

## BIOGRAPHICAL DATA

### JAMES JOHNSON DUDERSTADT

President *Emeritus*  
University Professor of Science and Engineering  
The University of Michigan

#### EDUCATION:

B. Eng. (*with highest honors*), Electrical Engineering, Yale University, 1964  
M.S., Engineering Science, California Institute of Technology, 1965  
Ph.D., Engineering Science & Physics, California Institute Technology, 1967

#### POSITIONS:

The University of Michigan, Ann Arbor, Michigan  
President *Emeritus*  
and *University Professor* of Science and Engineering, 1996 - present  
President, 1988 - 1996  
Acting President, 1987  
Provost and Vice President for Academic Affairs, 1986-1988  
Dean of the College of Engineering, 1981-1986  
Professor of Nuclear Engineering, 1976-1981  
Associate Professor of Nuclear Engineering, 1972-1976  
Assistant Professor of Nuclear Engineering, 1969-1972

#### Other Professional:

Chair, Policy and Global Affairs Division, National Research Council, 2010-  
Nonresident Senior Scholar, Brookings Institution, 2010 -  
Chair, National Science Board, 1992-1995  
Consultant with government agencies, higher education, and  
industry, 1968 to present  
Summer Research Physicist, Lawrence Livermore Laboratory, 1971  
Visiting Research Scientist, California Institute of Technology, 1971  
A.E.C. Postdoctoral Fellow, California Institute of Technology, 1968  
Summer Research Associate, Los Alamos Scientific Laboratory, 1964

#### CURRENT MAJOR APPOINTMENTS:

Director, Millennium Project, The University of Michigan (1996 - )  
National Academies  
Policy and Global Affairs Division (2008 - ), Chair  
Governing Board, National Research Council (2010 - )  
Committee on Research Universities (2010 - )  
Glion Colloquium, Co-Director (Joint European-American University  
Presidents' Conference) (2003 - )  
Chair, Board of Directors, DOE CASL Energy Innovation Hub (2013- )  
Brookings Institution, nonresident Senior Scholar (2010 - )

### Visiting or Advisory Committees:

Facility for Rare Isotope Beams, MSU and DoE (2009 - )  
 CASL (Consortium for Advanced Simulation of Light Water Reactors)  
 (2011-)  
 University of California Davis Advisory Committee (2011 - )  
 University of Illinois Advisory Committee (2011 - )

### PAST MAJOR APPOINTMENTS:

Intelligence Science Board (2007 – 2009)  
 Association of Governing Boards  
     Task Force on the State of the American University Presidency (2005-2007)  
 U.S. Department of Education  
     National Commission on the Future of Higher Education (2005-2007)  
 National Center for Atmospheric Research  
     Advisory Committee (2001-2006)  
 U. S. Department of Energy  
     Special Task Force on Scientific Research Priorities (2002 – 2004)  
     Nuclear Energy Research Advisory Committee, chair (1998 - 2002)  
 National Partnership for Advanced Computation Infrastructure  
     Oversight Board (1998 - 2002)  
 National Center for Postsecondary Improvement  
     Board of Senior Scholars (1997 - 2002)  
 National Academies/National Research Council  
     Nominating Committee, National Academy of Engineering (2007)  
     Keck Futures Initiative Review Panel, Chair (2007 - 2008)  
     NAS Workshop on OMB Performance Assessment Ratings, Chair (2004)  
     Committee on Science, Engineering, and Public Policy (1997 – 2004)  
     Steering Committees:  
         Research Activities of the States (2003-2005)  
         Interdisciplinary Research (2003)  
         Foreign Students and National Security (2003)  
         NSF Major Facilities Programs (2002)  
 IT Forum, Chair (2001- - 2005)  
 Federal Science and Technology Budget Guidance Group, Chair (1998 – 2006)  
 NAS-CSIS Roundtable on National Security and Scientific Communication (2003-  
 2005)  
 Panel on Scholarship in the Digital Age, Chair (1999)  
 Triana Satellite Mission Review Panel, Chair (2000)  
 National Academy of Engineering (1987 - )  
     Presidential Search Committee, Chair (2005-2007)  
     Executive Board Councilor (1993 – 1996, 1997 - 2001)  
     Manufacturing Forum (1990 - 1992)  
     Academic Advisory Board (1989 - 1993)  
 National Science Foundation  
     Advisory Committee on Cyberinfrastructure, Chair (2006 - 2009)  
     Advisory Committee on Education and Human Resources (2000 - 2003)  
     National Center for Atmospheric Research (2001 – 2006)

GUIRR-NSB Project on Stresses in the Academy, Co-Chair (1997-2000)  
 President, Michigan Virtual Automotive College (1996-1998)  
 National Science Board (1985 - 1996)  
   Chairman (1991- 1994)  
   Executive Committee (1988 - 1994)  
   Chair, Education and Human Resources Committee (1988-1991)  
 American Association of Universities (1988 - 1996)  
   Executive Committee (1994 - 1996)  
 National Association of State Universities and Land-Grant Colleges  
 (1988 - 1996)  
   Chair, Federal Legislation Committee (1990 – 1992)  
 University of Michigan Hospitals, Executive Board (1986 - 1996) (Chair)  
 M-Care HMO, Board of Directors (1988 - 1996) (Chair)  
 Michigan Virtual University and Michigan Virtual Automotive College  
   Board of Directors (1998 - ); President (1997-1999)  
 O. C. Tanner Trust, Board of Trustees (1988 - 1996)  
 Big Ten Conference, Board of Directors (1988 - 1996) (Chair, 1994 - 96)  
 Michigan Presidents' Council (1988 - 1996) (Chair, 1992-1994)  
 Michigan Education Trust, Executive Board (1992 - 1994)Chair  
 American Association of Universities, Executive Committee (1994 - 1996)  
 Association of Governing Boards, Board of Directors (1992 - 1996)  
 Business-Higher Education Forum (1988 - 1996)  
 Clements Library, Board of Directors (1988 – 1996 ) (Chair)  
 Rackham School of Graduate Studies, Governing Board (1988 - 1996) (Chair)  
 Industrial Technology Institute, Board of Directors (1983 - 1990)  
 Visiting Committees:  
   University of Illinois Advisory Committee (2011 - )  
   University of California Davis Advisory Committee (2010 - )  
   University of California Regents Task Force (2006 - 2009)  
   MIT: Department of Nuclear Engineering (2002 - 2006)  
   Stanford University: Board of Senior Scholars, National Center for  
     Postsecondary Education Improvement (1996-2003)  
   University of California Santa Cruz, Accreditation (Chair) (2004-2006)  
   University of Toronto: Planning Activities (1996-1998)  
   U.S. Naval Postgraduate School: Planning (2001-2004)  
   Yale University: Advisory Council on Information Technology (1996-2000)  
 Industry  
   Unisys Corporation, Board of Directors (1990 – 2013)  
   CMS Energy Corporation, Board of Directors (1992 – 2004)  
   Diamond Cluster Group, Fellow (1999 – 2004)

### **PROFESSIONAL, SCHOLARLY, AND HONORARY SOCIETIES:**

National Academy of Engineering (Member, Councilor)  
 American Academy of Arts and Sciences (Fellow)  
 American Nuclear Society (Fellow)  
 American Physical Society (Member)  
 Phi Beta Kappa (Member)

Tau Beta Pi (Member)  
 Sigma Xi (Member)  
 American Association for the Advancement of Science (Fellow)  
 American Society for Engineering Education (Member)

## **HONORS AND AWARDS:**

### Major National Awards:

Vannevar Bush Award, National Science Board (2015)  
 Ralph Coats Roe Medal, American Society for Mechanical Engineering (2016)  
 Arthur M. Bueche Award, National Academy of Engineering (2012)  
 Reginald Jones Award, National Action Commission for Minorities in Engineering (2005)  
 Reginald Wilson Award for achievement in diversity, American Council on Education (2001)  
 National Medal of Technology (Presidential Medal) (1991)  
 National Engineer of the Year, National Society of Professional Engineers (1991)  
 E. O. Lawrence Award, United States Department of Energy (1986)  
 Arthur Holly Compton Prize, American Nuclear Society (1985)  
 Mark Mills Award, American Nuclear Society (1968)

### Other National Awards:

Alice L. Beeman Award for book of the year  
 Council for Advancement and Support of Education (2001)  
 National Associate Award for extraordinary service to the National Academies (NAS-NAE-IOM-NRC) (2001)  
 Election to Fellow, American Association for the Advancement of Science (1994)  
 Centennial Medallion, American Society for Engineering Education (1993)  
 Election to American Academy of Arts and Sciences (1993)  
 Election to National Academy of Engineering (1987)  
 Election to Fellow, American Nuclear Society (1983)  
 Outstanding Nuclear Engineering Educator Award, American Society for Engineering Education (1974)

### University Honors and Awards:

Robert Fletcher Award, Dartmouth College (2009)  
 George Herbert Walker Bush Leadership Award, Yale University (2003)  
 Outstanding Alumnus Award, California Institute of Technology (1989)  
 Annual Award for Advancement of Basic and Applied Science, Yale University (1987)

### Honorary Degrees and Commencement Addresses

Dartmouth College (2009)  
 McGill University (2009)  
 Arizona State University (2008)  
 Royal Roads University (Victoria, Canada) (2002)  
 North Carolina State University (2002)  
 Michigan Tech University (1997)  
 California Institute of Technology (1991)

### Honorary Lectureships

John Danz Lectures, University of Washington (2012)  
*Dies Academicus* Address, University of Vienna (2009)  
 Millennium Lecture, University of Texas, El Paso (2008)  
 Distinguished Lecture Series, Florida State University (2007)  
 Distinguished Lecture Series, Arizona State University (2004)  
 Wolfle Lecturer, University of Washington (2001)  
 David Dobbs Henry Lecturer, University of Illinois (1999)  
 Perkin-Elmer Distinguished Lecturer, U of Pittsburgh (1998)

### State of Michigan:

Equity Award, Michigan Department of Education (1996)  
 Outstanding Engineering Educator of the Year (1986),  
 Michigan Society of Professional Engineers

### The University of Michigan (as a faculty member):

Dedication of the James and Anne Duderstadt Center (2004)  
 Faculty Book of the Year Award (2002)  
 College of Engineering Outstanding Teacher Award (1980)  
 Class of 1938E Award for Outstanding Junior Faculty Member (1972)  
 Nuclear Engineering Teacher of the Year (1969)

### Student Awards:

Election to Tau Beta Pi (1963), Yale University  
 Election to Phi Beta Kappa (1988), Yale University  
 B.Eng. (*summa cum laude*) (1964), Yale University  
 Chester Harding Plimpton Prize (1964), Yale University  
 AEC Predoctoral Fellowship (1965), California Institute of Technology  
 Election to Sigma Xi (1965), California Institute of Technology  
 AEC Postdoctoral Fellowship (1968), California Institute of Technology

### **RESEARCH INTERESTS:**

Engineering physics, statistical mechanics, plasma physics, nuclear systems, science policy, information technology, higher education policy, energy and global sustainability

### TEACHING INTERESTS:

Physics and mathematics, reactor physics, plasma physics, kinetic theory and statistical mechanics, fluid mechanics, heat transfer, computational science, engineering education, science policy, higher education policy

### SCHOLARLY ACTIVITIES:

#### Books:

- James J. Duderstadt and Louis J. Hamilton, *Nuclear Reactor Analysis* (New York: John Wiley and Sons, 1976) 650 pp. (Japanese translation, 1980, 1981)
- James J. Duderstadt and William R. Martin, *Transport Theory* (New York: Wiley-Interscience, 1979) 621 pp.
- James J. Duderstadt, *Nuclear Power* (New York: Marcel Dekker, 1979) 391 pp.
- James J. Duderstadt and Chihiro Kikuchi, *Nuclear Power: Technology on Trial* (Ann Arbor, MI: University of Michigan Press, 1979) 262 pp.
- James J. Duderstadt, Glenn F. Knoll, and George S. Springer, *Principles of Engineering* (New York: John Wiley and Sons, 1982) 558 pp.
- James J. Duderstadt and Gregory A. Moses, *Inertial Confinement Fusion* (New York: Wiley-Interscience, 1982) 347 pp.
- James J. Duderstadt, Glenn F. Knoll, and George S. Springer, *A Student Study Guide to Principles of Engineering* (New York: John Wiley and Sons, 1982) 108 pp.
- James J. Duderstadt, Glenn F. Knoll, and George S. Springer, *An Instructor's Guide to Principles of Engineering* (New York: John Wiley & Sons, 1982), 210 pp.
- James J. Duderstadt, *Chapter 16: Preparing for the 21<sup>st</sup> Century*, in Howard H. Peckham, *The Making of the University of Michigan* (Ann Arbor, MI: University of Michigan Press, 1998) 58 pp
- James J. Duderstadt, *A University for the 21<sup>st</sup> Century* (Ann Arbor, MI: University of Michigan Press, 2000) 342 pp.
- James J. Duderstadt, *Intercollegiate Athletics and the American University: A University President's Perspective* (Ann Arbor, MI: University of Michigan Press, 2000) 280 pp
- James J. Duderstadt, *Positioning the University of Michigan for the New Millennium: A Case Study in University Transformation* (Ann Arbor, MI: Millennium Project, University of Michigan, 1999) 630 pp
- James J. Duderstadt (chair), *Researchers in the Digital Age* (Washington, D.C.: National Academy Press, 2001).
- James J. Duderstadt and Farris W. Womack, *The Future of the Public University in America: Beyond the Crossroads* (Baltimore: Johns Hopkins University Press, 2002), 236 pp.

- James J. Duderstadt, Daniel E. Atkins, and Douglas Van Houweling, *Higher Education Faces the Digital Age: Technology Issues and Strategies for American Colleges and Universities* (Praeger Publishers, Westport, CT; American Council on Education, Washington, 2002) 289 pp.
- James J. Duderstadt (chair), *Preparing for the Revolution: Information Technology and the Future of the Research University* (Washington, D.C.: National Academy Press, 2003).
- James J. Duderstadt, *On the Move: A Personal History of Michigan's College of Engineering in Modern Times* (Ann Arbor: Millennium Project, University of Michigan, 2003) 152 pp.
- James J. Duderstadt and Luc E. Weber, Eds, *Reinventing the Research University* (London: Economica, 2004) 254 pp.
- James J. Duderstadt (chair), *Engineering Research and America's Future: Meeting the Challenge of the Global Economy* (Washington, D.C.: National Academy Press, 2005).
- James J. Duderstadt, *The View from the Helm: Leading the American University during an Era of Change* (Ann Arbor, MI: University of Michigan Press, 2006) 400 pp.
- Luc Weber and James Duderstadt, eds., *Universities and Business: Partnering for the Knowledge Economy*, V Glion Colloquium (Paris: Economica: 2006)
- James J. Duderstadt, *Engineering for a Changing World: A Roadmap to the Future of Engineering Practice, Research, and Education* (Ann Arbor, MI: Millennium Project, University of Michigan, 2007).
- Luc Weber and James Duderstadt, eds., *The Globalization of Higher Education*, VI Glion Colloquium (Paris: Economica, 2008)
- James J. Duderstadt, *The Michigan Roadmap, Redux: A Call for Leadership* (Ann Arbor, MI: Millennium Project, University of Michigan, 2008).2008:
- James J. Duderstadt, chair, *Energy Discovery Innovation Institutes: A Step Toward America's Energy Sustainability*, Blueprint for American Prosperity (Washington: Brookings Institution, 2009)
- James J. Duderstadt, *Time To Get It Right: The View from Year Five* (Kansas City: Great Kansas City Community Foundation, 2009)
- Luc Weber and James Duderstadt, eds., *University Research for Innovation*, VII Glion Colloquium (Paris: Economica, 2010)
- James J. Duderstadt, *The Michigan Strategy Book: 1986 – 1996* (Ann Arbor, MI: Millennium Project, University of Michigan, 2010)
- James J. Duderstadt, *A Master Plan for Higher Education in the Midwest: A Roadmap to the Future of America's Heartland* (Chicago, Chicago Council on Global Affairs, 2011)
- James J. Duderstadt, *A Master Plan for Higher Education in the Midwest* (Ann Arbor: Millennium Project, 2010)
- James J. Duderstadt, *The Third Century: A Roadmap to the University of Michigan's Future* (Ann Arbor, MI: Millennium Project, 2011) James J. Duderstadt, *The Third Century: A Roadmap to the University of Michigan's Future* (Ann Arbor, MI: Millennium Project, 2011)

- Luc Weber and James Duderstadt, eds., *Global Sustainability and the Role of Universities*, VIII Glion Colloquium (Paris: *Economica*, 2011)
- Chad Holiday, James Duderstadt, *Research Universities and the Future of America: Ten Breakthrough Actions Vital to the Nation's Prosperity and Security*, Report of the National Academies Committee on the Future of the American Research University (Washington DC: National Academies Press, 2012)
- Luc Weber and James J. Duderstadt, *Preparing Universities for an Era of Change*, IX Glion Colloquium (Paris: *Economica*, 2013)
- James J. Duderstadt, *The Third Century: A Roadmap to the University of Michigan's Future*, 3<sup>rd</sup> Edition (Ann Arbor, MI: Millennium Project, 2014)
- James J. Duderstadt and Anne Duderstadt, *For the Love of Michigan: A Half Century of Serving the University of Michigan* (Ann, Arbor, MI: Millennium Project, 2014)
- James Duderstadt, *Tilting at Windmills: Battles Won, Lost, or Long Since Forgotten*, Case Studies in Science, Technology, and Public Policy (Ann, Arbor, MI: Millennium Project, 2014)
- Luc Weber and James Duderstadt, *Balancing External Responsibilities with University Priorities and Constraints*, X Glion Colloquium (Paris: *Economica*: 2015)
- James J. and Anne M. Duderstadt, *Charting the Course of the University of Michigan's Activities over the Past 50 Years* (Ann Arbor, MI: Millennium Project, 2016)
- James J. Duderstadt, *The Third Century: A Roadmap to the University of Michigan's Future*, Final Edition (Ann Arbor, MI: Millennium Project, 2016)
- James J. Duderstadt, *A 50 Year History of Social Diversity at the University of Michigan* (Ann Arbor, MI: Millennium Project, 2016)

#### Journal Publications:

Over 200 technical publications in the areas of nuclear reactor theory, radiation transport, statistical mechanics and kinetic theory, plasma physics, information technology, engineering education, science policy, and higher education policy

More information can be found on the website:

<http://milproj.dc.umich.edu/>