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Formal Education:

Higher Education Management Development Program, Harvard University, Cambridge, MA, USA, 2007
Ph.D. in Physics, University of Bombay, India, 1982
B.Sc. (Honors) in Physics, Ranchi University, India, 1973

Employment History:

2012- now Professor, Physics Department, Illinois Wesleyan University, Bloomington, IL
1998 - 2012 Professor & Chair, Physics Department, Illinois Wesleyan University, Bloomington, IL
1991 - 1997 Associate Professor & Chair, Physics Department, Illinois Wesleyan University, Bloomington, IL
1985 - 1991 Assistant Professor, Physics Department, Northeastern University, Boston, MA
1982 - 1985 Postdoctoral Fellow, Materials Research Laboratory, Northwestern University, Evanston, Illinois
1975 - 1982 Scientific Officer, Solid State Physics Division, Department of Atomic Energy, Bombay, India

Awards:

2003 *CASE Illinois Professor of the Year* award given by the Carnegie Foundation for the Advancement of Teaching
2003 *Professor of the Year* award given by the Student Senate at Illinois Wesleyan University
2000 Co-founder and academic director of the *Sports and Scholars* program, which was named by the Illinois State Board of Education (ISBE) as a "model" program that excels as a "university-industry-community cooperation."
1998 "*Light of Unity*" award given by the Spiritual Assembly of the Baha'is for work in fostering cross-racial understanding

Leadership Roles:

1991 -2012 Chair, Physics Department, Illinois Wesleyan University, Bloomington, IL
2008- 2009 President, ISU-IWU Chapter of Sigma Xi (International Science Research Society)
2000 -2001 President, Illinois Section of American Association of Physics Teachers
1994-1996 Executive Secretary, American Chapter of Indian Physics Association
1993-1994 President, McLean County India Association

Extramural Research Grants (listed alphabetically)

ARO (Army Research Office), equipment grant for Laser Raman spectrometer
CER (Center for Electromagnetics Research) High T_c superconducting thin films
NASA (National Aeronautical and Space Administration), JOVE Undergraduate research in materials physics
ONR (Office of Naval Research), Electro-Rheological fluids
RC (Research Corporation), Magnetism in metallic multi-layer superlattices
SBIR (Small Business Innovation Research), Diamond-like thin films
SBIR (Small Business Innovation Research), High T_c thin films
SDIO (Strategic Defense Initiative Organization), High T_c superconductors

Current Membership in Professional Organizations

APS (American Physical Society), Member, Materials Physics Division, International Physics Group and Forum on Education; organized and chaired a symposium at the 1994 Annual Meeting
Sigma Xi (International Science Research Society), member and President of ISU-IWU Chapter (2008-09)
ISAAPT (Illinois Section of American Association of Physics Teachers), Member and President (2000)
ACIPA (American Chapter of Indian Physics Association), Life Member and Executive Secretary (1994-1996)
AAPT (American Association of Physics Teachers), Member

Recent Teaching (2011-12):

General Physics I (Phys101): for life scientists
General Physics II (Phys102): for life scientists
Mathematical Methods of Physics (Phys304): for physics majors
Theoretical Mechanics (Phys405): for physics majors
Independent Study (Phys499): for physics major Yao Xiao
Energy & Society (ENST115/Phys130): for all majors

Recent Scholarship (2011-12):

"Measurable Consequences of Extra Spatial Dimensions"
Physics Colloquium at Illinois State University, Normal, IL, March 29, 2011

"Visualizing the Process of Minimization of Functionals Using Mathematica"
Spring Meeting of ISAAPT, Eastern Illinois University, Charleston, IL, April 2, 2011

Faith and Science Workshop, Indiana Wesleyan University, June 27-29, 2011

"A Rotation Study of Jovian Trojan Asteroids"
L.M. French, R.D. Stephens, L.H. Wasserman, D. Coley, D.A. Rohl, D. La Rocca, N. Jaggi and S.M. Lederer. 2011.
EPSC-DPS Joint Meeting, Nantes, France. 351.

"Measurable consequences of extra spatial dimensions: a study of renormalized electrical conductance in four dimensional hypercubic networks of lumped linear elements"
Andrew Nelson and Narendra K. Jaggi, manuscript under preparation for *American Journal of Physics* (2012)

Recent Service to Illinois Wesleyan University (2011-12):

Member, Curriculum Council
Member, Assessment Committee Task Force
Chair, Department of Physics
Member, International Studies Team
Faculty Advisor, SASA (South Asian Student Association)

Service to Illinois Wesleyan University (Comprehensive):

Member, Curriculum Council (2011-13)
Member, Assessment Committee Task Force (2011-12)
Chair, Department of Physics (1991- 2012)
Member, International Studies Team (1992- present)
Faculty Advisor, S.A.S.A., (South Asian Student Association) (1992-present)
Chair, Promotion and Tenure Committee (2008-2009)
Vice-Chair, Promotion and Tenure Committee (2007-2008)
Chair, Faculty Development Committee (1997-1998)
Member, Faculty Development Committee (1996-1998)
Chair, Hearing Committee (1998-2000)
Chair, Curriculum Council (2001-2003)
Faculty Visitor, Board of Trustees (2003- 2004)
Coordinator, Asian Studies Team (2004-2005)
Member, CUPP (Council on University Programs and Policies) (1997-1998) and (2003-2004)
Member, Teacher Education Committee (1991-2005) and (2007-2008)
Member, Pre-Engineering Advisory Committee (1991-2001) and (2005-2008)
Member, Premedical Advisory Committee (1995-1996)
Member, Council on Religious Life (1993-2001)
Member, Evelyn Chapel Advisory Board (1992-2005)
Founder and Coordinator, Natural Science Colloquia Series (1994-present)
Faculty Advisor, Student Senate (2002-2005)
Faculty Advisor, S.P.S. (Society of Physics Students) (1991-1997)
Faculty Advisor, H.S.A., (Hindu Student Association) (1995-2007)

Faculty Advisor, T.I.E.S. (Together In Equal Standing) (1995-1997)
Faculty Advisor, Juggling Club (1995-1998)

List of Refereed Publications (listed chronologically)

1. "Hyperfine Interactions in Ferromagnetic Rh_2MnSn ,"
R.G. Pillay, P.N. Tandon, H.G. Devare, N.K. Jaggi and K.R.P.M. Rao, *Solid State Communications*, **24** (1977) 439.
2. "Hyperfine Interactions in Rh_2MnSn and Their Temperature Dependence,"
R.G. Pillay, P.N. Tandon, H.G. Devare, N.K. Jaggi and K.R.P.M. Rao, *Hyperfine Interactions*, **4** (1978) 392.
3. "Site Preference and Local Environment Effects in $Fe_{3-x}Co_xGa$,"
N.K. Jaggi, K.R.P.M. Rao, A.K. Grover, L.C. Gupta, R. Vijayaraghavan and L.D. Khoi, *Hyperfine Interactions*, **4** (1978) 402.
4. "Dependence of the Spin Glass Transition on the Details of Disorder,"
N.K. Jaggi, *Physica Status Solidi (b)*, **87** (1978) K81.
5. "A Simple Mössbauer Ferritometer,"
N.K. Jaggi and K.R.P.M. Rao, *Non Destructive Testing International*, **11** (1978) 281.
6. "Mössbauer Spectroscopy Study of Co_2FeGa and Fe_2CoGa ,"
N.K. Jaggi, K.R.P.M. Rao and P.K. Iyengar, *Indian Journal of Physics*, **53A** (1979) 67.
7. "A Simple Method for the Precise Determination of T_C and the Exponent by Mössbauer Effect,"
N.K. Jaggi, *Journal of Physics*, **C10** (1979) L243.
8. "Ground State of a Two Dimensional Frustrated Ising Model,"
N.K. Jaggi, *Journal of Physics*, **C13** (1980) L177.
9. "Non-exponential Relaxation and Remanence in Ising Spin-Glass Models,"
N.K. Jaggi, *Journal of Physics*, **C13** (1980) L307.
10. "Phase Analysis Using Scattering Mössbauer Spectroscopy,"
N.K. Jaggi and K.R.P.M. Rao, *Proceedings of the International Conference on Applications of Mössbauer Effect*, (1981) 268.
11. "CEMS Study of Corrosion of Plain Carbon Steels in Simulated Pressurized Water Reactor Environment,"
N.K. Jaggi, K.R.P.M. Rao, Y.D. Dande, P.K. Chauhan and H.S. Gadiyar, *Proceedings of the International Conference on Applications of Mössbauer Effect*, (1981) 313.
12. "Mössbauer and Magnetization Studies of Epsilon Fe_xN ,"
G.M. Chen, N.K. Jaggi, E. Yeh, L.H. Schwartz and J.B. Butt, *Journal of Physical Chemistry*, **87** (1983) 5326.
13. "Cofacial Assembly of Metallomacrocycles as an Approach to Controlling Lattice Architecture in Low Dimensional Molecular Solids: Polymeric $[Fe Pc Pyz]$,"
B.N. Diehl, T. Inabe, N.K. Jaggi, J.W. Lyding, O. Schneider, M. Hanack, C.R. Kannewurf, T.J. Marks and L.H. Schwartz, *Journal of American Chemical Society*, **106** (1984) 3207.
14. "Mössbauer Spectroscopy Study of Composition Modulated Fe-V Thin Films,"
N.K. Jaggi, L.H. Schwartz, H.K. Wong and J.B. Ketterson, *Journal of Magnetism and Magnetic Materials*, **49** (1985) 1.

15. "Preparation, structures, and physical properties of two products from the iodination of (phthalocyaninato) iron (II),"
S.M. Palmer, J.L. Stanton, N.K. Jaggi, B.M. Hoffman, J.A. Ibers and L.H. Schwartz, *Inorganic Chemistry*, **24** (1985) 2040.
16. "Magnetism in Composition Modulated Superlattices of Fe-V: a Comment,"
N.K. Jaggi and L.H. Schwartz, *Journal of Physical Society of Japan*, **54** (1985) 1652.
17. "Phase Characterization of Iron-Manganese Fischer-Tropsch Catalysts,"
N.K. Jaggi, L.H. Schwartz, J.B. Butt, H. Papp and M. Baerns, *Applied Catalysis*, **13** (1985) 347.
18. "Silica Supported Iron Nitride in Fischer-Tropsch Reactions: I. Characterization of the Catalyst,"
E. Yeh, N.K. Jaggi, J.B. Butt and L.H. Schwartz, *Journal of Catalysis*, **91** (1985) 231.
19. "Magnetic Properties of Compositionally Modulated Fe/Cr Thin Films,"
C. Sellers, Y. Shiroishi, N.K. Jaggi, J.B. Ketterson and J.E. Hilliard, *Journal of Magnetism and Magnetic Materials*, **54-57** (1986) 787.
20. "Effective-medium Theory of an Anisotropic Conductor Applied to the High T_c Superconductors,"
R.S. Markiewicz, K. Chen and N.K. Jaggi, *Physical Review*, **B 37** (1988) 9336.
21. "Superconductivity in Thin Films of Bi-Sr-Ca-Cu Oxide Deposited via Ablation of Oxide Pellets,"
N.K. Jaggi, M. Meskoob, S.F. Wahid and C.J. Rollins, *Applied Physics Letters*, **53** (1988) 1551.
22. "Superconductivity at 122K in $Tl(BaCa)_2Ca_3Cu_4O_y$ with Four Consecutive Copper Layers,"
P. Haldar, K. Chen, B. Maheswaran, A. Roig-Janicki, N.K. Jaggi, R.S. Markiewicz and B.C. Giessen, *Science*, **241** (1988) 1198.
23. "Interaction of High Temperature Superconductors with Conductive Oxides,"
A.C. Greenwald, E.A. Johnson, J.S. Wollam, A.J. Gale and N.K. Jaggi, *Proceedings of MRS Conference on Science and Technology of Thin Film Superconductors*, (Nov. 14-18, 1988) 193.
24. "Ion Beam Deposition of Diamond Like Coatings,"
A.C. Greenwald, J.K. Hirvonen and N.K. Jaggi, "Processing and Characterization of Materials Using Ion Beams," *Materials Research Society Proceedings*, **128A** (1989) 109.
25. "Electric Field Induced Solidification,"
R. Tao, J.T. Woestman and N.K. Jaggi, *Applied Physics Letters*, **18** (1989) 1844.
26. "Possible Phase Transitions in Electro-Rheological Fluids,"
N.K. Jaggi, R.Tao and J.T. Woestman, in *Electro-Rheological Fluids*, pub. Technomic Press, April 1990, pp. 53-62.
27. "Harmonic Generation in $TlBa_2Ca_3Cu_4O_y$ Superconductor,"
S.F. Wahid and N.K. Jaggi, *Physica C (Superconductivity)*, **170** (1990) 395.
28. "Structure and Dynamics of Dense Dipolar Fluids in an Electric Field and Their Relevance to Electro-Rheological Fluids,"
N.K. Jaggi, *Journal of Statistical Physics*, **64** (1991) 1093.
29. "Analytic Solution of a Generalized Critical State Model of Type II Superconductors,"
S.F. Wahid and N.K. Jaggi, *Physica C (Superconductivity)*, **184** (1991) pp. 88-92.

30. "Quasistatic Nonlinear Magnetic Response of Granular Superconductors: Applicability of Different Models," S.F. Wahid and N.K. Jaggi, *Physica C (Superconductivity)*, **194** (1992) pp. 211-222.
31. "A Lattice Gas Approach to the Structure and Dynamics of Electro-Rheological Fluids," J. Chen and N.K. Jaggi, *Journal of Undergraduate Research in Physics*, **12** (1994) pp. 34-38.
32. "A Novel Technique for Studying the Shear Elastic Properties of Weak Solids," J.A. Payne and N.K. Jaggi, *Journal of Undergraduate Research in Physics*, **12** (1994) pp. 43-46.
33. "Art in Physics: Exotic Macrostructures in Swelling Polyelectrolyte Gels," D. Deardorff, K. Branshaw and N.K. Jaggi, *Journal of Undergraduate Research in Physics*, **13** (1995) pp. 47-52.
34. "Polyelectrolyte Gels as Artificial Muscle Systems," K. Branshaw, D. Deardorff and N.K. Jaggi, *Journal of Undergraduate Research in Physics*, **13** (1995) pp. 43-46.
35. "Boundary Effects on Structures in Two Dimensional Dipolar Systems", J. Rinne and N.K. Jaggi, *Solid State Physics*, **44** (2001) pp. 545-546.
36. "Multiple Mössbauer Spectra Data Acquisition with an In-situ Cyclic Voltammetry System," T.L. Greave, J.D. Cashion, A.L. Benci, N.K. Jaggi, C. Hogan and A.M. Bond, *Hyperfine Interactions (C)*, **5**, 21-24 (2003).
37. "Physics and Sociology: Neighbourhood Racial Segregation," A.J. Laurie and N.K. Jaggi, *Solid State Physics*, **45** (2002) pp. 362-363.
38. "Role of 'Vision' in Racial Neighbourhood Segregation: A Variant of the Schelling Segregation Model," A.J. Laurie and N.K. Jaggi, *Urban Studies*, **40** (2003) pp. 2687-2704
39. "Insights into Neighborhood Racial Segregation: Some lessons from a careful exercise in sociological modeling" Narendra K. Jaggi and Alexander J. Laurie, *Proceedings of 3rd Annual Hawaii International Conference for the Social Sciences (2004)*.
40. " Experimental study of renormalized conductance in four dimensional hypercubic networks of lumped linear elements" Andrew Nelson and Narendra K. Jaggi, manuscript under preparation for *American Journal of Physics (2012)*
41. "A Rotation Study of Jovian Trojan Asteroids" L.M. French, R.D. Stephens, L.H. Wasserman, D. Coley, D.A. Rohl, D. La Rocca, N. Jaggi and S.M. Lederer. 2011. EPSC-DPS Joint Meeting, Nantes, France. 351.

Invited Talks at Conferences

NATO Advanced Study Institute on Dynamics of Simple and Complex Fluids; Los Alamos National Lab, Los Alamos, New Mexico (June 26-29, 1990), panel discussion on the open questions in Electro-Rheological fluids.

Meeting of the Rheological Society (October 22-25, 1990), "Computer Simulations of Dense Dipolar Fluids in an Electric Field."

37th Fall Meeting of Texas Section AAPT - Texas Section APS, (November 9-10, 1990), College Station, Texas, "Lattice Structures in Finite and Constrained Purely Repulsive Systems."

International Conference on Electro-Rheological Fluids, Southern Illinois University, Carbondale, Illinois (October 15-16, 1991), "Possible Phase Transitions in Electro-Rheological Fluids."

Annual Symposium of Department of Atomic Energy, Bombay, (December 20-26, 1996), "Giant Electromotility and Exotic Structures in Some Polyelectrolyte Gel Systems During Swelling."

National Conference on Teaching and Learning Diversity in American Higher Education, Monterey, California (April 8-11, 1997), "Female Friendly Physics: Proven Strategies from the Trenches."

Annual Conference of Midwest Sociological Society, Chicago, Illinois, (April 16-19, 2003), "Role of 'Vision' in Racial Neighborhood Segregation: A Variant of the Schelling Segregation Model."