

John C. Sutherland

Curriculum Vitae

Contact Information:

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Education:

1958 – 1962	B.S.	Physics	Georgia Institute of Technology
1962 – 1964	M.S.	Physics	Georgia Institute of Technology
1964 – 1967	Ph.D.	Physics	Georgia Institute of Technology & Oak Ridge National Laboratory
1969 – 1972	Postdoctoral.	Biophysics	University of California, Berkeley & Lawrence Berkeley Laboratory

Professional Experience:

1964 – 1967 School of Physics, Georgia Institute of Technology (James R. Stevenson Advisor) and Health Physics Division, Oak Ridge National Laboratory – Thesis Research – Optical Properties of Sodium and Potassium in the Vacuum Ultraviolet (Edward Arakawa's laboratory)

1967 – 1969 Walter Reed Army Institute of Research, Department of Molecular Biology – Fluorescence, phosphorescence and photochemistry of DNA-dye complexes (Captain, Medical Service Corps; Fredrick Hahn's laboratory)

1969 – 1972 University of California Berkeley and the Lawrence Berkeley National Laboratory, Laboratory of Chemical Biodynamics – Postdoctoral Fellow – Magnetic circular dichroism of porphyrins and heme proteins (Melvin Calvin's laboratory)

1972 – 1973 University of Southern California, Department of Chemistry – Near-infrared circular dichroism and magnetic circular dichroism of hemoglobin ([Philip Stephens' laboratory](#))

1973 – 1977 University of California, Irvine, College of Medicine, [Dept. of Physiology and Biophysics](#)

1973 – 1976	Assistant Professor
1976 – 1977	Associate Professor (Tenured)
1974 – 1977	Dept. of Molecular Biology and Biochemistry, School of Biological Sciences (joint appointment)

1977 – Brookhaven National Laboratory, Biology Department:

1977 – 1988	Biophysicist (Tenured)
1988 –	Senior Biophysicist (Tenured)
1979 –	Head, Synchrotron Ultraviolet User Facility
1998 –	National Synchrotron Light Source (joint appointment)

1994 – State University of New York at Stony Brook, Department of Physiology and Biophysics, School of Medicine, Adjunct Professor.

2001 – East Carolina University, Department of Physics (9 month appointment)

2001 –	Professor (Tenured)
2001 –	Chair

Awards, Fellowships and Honors:

- 1962 B.S. awarded with highest honors
- 1958 – 1965 [ΦΕΣ](#) (freshman), [ΣΠΣ](#) (physics) [ΦΚΦ](#)(senior) [ΤΒΠ](#) (engineering), [ΣΕ](#) (research); [Scabbard and Blade](#) (military)
- 1962 – 1965 National Defense Education Act, Predoctoral Fellowship
- 1965 – 1967 Oak Ridge Graduate Research Fellowship (Oak Ridge Associated Universities)
- 1969 – 1972 NIH Postdoctoral Fellowship
- 1976 – 1981 Research Career Development Award, National Cancer Institute
- 1986 Elected Fellow of the American Physical Society
- 1987 R&D–100 Award for invention of IMAGESystem, the first CCD electronic imaging system for recording fluorescence from electrophoretic gels
- 1997 R&D–100 Award for invention of the Fluorescence Omnilyzer, a single-photon counting system that records simultaneously the wavelength, time-of-arrival and polarization of each detected photon

Current Research Interests:

Biological Effects of Ionizing and Ultraviolet Radiation
Spectroscopy of Biological Molecules: Circular Dichroism and Time-resolved Fluorescence
Biomedical Applications of Synchrotron Radiation and Free Electron Lasers
Quantitative Analytical Electrophoresis and Electronic Imaging of Gels and Blots
Quantification of DNA Damage by Single-molecule Laser-induced Fluorescence

Society Memberships:

American Physical Society [Fellow] and member of the Biological Physics Subgroup
American Chemical Society
American Society for Photobiology
Biophysical Society: Molecular Biophysics and Fluorescence Spectroscopy Subgroups
Optical Society of America
Society of Photo-optical Instrumentation Engineers (SPIE)

Service (extra-departmental)**Brookhaven National Laboratory**

- 1988 Co-Organizer of Brookhaven Biology Symposium: Synchrotron Radiation in Structural Biology
- 1989 Co-Organizer of Brookhaven Biology Symposium: DNA Damage and Repair in Human Tissues
- 1990 Organized Session on "Biological Spectroscopy and UV Effects" at Workshop on Free Electron Lasers, Brookhaven National Laboratory
- 1991 Member Brookhaven National Laboratory Council (elected)
- 1993 – 1994 National Synchrotron Light Source Proposal Study Panel
- 1994 Organized BNL Workshop on "Raman Spectroscopy with Free-Electron Lasers"
- 1997 – 2000 Member, Brookhaven National Laboratory Council (elected)
1999-2000 Chairman (elected)
- 2000 – 2001 Member, Brookhaven National Laboratory Cyber Security Advisory Council
- 2000 – 2001 Member, Brookhaven Science Associates Distinguished Lectureship Committee
- 2001 – 2002 Member, Exec. Committee, National Synchrotron Light Source Users Org. (elected)
- 2002 – 2003 Member, Exec. Committee, National Synchrotron Light Source Users Org. (elected)
- 2002 Organizer, Workshop on X-ray Sources for Studies of Ultrafast Processes, annual National Synchrotron Light Source Users Meeting

East Carolina University

- 2001 [Oak Ridge Associated Universities](#) Council member
- 2003 [Southeastern Universities Research Association](#) [Jefferson Laboratory Committee](#)
- 2004 Chair, Harriot College Chairs Retreat Organizing Committee

University of California

- 1976 – 1977 U. C. Irvine Physics, Chemistry and Mathematics Review Coordinating Committee

Other Laboratories and Organizations

- 1988 Organizer, Session on Biological Spectroscopy at Los Alamos National Laboratory Workshop on Free Electron Lasers, Cloudcroft, NM
- 1999 Member, Biological Spectroscopy Review Panel, Biological Programme Joint Steering Committee (Daresbury Synchrotron Radiation Source, UK)
- 2000 – Member "Expert Panel," Centre for Protein Structure and Membrane Dynamics (UK).
- 2001 – Member, Free Electron Laser Program Advisory Committee, Thomas Jefferson National Accelerator Facility, Newport News, VA
- 2002 Invited Participant, SURA – UVA Workshop on Regional Synchrotron Radiation Sources, Charlottesville, VA.

Scientific Societies

- 1992 Organized Symposium on "Synchrotron Radiation in Photobiology," International Photobiology Congress, Kyoto, Japan
- 1994 Organized Symposium on "Biomedical Application of Free Electron Lasers" for American Society for Photobiology Annual Meeting
- 1996 Organized Symposium on "Applications of Synchrotron and Free-Electron Lasers in Photobiology," International Photobiology Congress, Vienna, Austria
- 1998 Co-Organizer SPIE Conference on Advances in Biomedical Spectroscopy
- 1999 Organizer of Workshop on "Medical and Environmental Effects of UVA and Visible Light," annual meeting of the American Society for Photobiology.
- 2000 Organizer, SPIE Conference on Biomedical Applications of Free Electron Lasers
- 2002 Organizer, SPIE Conference on Biomedical Applications of Free Electron Lasers II
- 2003 2006 [American Society for Photobiology Council](#) (elected)

Scientific Journals

- 1981 – 1984 Associate Editor, [Photochemistry and Photobiology](#)
- 1990 – 1995 Member of the Editorial Board of [Electrophoresis](#)

U. S. Government

- 1981 NIH Special Study Section (Site Visit)
- 1982 – 1983 NSF Advisory Panel on Biophysics
- 1983 NIH Special Study Section on Shared Instrumentation
- 1984 NIH Study Section: Biophysics and Biophysical Chemistry/A (ad hoc)
- 1985 Organizer, NSF sponsored U.S. – Japan Symposium on Photobiology and Biophysical Spectroscopy Using UV Synchrotron Radiation
- 1988 NIH Special Study Section (Site Visit)
- 1988 NIH Small Business Innovative Research Study Section
- 1989 NIH Small Business Innovative Research Study Section (Chairman)
- 1989 DOE Study Section (Human Genome Project)
- 1990 NIH Human Genome Special Study Section (Site Visit)
- 1990 NIH Small Business Innovative Research Study Section
- 1990 NIH Shared Instrumentation Study Section
- 1993 DOE Human Genome Project Review (Site Visit)
- 1994 NIH Division of Research Grants Study Section (Phosphor Imagers)
- 1996 NSF Advisory Panel on Academic Research Infrastructure Instrumentation
- 2000 Invited Participant, DOE/SURA Workshop on Scientific Frontiers with Accelerator-based Lasers, Washington D.C.
- 2002 Invited Participant, DOE Genome to Life Imaging Workshop, Charlotte, VA.