S.

Ayik, N. Er , O. Yilmaz, A. Gokalp , Nucl. Phys. **A 812** (2008) 44.

67 One-Body Energy Dissipation in Fusion Reaction From Mean-Field Theory, K. Washiyama, D. Lacroix and S. Ayik, Phys. Rev. **C79** (2009) 024609.

68. Fluctuations and Dissipation Dynamics in Fusion Reactions From Stochastic Mean-Field Approach, S. Ayik, K. Washiyama and D. Lacroix, Phys. Rev. **C79** (2009) 054606.

69. Mass Dispersion in Transfer Reactions with Stochastic Mean-Field Theory, K. Washiyama, S. Ayik and D. Lacroix, Phys. Rev. **C 80** (2009) 031602(R).

70. Spinodal Instabilities of Nuclear Matter in a Stochastic Relativistic Mean-Field Approach, S. Ayik, O, Yilmaz, N. Er, A. Gokalp and P. Ring, Phys. Rev. **C 80** (2009) 034613.

71. Stochastic Semi-Classical Description of Fusion at Near-Barrier Energies, S. Ayik, B. Yilmaz and D. Lacroix, Phys. Rev. **C 81** (2010) 034605.

72. Nucleon Exchange Mechanism in Heavy-Ion Collisions at Near-Barrier Energies, B. Yilmaz, S. Ayik, D. Lacroix and K. Washiyama, Phys. Rev. **C 83** (2011) 064615.

73. Investigations of Instabilities in Nuclear Matter in Stochastic Relativistic Models, S. Ayik, O. Yilmaz, F. Acar, B. Danisman, N. Er and A. Gokalp, Nucl. Phys. **A 859** (2011) 73.

74. Quantal Description of Instabilities in Nuclear Matter in a Stochastic Relativistic Model, O. Yilmaz, S. Ayik and A. Gokalp, Eur. Phys. J. **A 47** (2011) 123.

75. Symmetry Breaking and Fluctuations within Stochastic Mean-Field Dynamics: Importance of Initial Quantal Fluctuations, D. Lacroix, S. Ayik and B. Yilmaz, Phys. Rev. **C 85** (2012) 041602 (R).

76. Investigations of Spinodal Dynamics in Asymmetric Nuclear Matter Within a Stochastic Relativistic Model, O. Yilmaz, S. Ayik, F. Acar, S. Saatci, and A. Gokalp, Eur. Phys. J. **A 49** (2013) 33.

77. Quantal Corrections to Mean-Field Dynamics Including Pairing, D. Lacroix, D. Gambucurta and S. Ayik, Phys. Rev. **C 87** (2013) 061302(R).

78. Stochastic Quantum Dynamics Beyond Mean-Field, D. Lacroix and S. Ayik, Eur. Phys. J. **A 50** (2014) 95.

79. Nucleon exchange in heavy-ion collisions within stochastic mean-field approach, B. Yilmaz, S. Ayik, D. Lacroix and O. Yilmaz, Phys. Rev. **C 90** (2014) 024613.

80. Growth of spinodal instabilities in nuclear matter, O. Yilmaz, S. Ayik, F. Acar and A.

Gokalp, Phys. Rev. **C91** (2015) 014605.

81. Quantal description of nucleon exchange on a stochastic mean-field approach, S. Ayik, O. Yilmaz, B. Yilmaz, A. S. Umar, A. Gokalp, G. Turan and D. Lacroix, Phys. Rev. **C 91** (2015) 054601.

82. Growth of spinodal instabilities in nuclear matter: II Asymmetric Matter, F. Acar, S. Ayik, O. Yilmaz and A. Gokalp, Phys. Rev. **C92** (2015) 034605.

83. Multi-nucleon exchange in quasi fission reactions, S. Ayik, B. Yilmaz, O. Yilmaz, Phys. Rev. **C 92** (2015) 064615.

84. A simplified BBGKY hierarchy for correlated fermion systems from a Stochastic Mean-Field approach, D. Lacroix, Y. Tanimura, S. Ayik and B. Yilmaz, Eur. Phys. J. **A 52**(2016) 94.

85. Quantal nucleon diffusion: Central collisions of symmetric nuclei, S. Ayik, O. Yilmaz, B. Yilmaz and A. S. Umar, Phys. Rev. C**94** (2016) 044624.

86. Microscopic phase-space exploration modeling of ^{258}Fm spontaneous fission, Y. Tanimura, D. Lacroix and S. Ayik, Phys. Rev. Lett. **118** (2017) 152501.

87. Multinucleon transfer in central collision of $^{238}U+^{238}U$, S. Ayik, B. Yilmaz, O. Yilmaz, A. S. Umar and G. Turan, Phys. Rev. C **96** (2017) 024611.

88. Quantal diffusion description of multi-nucleon transfer in heavy-ion collisions, S. Ayik, B. Yilmaz, O. Yilmaz and A. S. Umar, Phys. Rev. C **97** (2018) 054618.

89. Multinucleon transfer in $^{58}Ni+^{60}Ni$ and $^{58}Ni+^{60}Ni$ Sin stochastic mean-field approach, B. Yilmaz, S. Ayik, O. Yilmaz and A. S. Umar, Phys. Rev. C **98** (2018) 034604.

90. Quantal diffusion approach for multi-nucleon transfer in .Xe+Pb collisions, S. Ayik B. Yilmaz, O. Yilmaz and A. S. Umar, Phys. Rev. C **100** (2019) 014609.

91. Heavy-isotope production in $^{136}Xe+^{208}Pb$ collisions at $E_{c.m.} = 514$ MeV, S. Ayik B. Yilmaz, O. Yilmaz and A. S. Umar, Phys. Rev. C **100** (2019) 044614.

92. Quantum diffusion approach for multi-nucleon transfer processes in the $^{58,64}Ni+^{208}Pb$ reactions: Toward the production of unknown neutron rich nuclei, K. Sekizawa and S. Ayik, Phys. Rev. C **102** (2020) 014620.

93. Merging transport theory with the time-dependent Hartree-Fock approach: Multi-nucleon transfer in U+U collisions, S. Ayik B. Yilmaz, O. Yilmaz and A. S. Umar, Phys. Rev. C **102** (2020) 024619.

94. Kinetic energy dissipation and fluctuations in strongly damped heavy-ion collisions with the stochastic mean-field approach, S. Ayik and K. Sekizawa, Phys. Rev. **C 102** (2020) 064619.

95. Quantal diffusion description of isotope production via the multinucleon transfer mechanism in 48Ca +238U collisions, S. Ayik, M. Arik, E. C. Karanfil, O. Yilmaz, B. Yilmaz and A. S. Umar, Phys. Rev. **C 104** (2021) 054614.

96. Multinucleon transfer mechanism in 250Cf+232Th collisions using the quantal transport description based on the stochastic mean-field approach, S. Ayik, M. Arik, O. Yilmaz, B. Yilmaz and A. S. Umar, Phys. Rev. **C 107** (2023) 014609.

97. Multinucleon transfer mechanism in 160Gd+186W collisions in stochastic mean-field theory, S. Ayik, M. Arik, E. Erbayri, O. Yilmaz and A. S. Umar, Phys. Rev. **C 108** (2023) 054605.

98. Supplemental Online Material for: Description of multinucleon transfer mechanism for 48Ca+244Pu and 86Kr+198Pt reactions in quantal transport approach, S. Ayik, M. Arik, O. Yilmaz and A. S. Umar, November 29, 2023. http://link:aps.org/supplemental/10.1103/PhysRevC.108.064604

99. Description of the multinucleon transfer mechanism for 48Ca+244Pu and 86Kr+198Pu reactions in a quantal transport approach, M. Arik, S. Ayik, O. Yilmaz and A. S. Umar, Phys. Rev. **C 108** (2023) 064604.

100. A theoretical study on quasi-fission and fusion-fission processes in heavy-ion collisions, A. Kayaalp, S. E. Ocal, B. Yaprakli, M. Arik, S. Ayik, O. Yilmaz and A. S. Umar, Eur. Phys. J. **A 60** :79 (2024).

101. A quantal diffusion approach for multinucleon transfer in heavy-ion collisions, A. Kayaalp, M. Arik, S. E. Ocal, O. Yilmaz, S. Ayik and A. S. Umar. Nucl. Phys. **A 1050** (2024) 122916.

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103. Production of neutron-rich heavy nuclei in deep-inelastic 208Pb+208Pb collisions within the stochastic mean-field theory, K. Sekizawa, S. Ayik, E.C. Karanfil, M. Arik, O Yilmaz and S. Umar, PR **C 112**, 024612 (2025).

(b) ABSTRACTS AND PUBLICATIONS IN CONFERENCE PROCEEDINGS:

1. Quantum Statistical Description of Heavy Ion Collisions; S. Ayik and W. Norenberg, Pikeville Meeting on Heavy Ion Collision, Pikeville, TN, 1977**.

2. Transport Theory of Dissipative Heavy Ion Collision; S. Ayik and W. Norenberg, Int. Workshop VI on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, 1978**.

3. Generalized Fokker-Planck Equation of Dissipative Heavy Ion Collision; S. Ayik and W. Norenberg, Int. Workshop VII on Gross Properties of Nuclei and Nuclear Excitations,

Hirschegg, Austria, 1979**.

4. Transport Theory of Heavy Ion Collisions in Adiabatic Representation; S. Ayik, Conference on Large Amplitude Nuclear Motion, Keszthely, Hungary, 1979.

5. Time-Dependent Hartree-Fock Theory and Statistical Treatment of Two-Body Collisions; S. Ayik, Int. Workshop VIII on Gross Properties of Nuclei and Nuclear Excitation, Hirschegg, Austria, 1980**.

6. Single-Particle Transport Theory; S. Ayik and W. Norenberg, Int. Workshop X on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, 1982.

7. Quantum Statistical Approach to Extended Mean Field Theory; S. Ayik, Int. Symposium on Time-Dependent Hartree-Fock and Beyond, Bad Honnef, W. Germany, 1982**.

8. Dynamical Treatment of Strong Coupling Within a One-Body Theory; S. Ayik and W. Norenberg, Int. Conference on Selected Aspects of Heavy-Ion Reactions, Saclay, France, 1982.

9. Extended Time-Dependent Hartree-Fock Theory in Adiabatic Limit; S. Ayik, Int. Workshop XI on Gross Properties of Nuclei and Nuclear Excitation, Hirschegg, Austria, 1983; and APS Meeting, Baltimore, MD, 1983**.

10. Spreading Widths by Extended TDHF and RPA; S. Ayik and M. Dworzecka, APS Meeting, Washington, D. C., 1984**.

11. Dissipation of Collective Motion in Extended TDHF; S. Ayik and M. Dworzecka, Divisional Meeting of APS, Nashville, TN, 1984**.

12. Damping of Collective Motion in Extended TDHF; S. Ayik, Winter Workshop of Nuclear Dynamics III, Copper Mountain, CO, 1984**.

13. Application of Mori Formalism to Dissipation of Collective Motion; S. Ayik, APS Meeting, Crystal City, VA, 1985**.

14. Spreading Width of Collective States in Extended TDHF; S. Ayik and M. Dworzecka, Conference on Nuclear Structure with Heavy Ion, Padova, Italy, 1985.

15. Statistical Description of Orbiting and Fusion; S. Ayik, B. Shivakumar, D. Shapira and B. A. Harmon, Winter Workshop on Nuclear Dynamical IV, Copper Mountain, CO, 1986**.

16. Transport Description of Intermediate Processes in Heavy Ion Collisions; S. Ayik, B. Shivakumar and D. Shapira, Many Facets of Heavy-Ion Fusion Reactions, Argonne, IL, 1986**.

17. Formation of a Dinuclear Complex in Collisions Between Light Nuclei and Entrance Channel Limitations to Fusion; D. Shapira, B. Shivakumar, S. Ayik and B. A. Harmon, Many Facets of Heavy-Ion Fusion Reactions, Argonne, IL, 1986.

18. Destination Fusion; B. Shivakumar et al., The Many Facets of Heavy-Ion Fusion Reactions, Argonne, IL, 1986.

19. Close Collisions Between Light Nuclei; D. Shapira et al., 6th Adriatic Int. Conference on Nuclear Physics, Dubrovnik, Yugoslavia, 1987.

20. Statistical Description of Orbiting Collisions: S. Ayik, Holifield Users Group Meeting, Oak Ridge, TN, 1987**.

21. Nucleon Transport Induced by Two Body Collisions; S. Ayik, APS Meeting, Nashville, TN, 1987**; Winter Workshop on Nuclear Dynamics V, Sun Valley, ID, 1988** and Third International Conference on Nuclear Collisions, Saint-Malo, France, 1988.

22. Calculation of Potential Energy Surfaced for Dinuclear Systems; K. Selvidge and S. Ayik, Tenn. Acad. Sci. Annual Meeting, Clarksville, TN, 1988.

23. The BUU Equation and Fluctuations; S. Ayik and C. Gregoire, The Symposium on Nuclear Dynamics and Nuclear Disassembly, Dallas, TX, 1989**.

24. A One-Body Transport Model of Fluctuation Processes in Nuclear Collisions; S. Ayik, E. Suraud, J. Stryjewski and M. Belkacem, Sixth Workshop on Nuclear Dynamics, Jackson, WY, 1990**.

25. Dynamical Description of Formation of Intermediate Mass Fragments in Heavy Ion Collisions; S. Ayik, E. Suraud, J. Stryjewski and M. Belkacem, Holifield Theory Users Meeting, Oak Ridge, TN, 1990**, Saturn Theory Workshop, Paris, France, 1989; and Nuclear Dynamics Workshop, Bormio, Italy, 1990.

26. Boltzmann-Langevin Equation and Applications to Intermediate Mass Fragment Productions; E. Suraud, S. Ayik, J. Stryjewski and M. Belkacem, Int. Conference on Nuclear Dynamics, Elba, Italy, 1990; Nucl. Phys. **A519** (1990) 171c.

27. Boltzmann-Langevin Equation and Applications to Nuclear Collisions; S. Ayik, Gordon Conference on Nuclear Chemistry, New London, NH, 1990**.

28. From One-Body to Collective Transport Models; S. Ayik, E. Suraud and M. Belkacem, Seventh Workshop on Nuclear Dynamics, Key West, FL, 1991**.

29. Towards Stochastic Extensions of Quantal and Semi-Classical Dynamical Theories; P. G. Reinhard, E. Suraud, S. Ayik and M. Belkacem, Int. Workshop on Gross Properties of Heavy-Ion Collisions, Hirschegg, Austria, 1991.

30. The Boltzmann-Langevin Approach; Workshop on Equilibrium and Non-Equilibrium Physics at Finite Temperature, S. Ayik, Telluride, CO, 1991**.

31. Memory Effects in Damping of Collective Vibrations, S. Ayik and D. Boilley, Eighth Winter Workshop on Nuclear Dynamics, Jackson, WY, 1992**.

32. Boltzmann-Langevin Model for Nuclear Collisions, S. Ayik, E. Suraud, M. Belkacem, D. Boilley, International Workshop on Nuclear Dynamics, Aussois, France, 1992**, Nucl. Phys. A545 (1992) 35c.

33. Stochastic Two-Fluid Model for Relativistic Heavy-Ion Collisions, S. Ayik, Y. B. Ivanov, V. N. Russkikh, and W. Norenberg, Winter Workshop on Nuclear Dynamics IX, Key West, FL, 1993**.

34. Boltzmann-Langevin Model for Heavy-Ion Collisions, S. Ayik, NATO Advanced Study Institute on Hot and Dense Nuclear Matter, Bodrum, Turkey, 1993**.

35. Fluctuations in Microscopic Nuclear Simulations, J. Randrup and S. Ayik, International Workshop on Dynamical Features of Nuclei and Finite Fermi Systems, Stiges, Spain, 1993.

36. Simulation of Boltzmann-Langevin Equation, S. Ayik and J. Randrup, Workshop on Gross Properties of Nuclei and Nuclear Excitations XXII, Hirschegg, Austria, 1994**.

37. On the Relationship Between Boltzmann-Langevin and Boltzmann-Uehling-Uhlenbeck Models, Y. B. Ivanov and S. Ayik, Fifth International Conference on Nucleus-Nucleus Collision, Taormina, Italy, May 1994.

38. A Stochastic Approach to Fission, D. Boilley, E. Suraud, Y. Abe and S. Ayik, Int. Workshop on Nuclear Dynamics XXX, Bormio, Italy, 1992.

39. Stochastic Approaches to Dynamics of Heavy-Ion Collisions: The Case of Thermal Fission, D. Boilley, E. Suraud, Y. Abe and S. Ayik, RIKEN Symposium on Nuclear Dynamics at Finite Temperature, Tokyo, Japan, February 1994.

40. β-Decay Probing Electron Bulk Correlations, V. K. Kondratiev and S. Ayik, IVInt.School on Nuclear Physics, Kiev, Ukraine, 1994.

41. Dynamics of Density Fluctuations in a Non-Markovian Boltzmann-Langevin Model, S. Ayik, Adv. in Nucl. Dyn. 2, eds. W. Bauer and G. Westfall, Plenum, 1996**.

42. Quantal Extension of Mean-Field Dynamics, D. Lacroix, Ph. Chomaz and S. Ayik, in proc. XXXVI Winter Meeting on Nuclear Physics, Bormio, Italy, February 1998.

43. A Stochastic Transport Approach for Nuclear Dynamics, S. Ayik, in proc. 5th Statistical Physics Days, Istanbul Technical University, Istanbul, Turkey, July 1998**.

44. Mean-Field Instabilities, Ph. Chomaz, D. Lacroix, B. Jacquot, M. Colonna and S. Ayik, Winter Workshop on Nuclear Dynamics, Hirschegg, Austria, February 1999.

45. Nuclear Collective Excitations at Finite Temperature, S. Ayik, Adv. in Nucl. Dyn. 5, eds. W. Bauer and G. Westfall, Plenum, 1999** and Int. Conference on Nuclear Collective Excitations, RIKEN, Japan, 1999.

46. Width of Hot Giant Dipole Resonance, P. Schuck and S. Ayik, Int. Conference on Giant Resonances (GR2000), Osaka, Japan, June 2000.

47. Collisional Damping of Giant Dipole Resonance in ^{120}Sn and ^{208}Pb, A. Gokalp, O. Yilmaz, S. Yildirim and S. Ayik, Zakopane School of Physics XXXV, Zakopane, Poland, 2000.

48. Stochastic One-Body Transport and Coherent Collision Term, Int. Conference on Nonequilibrium and Nonlinear Dynamics in Nuclear and Other Finite Systems, Beijing, China, May 2001**.

49. Dynamics of Cluster Formation in Liquid-Gas Phase Transformations, M. Colonna, S. Ayik, V. Baran, Ph. Chomaz and M. Di Toro, 8th International Conference on Clustering Aspects of Nuclear Structure and Dynamics, Nara, Japan, 2003.

50. Quantum Effects in Diffusion Process to Form Heavy-Nucleus in Heavy-Ion Fusion Reactions, K. Washiyama, B. Yilmaz, S. Ayik and N. Takigawa, Proc. Int. Conf. On Reaction Mechanisms and Nuclear Structure at Coulomb Barrier, Venezia, Italy, 2006.

51. Stochastic Mean-Field Dynamics for Nuclear Collisions, S. Ayik, Int. Conf. on Nuclear Physics and Astrophysics: From Stable Beams to Exotic Nuclei, Capadocia, Turkey, June 2008**, AIP Conference Proceedings, Eds: I. Boztosun and A. B. Balantekin.

52. Beyond Mean-Field Description of Break-up, Transfer and Fusion, D. Lacroix, M. Assie, S. Ayik, G. Hupin, J. A. Scarpaci and K. Washiyama, Proc. of Int. Conf. on Nuclear Structure and Related Topics, Dubna, Russia, June 2009.

53. Nucleus-Nucleus Potential, Energy Dissipation and Mass Dispersion in Fusion and Transfer Reactions, K. Washiyama, D. Lacroix and S. Ayik, Proc. 2nd Int. Workshop on Compound Nucleus Reactions and Related topics, Bordeaux, France, October, 2009.

54. Beyond Mean-Field Approach to Heavy-Ion Reactions Close to Coulomb Barrier, K. Washiyama, D. Lacroix, S. Ayik and B. Yilmaz, Proc. of Int. Conf. Fusion11, Saint-Malo, France, May 2011.

55. Stochastic Semi-Classical Description of Sub-barrier Fusion Reactions, B. Yilmaz, S. Ayik and D. Lacroix, Proc. of Int. Conf. Fusion11, Saint-Malo, France, May 2011.

56. Quantal Description of Spinodal Instabilities in Hot Nuclear Matter", O. Yilmaz and S. Ayik, Int. Conference on Nuclear Fragmentation NUFRA 2011, Antalya, Turkey, October 2-9, 2011.

57. Spinodal Dynamics in Asymmetric Nuclear Matter, O. Yilmaz, S. Ayik, and A. Gokalp, Int. Conference on Nuclear Fragmentation NUFRA 2011, Antalya, Turkey, October 2-9, 2013.

58. Quantal Corrections to Mean-Field Dynamics, S. Ayik**, Workshop in Advances in Time- Dependent Methods for Quantum Many-Body Systems, ECT*, Trento, Italy, October 14-18, 2013.

59. Quantal Corrections to Time-Dependent Mean-Field Dynamics, S. Ayik**,FUSTIPEN Workshop on "Challenges in Microscopic Description of Nuclear Large Amplitude Collective Dynamics", GANIL, Caen, France, October 12-15, 2014.

60. Recent Progress in Microscopic Description Small and Large Amplitude Collective Motions, D. Lacroix, S. Ayik, G. Scamps, C. Simenel, Y. Tanimura and D. Yilmaz, Proceeding of the International Nuclear Physics Conference "Nuclear Structure and Dynamics III", Portoroz, Slovenia, June, 2015.

61. Quasi-Fission Studies Using TDHF, A. S. Umar, C. Simenel and S. Ayik, Fusion17.

** Papers presented by S. Ayik

(c) MEETINGS AND CONFERENCES ATTENDED:

Pikeville Meeting on Heavy Ion Collisions, Pikeville, TN, 1977.

Workshops VI, VII, VIII, and XXII on Gross Properties of Nuclei and Nuclear Excitations, Hirschegg, Austria, 1978, 1979, 1980, and 1994.

Conference on large Amplitude Nuclear Motion, Keszthely, Hungary, 1979.

Symposium on Time-Dependent Hartree-Fock and Beyond, Bad Honnef, W. Germany, 1982.

APS Meetings, Baltimore, MD, 1983; Washington, D.C., 1984; Nashville, TN, 1984; Crystal City, VA, 1985; Washington D. C. , 1987; and Nashville, TN, 1987.

Winter Workshops on Nuclear Dynamics III, IV, V, VI, VII, VIII, IX, XXII and XXV, Copper Mountain, CO, 1984 and 1986; Sun Valley, ID, 1988; Jackson, WY, 1990; Key West,

FL, 1991; Jackson, WY, 1992; Key West, FL, 1993; Snowbird, UT, 1996 and Park City, UT, 1999.

Workshop on Intermediate Energy Heavy-Ion Physics, Oak Ridge, TN, 1985.

Holifield Users Group Meetings, ORNL, Oak Ridge, TN, 1986, 1987, and 1990.

Symposium of Many Facets of Heavy-Ion Fusion Reactions, Argonne, IL, 1986.

Third Int. Conference on Nucleus-Nucleus Collisions, Saint-Malo, France, 1988.

Symposium on Nuclear Dynamics and Nuclear Disassembly, Dallas, TX, 1989.

Turkish Physical Society Meeting, Ankara, Turkey, 1989.

Gordon Conference on Nuclear Chemistry, New London, NH, 1990.

Workshop on Equilibrium and Non-Equilibrium Physics, Telluride, Co, 1991.

Quark Matter 91, Gatlinburg, TN, 1991.

International Workshop on Nuclear Dynamics, Aussois, France, 1992.

NATO Advanced Study Institute on Hot and Dense Nuclear Matter, Bodrum, Turkey, 1993.

Workshop on Large Amplitude Nuclear Collective Motion, I NT, Seattle, WA, 1993.

Workshop on Fluctuations in Nuclear Dynamics, ECT, Trento, Italy, February 1994.

Fifth International Conference on Nucleus-Nucleus Collisions, Taormina, Italy, May 1994.

Workshop on Hot and Dense Nuclear Matter, INT, Seattle, WA, September-October, 1994.

International Workshop on Nuclear Giant Resonance, ECT Trento, Italy, December 1996.

Sixth International Conference on Nucleus-Nucleus Collisions, Gatlinburg, TN, June 1997.

Workshop on Interface Dynamics and Non-Equilibrium Phase Transitions, TUBITAK Research Institute for Basic Science, Istanbul, Turkey, April 1998.
4th INDRA Workshop, GANIL, Caen, France, May 1998.

5th Statistical Physics Days, Istanbul Technical University, Istanbul, Turkey, July 1998.

International Workshop on Transport in Many-Body Systems, ECT Trento, Italy, May 2000.
International Conference on Nonequilibrium and Nonlinear Dynamics in Nuclear and Other

Finite Systems, Beijing, China, May 2001.

Gordon Conference on Nuclear Chemistry, New London, NH, 2002.

Workshop on Nuclear Dynamics, F. Gursey Institute for Theoretical Physics, Istanbul, Turkey, July 29-August 03, 2002 (Organized by S. Ayik).

Summer School on Nuclear Dynamics II, F. Gursey Institute for Theoretical Physics, Istanbul, Turkey, July 26-30, 2004 (Organized by S. Ayik, O. Yilmaz and A. Gokalp).

Memorial Symposium in Honor of A. Allan Bromley, Yale University, New Haven, CT, December, 2005.

Summer School on Nuclear Dynamics III, F. Gursey Institute for Theoretical Physics, Istanbul, Turkey, June 12-16, 2006 (Organized by S. Ayik, O. Yilmaz and A. Gokalp).

International Workshop: Joint JUSTIPEN-LACM meeting, Oak Ridge, TN, 2007

Nuclear Physics and Astrophysics: From Stable Beams to Exotic Nuclei, Capadocia, Turkey, June 2008 .

Summer School on Nuclear Dynamics IV, F.Gursey Institute for Theoretical Physics, Istanbul, Turkey, June 30- July 04, 2008 (Organized by S. Ayik, O.Yilmaz and A. Gokalp).

International Workshop "New Paradigms in Nuclear Physics", September 29-October 3,

2008, Paris, France.

Summer School on Nuclear Dynamics V, F. Gursey Institute for Theoretical Physics, Istanbul, Turkey, July 04- July 10, 2010 (Organized by S. Ayik, O. Yilmaz and A. Gokalp).

JUSTIPEN (French-US Theory Institute for Physics with Exotic Nuclei) Workshop, GANIL, Caen, France, January 2-10, 2012

Summer School on Nuclear Dynamics VI, Yildiz Technical University, Istanbul, Turkey, June

24- June 30, 2012 (Organized by S. Ayik, O. Yilmaz and A. Gokalp).

Workshop in Advances in Time-Dependent Methods for Quantum Many-Body Systems,

ECT*, Trento, Italy, October 14-18, 2013.

Int. workshop on "New Frontiers in Nuclear Physics and Astrophysics", Akdeniz University,

Antalya, Turkey, May28-June1, 2018. An invited talk presented with the title

"Multi-Nucleon Exchange in Stochastic Mean-Field Approach".

(d) SEMINARS GIVEN AT THE INVITATION OF OTHER INSTITUTIONS

"Generalized Master Equation for Heavy Ion Collisions," Hahn-Meithner Institute, W. Berlin, W. Germany, 1976; and Saclay, France, 1976.

"Transport Description of Heavy Ion Collisions," University of Toronto, Toronto, Canada, 1978; and Yale University, New Haven, CT, 1978.

"Generalized Fokker-Planck Equation for Dissipative Heavy Ion Collisions," Munich Technical University, W. Germany, 1979.

"Extended Mean Field Theory Including Two-Body Collisions," Michigan State University, East Lansing, MI, 1980; and TH Darmstadt, W. Germany, 1980; and KFA Julich, W. Germany, 1980; and ZFK Rossendorf, Dresden, E. Germany, 1981.

"Quantum Statistical Approach to Extended Mean Field Theory," Int. Symposium on Time-Dependent Hartree-Fock and Beyond, Bad Honnef, W. Germany, 1982.

"Description of Collective Motion by Extended-TDHF," in Adiabatic Limit," Texas A&M University, College Station, TX, 1983.

"A Statistical Model for Fusion and Orbiting Collisions of Heavy Ions," Oak Ridge National Laboratory, Oak Ridge, TN, 1985.

"Transport Theory of Intermediate Processes in Heavy-Ion Collisions," University of Rochester, Rochester, NY, 1986.

"Statistical Description of Orbiting Collisions," Vanderbilt University, Nashville, TN, 1987.

"A Statistical Model for Capture Processes in Nuclear Collisions," GANIL, Caen, France, 1988.

"Incorporating Fluctuations into Landau-Vlasov," GSI, Darmstadt, Germany, 1988; GANIL, Caen, France, 1988; ORSAY, France, 1988; Lawrence Berkeley Laboratory, Berkeley, CA, 1988; and Oak Ridge National Laboratory, Oak Ridge, TN, 1988.

"Transport Description of Fluctuation Phenomena in Nuclear Collisions," GANIL, Caen, France, 1989; Nantes, France, 1989.

"Multi-Fragmentation Processes in Nuclear Collisions," Ankara, Turkey, 1989.

"Boltzmann-Langevin Equation and Applications to Nuclear Collisions," Gordon Conference on Nuclear Chemistry, New London, NH, 1990; Michigan State University, East Lansing, MI, 1990; and GSI, Darmstadt, Germany, 1990.

"Correlation Dynamics," Institute for Nuclear Theory, University of Washington, Seattle, WA, 1990.

"Heavy-Ion Collisions at Intermediate Energies," A series of lectures given at University of Ankara, Turkey, 1990.

"Relativistic Boltzmann-Langevin Model for High Energy Nuclear Collisions," GSI, Darmstadt, Germany, 1991; and GANIL, Caen, France, 1991.

"The Boltzmann-Langevin Equation," Michigan State University, East Lansing, MI, 1991; GSI, Darmstadt, 1992; and University of Munich, Munich, Germany, 1992.

"The Boltzmann-Langevin Model," University of P. Sabatier, Toulouse, France, 1993; and ECT, Trento, Italy, 1994.

"Damping of Collective Vibrations in a Memory Dependent Transport Model," Lawrence Berkeley Laboratoy, Berkeley, CA, 1993, and Institute for Nuclear Theory, University of Washington, Seattle, WA, 1993.

“Memory Effect in Boltzmann-Langevin Equation,” INFN-LNS, Catania, Italy, 1994; Workshop on Hot and Dense Matter, INT, University of Washington, Seattle, WA, 1994; GANIL, Caen, France, 1994 and University of Rostock, Rostock, Germany, 1994.

“Memory Effects on Transport Properties of Collective Modes”, University of Catania, Catania, Italy, 1995; GSI, Darmstadt, Germany, 1995.

“Nuclear Multifragmentation,” Middle East Technical University and Ankara University,

Ankara, Turkey, 1996.

“Spinodal Instabilities in Finite Nuclei,” International Workshop on Nuclear Giant Resonance, ECT, Trento, Italy, 1996 and ISN, Grenoble, France, 1996.

“Nuclear Collective Response at Finite Temperature”, Nuclear Physics Institute, Orsay, June 1998; GANIL, Caen, France, June 1999 and Tohoku University, Sendai, Japan, May 2000.

"A Stochastic Transport Approach for Nuclear Dynamics", 5th Statistical Physics Days, Istanbul Technical University, Istanbul, Turkey, July 1998; Yukawa Institute for Theoretical Physcis, April 2000; ECT Trento, Italy, May 2000 and Nuclear Physics Institute, Orsay, France, June 2000.

"Properties of Nuclear Matter Under Extreme Conditions", Symposium for Celebrating Physics Year, Kocaeli University, Kocaeli, Turkey, May 2005.

"Properties of Nuclear Matter as a Function of Density and Temperature", Physics Department, Ankara University, Turkey, May 2006.

"Stochastic Mean-Field Dynamics for Nuclear Collisions", talk presented at IPN-ORSAY, October 22, 2008.

"A Stochastic Mean-Field Approach for Nuclear Dynamics", Texas A&M University, March 8, 2011.

"A Stochastic Mean-Field Approach for Nuclear Collisions at Low Energies", GANIL, Caen, France, January 12, 2012. (Please look under conferences and workshop in 2012 http://fustipen.ganil.fr/)

"A Stochastic Mean-Field Approach for Nuclear Collisions at Low Energies", University of Washington, March 7, 2012

Two lectures were presented on "Nuclear Transport Theory" at Summer School VI on Nuclear Dynamics" in June 2012 at Yildiz Technical University, Istanbul, Turkey (please see http://www.physics.metu.edu.tr/nuclear/school-ncd6/).

"A Stochastic Mean-Field Approach for Nuclear Nuclear Dynamics", Bilkent Univeristy, Ankara, Turkey, May, 2014.

"Quantal Corrections to Time-Dependent Mean-Field Dynamics", IPN, Orsay, France, October 16, 2014.

"Multi-Nucleon Exchange in Stochastic Mean-Filed Approach", IPN, Orsay, France, June 19, 2017.

"Multi-Nucleon Exchange in Stochastic Mean-Filed Approach", GSI, Darmstadt, Germany, June 28, 2017.