

John Sampson Toll
Curriculum Vitae

President, Washington College, Chestertown, Maryland
Chancellor Emeritus and Professor Physics, University of Maryland

PERSONAL DATA

UMCP Office 301-405-6051
Office of the President, Washington College
Chestertown, Maryland 21620; Tel: 410-778-7201

ACADEMIC BACKGROUND

Ph.D.	Princeton University	1952
B.S.	Yale University (with highest honors)	1944
Diploma	Putney School, Putney, Vermont	1941

PROFESSIONAL WORK EXPERIENCE

President, Washington College, Chestertown, Maryland, January 1, 1995--
Chancellor Emeritus, University of Maryland System, September 5, 1989--
Professor of Physics, University of Maryland at College Park, July 1, 1978--
President, Universities Research Association, December 1, 1989 - July 1, 1994
Chancellor, The University of Maryland System, July 1, 1988--September 4, 1989
President, University of Maryland, July 1, 1978 - June 30, 1988
President and Professor of Physics, State University of New York
at Stony Brook, September 1, 1965 - June 30, 1978
Professor and Chairman of the Department of Physics and Astronomy,
University of Maryland, January, 1953 - August 1965
Staff Member and Associate Director, Project Matterhorn, Forrestal
Research Center, Princeton University, 1951-1953
Theoretical Physicist, Los Alamos Scientific Laboratory,
Los Alamos, New Mexico, 1950-1951
Grantee, Friends of Elementary Particles Theoretical Research,
study in France, 1950
Assistant and Proctor Fellow, Princeton University, 1946-1949
Managing Editor and Acting Chairman, Yale Scientific Magazine,
1943-1944

Concurrent Positions

President, Washington Academy of Sciences, 1995-96
Visiting Professor, Nordic Institute of Theoretical Physics and Niels
Bohr Institute, Copenhagen, October 1975-January 1976
First Director of the State University of New York Chancellor's Panel
On University Purposes, January 1- August 31, 1970
John Simon Guggenheim Memorial Foundation Fellow, Institute for
Theoretical Physics of the University of Copenhagen, Denmark, and
the University of Lund, Sweden, 1958-1959

Honorary Degrees

Honorary Doctor of Science Degree, University of Maryland University
College, 1973
Honorary Doctor of Science Degree, University of Wroclaw, Poland, 1975
Honorary LL.D., Adelphi University, 1978
Honorary Doctor of Science Degree, Fudan Univ., People's Republic of
Of China, 1987
Honorary L.H.D., State University of New York at Stony Brook, 1990

Honorary Doctor of Laws, University of Maryland Eastern Shore, 1993

Special Awards

Benjamin Barge Prize in Mathematics, Yale University, 1943
George Beckwith Medal for Proficiency in Astronomy, Yale University,
1944
Outstanding Citizen Award, City of Denver Centennial, 1958
Outstanding Teacher, Men's League, University of Maryland, 1965
University of Maryland Sigma Xi Award for Scientific Achievement, 1965
National Golden Plate Award, American Academy of Achievement, 1968
Copernicus Medal from the Government of Poland, 1973
Stony Brook Foundation Award for Distinguished Contributions to
Education, 1979
Distinguished Service Award, State of Maryland, 1981
Washingtonian of the Year, 1985
Distinguished Member, Honor Society of Phi Kappa Phi, University of
Maryland Chapter, 1990
John Toll Chair in Physics at University of Maryland, College Park, 1991
International Landmark Award for significant contributions in building
relationships between Maryland and academic institutions in China
over four decades, University of Maryland, September 1994
Silver Medal of the Science University of Tokyo, October 1994
Yale University Science and Engineering Association, Award for
Distinguished Contributions, 1996
Chestertown Optimist Club Citizen of the Year 1997.
John Toll Chair at Washington College, 2000
Council for Advancement and Support of Education (CASE) District II
Chief Executive Leadership Award, 2000
Lifetime Achievement Award, Maryland Association for Higher Education,
2000
Newsday Long Islander of the Century, 2000
Phi Kappa Phi Distinguished Marylander for the Year 2000
Physics Building at University of Maryland College Park renamed "The
John S. Toll
Physics Building", May, 2001

Professional Service

Physics Consultant to the editorial staff, National Science Teachers
Association, 1957-61
Member, Advisory Committee on Science and Technology, Democratic
Advisory Council of the Democratic National Committee, 1959-60
United States delegate, head scientific secretariat, International
Conference on High Energy Physics, 1960
Member and Chairman, National Science Foundation's Advisory Panel for
Physics, 1964-67
Chairman, Research Advisory Committee on Electrophysics for the
National Aeronautics and Space Administration, 1961-65

Member-at-large, U.S. National Committee for the International Union of
Pure and Applied Physics, 1960-63
Consulting Editor of the Physics Series, Prentice-Hall, Inc. 1963
Member, Editorial Board of The Physics Teacher (A.A.P.T.), 1963
Member, Governor's Science Resources Advisory Board for the State of
Maryland, 1963-65
Member, Governor's Advisory Committee on Atomic Energy for the State of
New York, 1966-70

Member, Brookhaven Industrial Commission, 1966-78
Member, Commission on Plans and Objectives for Higher Education of the American Council on Education, 1966-69
Member, Committee on Support of Research in the Mathematical Sciences (COSRIMS) Panel on Undergraduate Education, Dartmouth College 1967
Member, New York State Advisory Council for the Advancement of Industrial Research and Development, 1971-78
Chairman of the Board, The Metropolitan Area Council for International Recreation, Culture and Lifelong Education, Inc. (C.I.R.C.L.E), 1974-78
Member, National Science Foundation Advisory Panel on Research Management, 1974-77
Member, Governor Carey's Task Force on Higher Education, 1975-78
Member, National Science Foundation Blue Ribbon Panel, March 16, 1979
Advisory Council of Presidents, Association of Governing Boards, Member 1980-88 (and Chairman 1983-84)
Member, Hall of Records Commission, 1979-1985
Executive Committee, National Association of Universities and Land-Grant Colleges, 1980-88
Member and Chairman, Advisory Council, Princeton University Plasma Physics Lab., 1979-87
Greater Baltimore Committee (Urban Affairs Council, Education Subcommittee, Public Policy Council), 1981-88
Washington/Baltimore Regional Association, Board of Directors, 1980-89
ACE Commission on Leadership Development and Academic Administration 1980-83
Defense Systems Management College, Board of Directors, 1982-88
AAU representative on Assembly of National Postsecondary Education Associations, 1982-86
University Programs Panel of Energy Research Advisory Board, U.S. Department of Energy, 1982-83
Member, Southern Regional Education Board, 1980-90
Member, Center for the Study of the Presidency, 1983-84
Member, State Board for Higher Education Advisory Committee, 1983-89
Member, Academic Advisory Panel to Committee on Exchanges, Central Intelligence Agency, 1984-90
Member, Maryland Governor's Chesapeake Bay Council, 1985
Member, Board of Directors of American Council on Education, 1985-89
Resource Committee, State Trade Policy Council, Governor's High Technology Roundtable, Maryland Department of Economic Development, 1986-89
National Association of State Universities and Land Grant Colleges (NASULGC), Marine Division Chairman, 1986
Member, Commission of Higher Education of the Middle States Association Of Colleges and Schools, 1987-88
Chairman, Advisory Panel on Technological Risks and Opportunities for U.S. Energy Supply and Demand, Office of Technology Assessment of the U.S. Congress, 1987-91
Board of Trustees, Aspen Institute for Humanities, 1987-89
Chairman, Advisory Panel on International Collaboration in Defense Technology, Office of Technology Assessment of the U.S. Congress, 1989-91
Mathematical Sciences Education Board, National Academy of Sciences, 1991-93
Member, National Sea Grant Review Panel, U.S. Dept. of Commerce, 1992-- (Chair, 1996-97)

Participant, Forum on Science in the National Interest, Office of Science and Technology Policy, Executive Office of the President, January 31-February 1, 1994
Member, NSF Committee of Visitors, Review of Instructional Material Development, July 28-29, 1994
Member, Committee on Financing Higher Education, National Association of Independent Colleges and Universities, 1996-98
Board Member, Hodson Scholarship Foundation, 1996--
Member, Board of Governors of the Chesapeake Bay Maritime Museum, 1996--
Member, Maryland Governor's Blue Ribbon Citizens Pfiesteria Action Commission, 1997
Member, Governing Council of the Wye Faculty Seminar, 1997--
Director, Eastern Shore Association of College Presidents, 1998--
Member, Board of Maryland Center for Agro-ecology, Inc., 1999--
Honorary Board Member, Radcliffe Creek School, 2000--
Member, Board of Mid-Shore Community Foundation, 2002--
Member, Higher Education Heritage Action Committee, 2002--

Community Service

Member and officer of various local and regional civic activities
Including Chairmanship of the Suffolk County Boy Scouts annual Boypower Dinner, currently Advisory Council Member of Boy Scouts of America Del-Mar-Va Council
Moderator of the Long Island Mid-Suffolk Businessmen's Action Group
Member of the Board of Trustees of the Museums at Stony Brook, 1975-78
Member, Board of Directors, Suffolk County Development Corporation, 1972-78
Member, Prince George's County Economic Development Advisory Committee 1979-89
Rotary Club of College Park, 1979-1989

Professional and Academic Memberships

Fellow: American Physical Society
Washington Academy of Sciences (President 1995-1996)
New York Academy of Sciences
American Association for the Advancement of Science
Member: Federation of American Scientists (National Chairman, 1961-62)
American Association of Physics Teachers
Philosophical Society of Washington
Association for Higher Education
National Science Teachers Association
Yale Engineering Association
National Association for the Advancement of Colored People (NAACP) (life member)
Phi Beta Kappa Association of the University of Maryland (Chairman, 1962-64)
Sigma Xi
Phi Kappa Phi (Distinguished Member, 1990)
Sigma Pi Sigma
Omicron Delta Kappa, Honorary Member
Cosmos Club, Washington, D.C., 1953---
Hamilton Street Club, Baltimore, 1979---
University Club, Washington, D.C., 1979---
University Club, New York, 1997---

Military Service

Commissioned Ensign in U.S. Navy, June 1944; Promoted to Lt. (jg);
Active duty, June 1944-August 1946.

Scientific Publications have appeared in referred journals in the
United States of America, Denmark, Italy, Japan, and Switzerland.

Presentations/Invited Talks

- "International Cooperation in Science: Lessons from the
Superconducting Supercollider Project", Sir Run Run Shaw
Distinguished Lecture, State
University of New York at Stony Brook, November 29, 1994.
- "Promotion of Relations between Universities and Industries", Japan
Universities Presidents Symposium, October 18, 1994.
- "Wheeler's Universe", Conference on Foundations of Physics, Banquet
Address, June 20, 1994.
- "The Search for Fundamental Particles and Theories, or, Why Eventually
We Need the Equivalent of the SSC", George Washington University
Physics Colloquium, February 8, 1994.
- "Now is a Critical Time for U.S. Science Policy", an Address to the
Washington Academy of Sciences, October 12, 1993.
- "Some current concerns in basic research", Welcoming address, 38th
Institute on Federal Funding, National Graduate University, Crystal
City, Virginia, September 27, 1993.
- Statement before the Subcommittee on Oversight and Investigations of
The Committee on Energy and Commerce, U.S. House of Representatives,
June 30, 1993
- "General Relativity At Maryland", Banquet Address, Misner-Brill
Symposium, May 28, 1993.
- "Review of the Search for the Most Fundamental Particles and
Interactions", APS/AAPT April Meeting 1993
- "The Value of Science", International Industrial Symposium of the
Supercollider, session--"Next Generation Science", May 7, 1993.
- "Physics at the SSC: The Modern Voyage of Discovery", Address at the
Opening Ceremony of the SSC Exhibit, Cannon House Office Building,
May 29, 1991.
- "The Changing Role of the Professor", American Association for the
Advancement of Science, 1991 Annual Meeting, Session 39-5, February
15, 1991.
- "Women, College & Science", Symposium, The Bryn Mawr School, Baltimore,
MD, January 16, 1991.
- Lecture to Soviet and American High School Students, July 30, 1990,
Toll Lounge, US/USSR Physics Student Exchange Program, (15
USSR students, 6 USSR professors; 16 US students, 6 US teachers
and professors; sponsored by AAPT)
- "The Endless Search for the Fundamental Forces, Particles and Laws of
Nature", an address to the Society of Physics Students, April 16, 1990
- "The partnership of universities and industry is giving renewed life to
research." Conference speech, Virginia Commonwealth University,
9/14/83.
- Testimony of Federation of American Scientists before the Committee on
Resolutions and Platform, 1964 Democratic National Convention, Aug.
17, 1964

Selected Publications

Some Pair-Theoretic Applications of the Dispersion Relation, with John A. Wheeler. Phys Rev. 81 654 (A), 1951.

Bases for an Estimate of Coherent Gamma-Ray Scattering, with John A. Wheeler. Phys Rev. 81: 635 (A), 1951.

Radiative Corrections to Forward Compton Scattering. Phys. Rev. 90: 372, 1953.

Extension of the Bohr-Peierls-Placzek Relation to Non-Zero Scattering Angles, with D. Wong. Bull. Am. Phys. Soc. Ser. II 1: 66, 1956.

Causality and the Dispersion Relation. I. Logical Foundations. Phys Rev. 104: 1760, 1956.

Causality and the Dispersion Relation: S-Matrix for the Maxwell Field, with D. Wong. Ann. Phys. (NY) 1: 97, 1957.

Dispersion Relations for the S-Matrix, with D. Wong and J.M. Knight. Bull. Am. Phys. Soc. Ser. II 2: 13, 1957.

Bound State Contribution to Dispersion Relations for the Scattering Matrix, with J. M. Knight. Bull. Am. Phys. Soc. Ser. II 2: 177, 1957.

Causality and the Dispersion Relation: S-Matrix for Klein-Gordon and Dirac Field, with J. M. Knight. Ann. Phys. (NY) 3: 49, 1958.

Connection of Phase Shift and Potential for the Dirac Equation, with F. Prats. Bull. Am. Phys. Soc. Ser. II 3: 36, 1958.

Formation of Discontinuities in Classical Non-Linear Electrodynamics, with M. Lutzky. Phys. Rev. 113: 1649, 1959.

Construction of the Dirac Equation Central Potential from Phase Shifts and Bound States, with F. Prats. Phys. Rev. 113: 363, 1959.

Formulation of the Causality Requirement, with J. G. Taylor. Nuovo Cimento 15: 389, 1960.

A New Reduction Technique in Quantum Field Theory. In Proc. of Tenth International Conference on High Energy Physics, 259, Interscience Publishers, NY, 1960.

Integral Representations for the Vacuum Expectation Value of Three Scalar Local Fields, with G. Källén. Helvetica Phys. Acta 33: 753, 1960.

Analyticity Domain of Vacuum Expectation Values. Chapter in Lectures on Field Theory and the Many-Body-Problem, 147-162, ed. E. Caianiello. Academic Press, NY, 1961.

On the Commutator of a Free Klein-Gordon Field Operator with an "Arbitrary" Heisenberg Field Operator, with Z. Fried and A. L. Licht. Bull. Am. Phys. Soc. Ser. II 6: 59, 1961.

Strict Localization in Quantum Field Theory, with J. M. Knight. Bull. Am. Phys. Soc. (following paper in J. Math. Phys. 2: 4, 1961).

The Two-Point Function and Generalized Free Fields, with A. L. Licht. Nuovo Cimento 21: 346, 1961.

Analyticity and Representations in Quantum Field Theory, Bull. Am. Phys. Soc. Ser. II 8: 393, 1963.

A Special Class of Feynman Integrals in 2-Dimensional Space Time, with G. Källén. J. Math. Phys.

Momentum-space Analyticity Properties of the Bergmann-Weil Integral for the Three-Point Function, with G. Källén, J. Math. Phys. 6: 12, 1965.

Necessity of Production Amplitudes in Quantum Field Theory, with F. Cheung. Phys Rev. 160: 5, 1967.

Two, Three, and Four Point Functions in Quantum Field Theory, reprint from "High-Energy Physics and Elementary Particles," International Atomic Energy Agency, Vienna, 1965.

Equivalence of Locality and Parolocality in Free Parafield Theory, with Huzihiro Araki and O. W. Greenberg. The Physical Review, Vol. 142, No. 4, 1017-1018, February 25, 1966.

Scattering Mode with Crossing Symmetry and Minimal Inelastic Effects, with F. Cheung. Phys. Rev. 173, 1791 (1968).

The Changing University: New Audiences for Learning, published in "Americans in Middle Years: Career Options and Educational Opportunities" (summary of proceedings of a conference sponsored by the State University of New York and the Fund for New Priorities in America, April, 1974).

Importance of the 1978 Special Sessions of the UN General Assembly Concerning Disarmament as an Opportunity for Pugwash Proposals, In Proc. of Twenty-Seventh Pugwash Conference on Science and World Affairs, "Peace and Security in a Changing World," Munich, F.R.G., August 24-29, 1977.

A Turning Point in Research and Graduate Education, Council of Graduate Schools in the U.S., Proceedings of Annual Meeting, Dec. 5-7, 1979.

Rewards to Stimulate Faculty Excellence, Phi Kappa Phi Journal, Spring, 1980, Vol. LX, No. 2, and Chronic, Vol. 14, No. 3, May-June, 1980.

Scholars, Dollars and the Future, Association of Governing Boards Reports, May-June, 1980, Vol. 22, No. 3.

Business, Society and the University: Challenges and Opportunities for the Eighties, Business Environment/Public Policy: The Field and its Future, 1981 Conference Papers, Edited by Edwin M. Epstein and Lee E. Preston.

Strategic Planning: An Increasing Priority for Colleges and Universities, Change Magazine, May/June, 1982.

Quality in Governance: A Presidential Perspective, Proceedings of the 62nd Annual Meeting of the North Carolina Association of Colleges and Universities, November 4-5, 1982.

Creative Expansion with Limited State Funding: Initiative, Responsiveness, Cooperation and Excellence should be Maryland Higher Education Goals for the Next Decade, MAHE JOURNAL, Volume 7, Fall, 1983.

Reshaping the Partnership of Universities and Industry, Research in Action, Virginia Commonwealth University, 9/14/83 (Conference & Industry/University Relationships in Science and Technology).

University of Maryland Forging Strong Ties with Industry, The Business Review, March 19-23, 1984.

The Super Collider Lessons for National Science Policy, COSMOS 1994, pp. 76-80.

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