

## CURRICULUM VITAE: ANTHONY F. STARACE

(Revised 1 March 2008)

### PROFESSIONAL EXPERIENCE

- Academic Positions:** *George Holmes University Professor of Physics*, August 2001–  
*Professor of Physics*, September 1981–  
*Associate Professor of Physics*, September 1975 – August 1981  
*Assistant Professor of Physics*, January 1973 – August 1975  
*The University of Nebraska, Lincoln, Nebraska*  
Tenure granted September 1976
- Administrative Positions:** *Sr. Associate to the Vice Chancellor for Research*, September 2000–May 2001  
*Associate Dean for Science Research, College of Arts & Sciences*, July 2000–  
December 2001  
*Chairman, Department of Physics & Astronomy*, July 1984 - August 1995  
*Chairman, Graduate Committee, Department of Physics & Astronomy,*  
*The University of Nebraska, Lincoln, Nebraska*, 1978-1984
- Editorial Positions:** *Associate Editor, Reviews of Modern Physics*, January 1996–March 2006  
*Editorial Board, Physical Review A*, 1993–1999  
*Co-Editor, New Journal of Physics, Focus Issue on Attosecond Physics*, May  
2006 – February 2008. [New J. Phys. **10**, 025004 (2008)]
- Other Positions:**
- 05/07-06/07: *Professeur Invité*, Université Catholique de Louvain, Louvain la Neuve,  
Belgium.
- 10/06-12/06: *Guest Professor*, Max Planck Institut für Quantenoptik, Garching, Germany
- 9/95 - 12/95: *Visiting Fellow*, Institute for Theoretical Atomic and Molecular  
Physics, Harvard-Smithsonian Center for Astrophysics.
- 11/94: *National Science Council Foreign Scholar*, National Chiao Tung  
University, Hsinchu, Taiwan.
- 6/92: *Professeur Invité*, Université Pierre et Marie Curie, Paris, France.
- 1/92 – 8/92: *Visiting Fellow*, Joint Institute for Laboratory Astrophysics, The  
University of Colorado, Boulder, CO.
- 6/82 – 7/82: *Visiting Scientist*, Institute for Theoretical Physics,  
Universität Innsbruck, Austria

- 12/79 – 8/80: *Alexander von Humboldt Research Fellow*, Fakultät für Physik der Universität Freiburg, Freiburg im Breisgau, Germany.
- 8/77: *Visiting Scientist*, Institute of Theoretical Physics, Chalmers University of Technology, Gothenburg, Sweden.
- 8/73: *Visiting Scientist*, Department of Physics, Chalmers University of Technology, Gothenburg, Sweden.
- 9/71 – 12/72: *Research Associate*, Department of Physics, Imperial College, London, England.
- 1/68 – 8/71: *Research Assistant*, Department of Physics, The University of Chicago, Chicago, Illinois.

**EDUCATION:**

- 1966 - 1971: M.S., Physics, December 1967,  
Ph.D., Physics, December 1971,  
The University of Chicago  
*Thesis Title* : Many-Particle Effects in Atomic Photoabsorption  
*Thesis Supervisor* : Professor Ugo Fano
- 1962 - 1966: Columbia College of Columbia University  
A.B. cum laude, June 1966

**AWARDS & CITATIONS:**

1. Outstanding Research and Creative Activity (ORCA) Award, April 2005. [Sponsored by the University of Nebraska, four-campus system.]
2. Cited as an “Outstanding Referee” by the editors of the journals of the American Physical Society, February 2008.

**FELLOWSHIPS:**

- ITAMP Fellow*, Harvard-Smithsonian Center for Astrophysics, 1995.  
*JILA Visiting Fellow*, The University of Colorado–Boulder, 1/92 – 8/92.  
*Fulbright Fellowship*, University of Innsbruck, 9/84 - 1/85 (Declined).  
*Alexander von Humboldt Research Fellow*, 12/79 - 8/80.  
*Alfred P. Sloan Foundation Fellow*, 9/75 - 9/79.  
*National Science Foundation Graduate Fellow*, 9/69 - 8/71.  
*National Science Foundation Graduate Trainee*, 9/66 - 8/69.

**PROFESSIONAL SOCIETIES:**

1. Fellow, American Physical Society (1980–).
2. Fellow, American Association for the Advancement of Science (1997–).
3. Member, Society of Sigma Xi.
4. Member, Institute of Physics (London, England).

**MAJOR PROFESSIONAL ACTIVITIES:**

1. Scientific Advisory Board, Max-Planck-Institute on the Physics of Complex Systems, Dresden, Germany, 2007-2010.
2. Co-organizer, *Attosecond Science Workshop*, Kavli Institute for Theoretical Physics, University of California-Santa Barbara, 31 July – 15 September 2006.

3. President (2003-4), President-Elect (2002-3), Past-President (2004-5), University of Nebraska-Lincoln Chapter of Sigma Xi.
4. Chairman, Review Committee for Beamline 10.0.1 at the Advanced Light Source, Lawrence Berkeley National Laboratory, 14-16 August 2001.
5. Member, Committee of Visitors, Division of Physics, National Science Foundation (9-11 February 2000).
6. Chairman (1995-6), Member (1993-5), Advisory Board of the Institute for Theoretical Atomic and Molecular Physics, Harvard-Smithsonian Center for Astrophysics.
7. *Chairman* (1992-93), American Physical Society Task Force to Review *Reviews of Modern Physics*.
8. *Chairman* (1990-91), *Vice Chairman* (1989-90), *Past Chairman* (1991-92), American Physical Society Division of Atomic, Molecular, and Optical Physics.
9. *Chairman* (1986-1989), Theoretical Atomic, Molecular, and Optical Physics Community, American Physical Society Division of Atomic, Molecular, and Optical Physics.

**OTHER  
PROFESSIONAL  
ACTIVITIES:**

1. External Examiner, Institute of Theoretical Physics, Chalmers University of Technology, Gothenburg, Sweden, 1972, 1990.
2. Program Committee, VI International Conference on Vacuum Ultraviolet Radiation Physics, Charlottesville, Virginia, 2-6 June 1980.
3. Panel on Current Trends in Atomic Spectroscopy, Tucson, Arizona, 24-26 October 1982.
4. Executive Committee, APS Division of Electron and Atomic Physics, 1983-84.
5. Program Committee, APS Division of Electron and Atomic Physics, 1983-87.
6. Committee on Line Spectra of the Elements – Atomic Spectroscopy National Research Council, 1984-87.
7. Committee on Atomic and Molecular Sciences (CAMS), National Research Council, 1986-1989.
8. External Evaluator, Swedish Natural Science Research Council, 1986, 1990.
9. Organizer, International Track Physics Conference, Lincoln, NE, 18-20 October 1988 (held in honor of the retirement of Professor Robert Katz). Principal Investigator, DOE Grant for \$6,500 in support of the conference. Co-Editor, conference proceedings (comprising 17 invited papers), published as a special issue of the journal *Nuclear Tracks and Radiation Measurements*.
10. General Committee, International Conference on the Physics of Electronic and Atomic Collisions, 1989-1993.
11. Committee on Atomic, Molecular, and Optical Sciences (CAMOS), National Research Council, 1990-91.
12. APS Search Committee for the Editorship of *Physical Review A* (1991).
13. APS Committee on Investments (1994-97).

14. Program Committee, Gordon Conference on Atomic Physics, Wolfeboro, N.H., 1–5 July 1995.
15. Nominating Committee, APS Division of AMO Physics, Chair (1993-94), Member (1994-95), Member (1995-96).
16. Co-Chair, International Symposium on Two-Center Effects in Ion-Atom Collisions, Lincoln, NE, 13-14 May 1994.
17. International Scientific Committee, International Symposium on (e,2e), Double Photoionization and Related Topics, Vancouver, B.C., Canada, 3-5 August 1995.
18. APS Task Force to Review Physical Review A (1996-97).
19. Co-Organizer, Workshop on “Resonances and Fragmentation of Three-Body Systems,” Harvard-Smithsonian Institute for Theoretical Atomic and Molecular Physics, Cambridge, MA, 10-12 July 1997.
20. Member, Theory Panel, DOE Workshop on AMO Science, Chantilly, VA, 21-24 September 1997.
21. Chair, External Review Committee (with C.F. Hooper and C.E. Tanner) for the Physics Department of the University of Nevada-Reno, 4-6 October 1998.
22. Presenter, workshop on The Role of Theory in AMO Physics, Institute for Theoretical Atomic and Molecular Physics, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, 26-27 February 1999.
23. Review Panel, Complex Phenomena Program, U.S. Department of Energy, Gaithersburg, MD, 23-25 May 1999.
24. External Member, Review Team for the Department of Physics and Astronomy, Georgia State University, Atlanta, Georgia, 4-5 December 2000.
25. External Member, Review Team for the Department of Physics and Astronomy, The University of Kentucky, Lexington, KY, 25-26 January 2001.
26. Member, Review Panel, Theoretical AMO Physics Program, National Science Foundation, 26-28 February 2001.
27. Chair (2001), Member (2000), Nominations Committee, APS Division of AMO Physics
28. Member, Scientific Advisory Committee, Advanced Light Source, Lawrence Berkeley National Laboratory, 2001-
29. Member, Review Panel, Theoretical AMO Physics Program, National Science Foundation, 13-15 February 2002.
30. Member, Review Panel, Graduate Fellowship Program, National Science Foundation, 8-11 February 2003.
31. Member, Nebraska EPSCoR State Committee, 2004- .
32. Member, Review Panel, Theoretical AMO Physics Program, National Science Foundation, 1-4 February 2005.
33. International Advisory Committee, International Symposium on (e,2e), Double Photoionization, and Related Topics, Buenos Aires, Argentina, 28-30 July 2005.
34. Program Committee, 10<sup>th</sup> International Conference on Multiphoton Processes, Oxford, Québec, Canada, 9-14 October 2005.
35. Program Committee, APS DAMOP Meeting, Lincoln, NE, 17-21 May 2005.

36. Co-Chair, Local Committee, APS DAMOP Meeting, Lincoln, NE, 17-21 May 2005.
37. International Advisory Committee, *International Symposium on (e,2e), Double Photoionization and Related Topics*, Königstein, Germany, 1-4 August 2007.
38. Member, Local Committee, XXVI International Conference on Photonic, Electronic, and Atomic Collisions, Kalamazoo, MI, 22-28 July 2009.

**LISTED:**

1. American Men and Women of Science, 19th Edition.
2. Who's Who in the Midwest, 26th Edition.
3. Who's Who in Technology Today, 5th Edition.
4. Who's Who in Frontiers of Science and Technology, 2nd Edition.
5. Who's Who in Science and Engineering, 10th Edition.
6. Who's Who in the World, 24th Edition.
7. Who's Who in American Education, 7th Edition.
8. Who's Who in America, 63rd Edition.

## **ADMINISTRATIVE EXPERIENCE:**

*Chairman (1978–1984), Graduate Committee, Department of Physics and Astronomy, The University of Nebraska.*

Had responsibility for policies, admission, financial aid, testing, and advising of approximately 35 graduate students.

### Major accomplishments:

- Increased standards for admission of new students.
- Decreased time spent by students between admission and first Ph.D. qualifier attempt.
- Joined CUSPEA program.

*Chairman (1984–1995), Department of Physics and Astronomy, The University of Nebraska.*

Had responsibility for Department comprising 28 permanent faculty, having \$3 million annually in external support, 15 research/visiting/adjunct faculty, 10 postdoctoral research associates, 16 support staff, and approximately 65 graduate students and 60 undergraduate majors.

### Major accomplishments:

- Achieved faculty consensus to focus new faculty hires in only 4 research areas.
- Increased number of experimental faculty from 7 to 12.
- Renovated and reconfigured nearly all of the Department's space in 3 buildings to create 5 new laboratories for new experimental faculty.
- Initiated Department endowment funds and annual fund-raising campaign.
- Added Laboratory Manager position and supported development of multimedia introductory laboratory courses.
- Increased number of graduate students by more than 50%.
- Initiated review of undergraduate major program.
- Increased contacts with alumni and area high school physics teachers.

*Associate Dean for Science Research, College of Arts and Sciences (July 2000 – December 2001)*

Had responsibility for science research issues involving the departments of Biological Sciences, Chemistry, Computer Science and Engineering, Geosciences, Math and Statistics, and Physics and Astronomy. These issues included grant matching, coordinating interdisciplinary research among departments and/or other colleges, research infrastructure and space matters, etc.

*Senior Associate to the Vice Chancellor for Research (September 2000 – May 2001)*

Had responsibility for coordinating and fostering multidisciplinary research in the areas of nanoscience and nanotechnology.