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RESUME

Name John R. Hull

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Argonne National Laboratory
Argonne, Illinois 60439

Date and Place of Birth August 15, 1949
Des Moines, Iowa

Education Ph.D. Physics 1979
Iowa State University

B.S. Physics 1971
Iowa State University

Professional Societies American Society of Mechanical Engineers, Fellow
Inst. Electrical & Electronics Engineers, Senior Member
International Solar Energy Society
American Physical Society

Awards and Honors

Phi Kappa Phi. 1971.
Who's Who in Technology. 1985.
Who's Who of Optical Scientists and Engineers. 1985.
ANL Pacesetter Award for development of electromagnetic steel casting concept. April 1985.
American Men and Women of Science. 1986.
ANL Pacesetter Award for development of high-temperature superconducting current lead. April 1990.
Who's Who in Science and Engineering, 1st edn. 1992-3; 2nd edn. 1994-5; 3rd edn. 1996-7; 4th edn. 1998-9.
ANL Director's Award. 1991
Who's Who in the Midwest, 23rd edn. 1992-3; 24th edn. 1994-5; 25th edn. 1996-7.
Federal Laboratory Consortium for Technology Transfer Award of Merit, 1992.
Men of Achievement, 16th edn. 1993.
Who's Who in the World, 12th edn. 1995-6.
University of Chicago Award for Distinguished Performance. 1995.
Industry Week, Annual Top 50 R&D Stars, 1995.

Research Interests applications of superconductivity
electromagnetic levitation and propulsion
flywheel energy storage
magnetohydrodynamics
natural convection
numerical modeling
solar energy
stability theory
thermal sciences

Employment History

1962–1965	Self Employed – Newspaper Delivery, Des Moines, Iowa.
Summer 1967	Welder, Economy Forms Corp., Des Moines, Iowa.
Summer 1970	Undergraduate Research Assistant, Ames Laboratory, Iowa State University, Ames, Iowa.
Summer 1971	Research Assistant, Dept. Physics, California Institute of Technology, Pasadena, California.
9-73 to 8-75	Teaching Assistant, Dept. Physics, Iowa State University, Ames, Iowa.
9-75 to 2-79	Research Assistant, Dept. Physics, Iowa State University, Ames, Iowa.
Spring 76,77,78	Instructor, Dept. Physics, Des Moines Area Community College, Ankeny, Iowa.
Fall 1978	Assistant Professor and Acting Dept. Chairman, Earth Science Dept., Simpson College, Indianola, Iowa.
3-79 to 11-79	Instructor, Dept. Physics, Iowa State University, Ames, Iowa.
12-79 to 9-80	Postdoctoral Fellow, Ames Laboratory, Iowa State University, Ames, Iowa.
10-80 to 9-81	Assistant Physicist, Chemical Engineering Div., Argonne National Laboratory, Argonne, Illinois.
10-81 to 4-84	Assistant Engineer, Components Technology Div., Argonne National Laboratory, Argonne, Illinois.
5-84 to 8-90	Engineer, Materials and Components Technology Div., Argonne National Laboratory, Argonne, Illinois.
8-90 to 12-99	Manager, Electromechanics and Superconductivity Applications Section, Energy Technology Div., Argonne National Laboratory, Argonne, Illinois.
12-97 to now	Senior Engineer, Energy Technology Div., Argonne National Laboratory, Argonne, Illinois.
12-99 to now	Manager, Thermal and Electromechanics Section, Energy Technology Div., Argonne National Laboratory, Argonne, Illinois.

Professional Society Positions

Am. Solar Energy Soc., Engineering Div., Board of Directors, 1984-88.
Illinois Solar Energy Association, Board of Directors, 1988-92.
ASME, Superconductivity Tech. Comm., Papers Review Chair, 1988-89.
ASME, Superconductivity Tech. Comm., Secretary, 1989-90.
ASME, Superconductivity Tech. Comm., Vice Chair, 1990-92.
ASME, Superconductivity Tech. Comm., Chair, 1992-93.
ASME, Superconductivity Tech. Comm., Vice Chair, 1994-97.
Cryogenic Engineering Conference, Board of Directors, 1995-2001.
Applied Superconductivity Conference, Board of Directors, 1996-2002.

Editorial Activities

Associate Editor - Solar Ponds, for *Solar Energy* 1986-1993.
Associate Editor for *Superconducting Bearings and Levitation Newsletter* 1989-1991.
Guest Editor for *Applied Superconductivity* "Magnetic Levitation Using High-Temperature Superconductors." Vol. 2, No. 7/8, July/Aug. 1994
Editorial Board, *Int. J. Appl. Electromagn. Electromech.* 1995-.
Editorial Committee and Subeditor, *Cryogenic Engineering Conf.*, 1998-.

Advisory Positions

1. Participant in U.S. Solar Pond Plan Panel, June-September 1980.
2. Nonfaculty Advisor for J. M. Mehta, Ph.D., 1985, Illinois Inst. Tech. (under Worek and Lavan)
3. External Thesis Examiner for A. Moshref, Ph.D., 1984, McGill University, Montreal.
4. External Thesis Examiner for Y. Katti, Ph.D., 1985, Indian Institute of Technology, New Delhi.
5. Member of Research Advisory Board, Texas Solar Pond Consortium, 1989-92.
6. NATO Multinational Exercise LTSS/41, 1993.
7. Member, U.S. Technical Advisory Group of Technical Committee 90 of International Electrotechnical Commission, 1993-96.
8. NATO Multinational Exercise LTSS/47, 1997.
9. External Thesis Examiner for R. Jayaprakash, Ph.D., 1998, Bharathiar University, Coimbatore, India.
10. Nonfaculty Advisor for A. Cansiz, Ph.D., 1999, Illinois Institute of Technology (under Segre).
11. Member, NASA Peer Review Team for Space Station Flywheel Project (Jan. 2000).

Consulting Activities

Reinforced Earth Company (1983)
United States Agency for International Development: Jordan (1983), Togo (1984)
Consejo Superior de Investigaciones Cientificas - Spain (1985)
Kuwait Institute for Scientific Research (1985)
Chemical Waste Management Company (1986, 1987)
Expert Witness - USA vs. Earl Smith (July 1986)
United Nations - Kuwait (1987)
Gravi-Mechanics Company (1989)
Illinois Superconductor Corp. (1990-1991)
Radio Interview - British Broadcasting Company (1994)
Radio Interview - Pulse of the Planet (1995)
Electric Power Research Institute (1997)
Leiser Presser (1999)

Conference Organization Activities

1. Arrangements for Solar Pond Panel. Sponsored by Living History Farms and Iowa State University. December 1975.
2. Solar Pond Session Chairperson. American Solar Energy Society Conference. Minneapolis, Minnesota. June 1983.
3. Workshop Organizer. "Solar Ponds." Argonne National Laboratory, Argonne, Illinois. April 1984.
4. Solar Pond Session Chairperson. American Solar Energy Society Conference. Anaheim, California. June 1984.
5. Workshop Coorganizer "Advanced Tubular Evacuated Concentrating Solar Collectors." Argonne National Laboratory, Argonne, Illinois. February 1985.
6. Radiation, Agriculture, and Architecture Session Chairperson. American Solar Energy Society Conference. Boulder, Colorado. June 1986.
7. Space Heating and Cooling Session Chair. American Solar Energy Society and Solar Energy Society of Canada Conference, Portland, Oregon. July 1987.
8. Solar Pond Session Chair. ASME Solar Energy Division Conference. Denver, Colorado. April 11-14, 1988.
9. Technical Chairman and Member of National Organizing Committee. American Solar Energy Society Conference, Boston, Massachusetts. June 21-23, 1988.
10. Photovoltaic System Modeling Session Chairperson. American Solar Energy Society Conference. Denver, Colorado. June 1989.
11. Organizer. Magnetic Bearing Symposium. Intersociety Energy Conversion Engineering. Conference, Reno, Nevada. August 1990.
12. Magnetic Bearings Session Chair. Applied Superconductivity Conference. Snowmass, Colorado. September 28, 1990.
13. Organizer, Superconductivity Sessions. Intersociety Energy Conversion Engineering. Conference, Boston, Massachusetts. August 1991.
14. Publicity Chair. Applied Superconductivity Conference. Chicago, Illinois. September 1992.
15. Organizer, New Technologies for Energy Utilization. Intersociety Energy Conversion Engineering. Conference, Atlanta, Georgia. August 1993.
16. Bearings and Levitation Session Chair. Applied Superconductivity Conference. Pittsburgh, Pennsylvania. August 26-30, 1996.
17. Conductor Stability and Superconducting Wire Sessions Chair. Cryogenic Engineering Conference. Portland, Oregon. July 28-August 1, 1997.
18. Novel Concepts Sessions Chair. Cryogenic Engineering Conference. Portland, Oregon. July 28-August 1, 1997.
19. Current Leads and Power Transmission Cables Session Chair. Applied Superconductivity Conference. Desert Springs, California. Sept. 13-18, 1998.
20. HTS Devices for Levitation Session Chair. Applied Superconductivity Conference. Desert Springs, California. Sept. 13-18, 1998.
21. Organizing Committee. International Symposium on Non-Linear Electromagnetic Systems. Oct. 1998 to present.
22. CoOrganizer. Workshop on Bulk High-Temperature Superconductors. Argonne National Laboratory. May 17-18, 1999.
23. Novel Concepts/New Devices Sessions CoChair. Cryogenic Engineering Conference. Montreal, Quebec. July 12-16, 1999.
24. Cryogenic Cables and Leads Sessions CoChair. Cryogenic Engineering Conference. Montreal, Quebec. July 12-16, 1999.
25. Superconducting Motors, Generators, and Bearings Session CoChair. Cryogenic Engineering Conference. Montreal, Quebec. July 12-16, 1999.
26. Member, International Board. 2nd International Workshop on the Processing and Applications of Superconducting RE-BCO Large Grain Materials. Morioka, Japan. Oct. 1999.
27. Member, Standing Committee. International Symposium on Applied Electromagnetics. 2000-.

28. Organizer, 18th Symposium in Energy Engineering Sciences, Argonne National Laboratory, Argonne, Illinois. May 15-16, 2000.

Reviewed Proposals for

Small Business Innovative Research Program.
National Research Council of Canada
New Mexico Energy Research and Development Institute
ASME Research Foundation
National Science Foundation
United States - Israel Binational Science Foundation
Texas Higher Education Coordinating Board

Refereed Journal Articles for

Acta Mechanica
Applied Physics Letters
ASME Journal of Solar Energy Engineering
Canadian Journal of Chemical Engineering
Cryogenics
Energy, the International Journal
Energy Sources
Experimental Thermal and Fluid Science
IEEE Transactions on Applied Superconductivity
IEEE Transactions on Magnetics
International Journal of Applied Electromagnetics and Mechanics
International Journal Heat and Mass Transfer
Journal of Applied Physics
Journal of Fluid Mechanics
Journal of Magnetism and Magnetic Materials
Journal of Thermophysics and Heat Transfer
Optical Engineering
Optics Letters
Physica-C
Physics of Fluids
Review of Scientific Instruments
Solar Energy

Teaching Activities

Engineering Statics
Introduction to Astronomy
Man and Energy
Introductory Physics with Calculus
Introductory Physics without Calculus
Modern Physics
Introductory Physics Laboratory
Modern Physics Laboratory
Advanced Physics Laboratory

Languages:

Read - English (fluent), Russian (very good), German (good),
French (good), Spanish (good)

Speak - English (fluent), Russian (good), German (moderate),
French (moderate), Spanish (moderate)

Science Citations

- citations by other researchers, as listed in the Science Citation Index

<u>Year Cited</u>	<u>Number of Citations</u>
1981	2
1982	6
1983	16
1984	11
1985	11
1986	13
1987	15
1988	19
1989	15
1990	27
1991	37
1992	50
1993	61
1994	67
1995	71
1996	64
1997	100
1998	78
1999	53
2000	4 (partial)