## DENNIS LEE SCHATZ (see additional information at www.dennisschatz.org)

## **EDUCATION**

B.S. with honors, in Physics and Astronomy, U of Wisconsin, Madison, 1969 M.S. in Astronomy, U of California, Berkeley, 1972 Graduate Work, Science Education, U of Washington, Seattle, 1977-78

### **EMPLOYMENT**

8/18 to present	Senior Fellow, Institute for Learning Innovation
3/15 – 1/19	Field Editor for <i>Connected Science Learning</i> , a journal of NSTA and ASTC
3/14 to present	Senior Advisor, Pacific Science Center
3/11 to 3/15	On assignment to NSF as Program Director in the Division of Research on Learning in Formal and Informal Environments
11/11 to 3/14	Lifelong Learning Cluster Coordinator at the National Science Foundation (NSF) in the Division of Research on Learning in Formal and Informal Environments
9/09 to 9/17	Adjunct professor in the University of Washington's Museology (Museum Studies) Department (teach courses on translating learning theory into museum practice and advise students on their thesis projects)
6/08 to 11/11	Senior Vice President for Strategic Programs and Co-Director of Washington State LASER (Leadership and Assistance for Science Education Reform), Pacific Science Center, Seattle, Washington
9/04 - 6/08	Vice President for Education and Co-Director of Washington State LASER, Pacific Science Center
3/02 - 9/04	Vice President for Education and Exhibits and Co-Director of Washington State LASER, Pacific Science Center
12/91 - 3/02	Associate Director for Education, Pacific Science Center
1/85 - 12/91	Associate Director of Program Development, Pacific Science Center
6/80 - 1/85	Director of Science, Pacific Science Center

6/77 - 6/80	Director of Regional Astronomy Education Laboratory, Pacific Science Center
1/74 - 6/77	Associate Director of Astronomy and Physics Education plus Assistant Director, Science Activities for the Visually Impaired (SAVI), Lawrence Hall of Science, University of California, Berkeley

# SELECTED PROFESSIONAL ACTIVITIES/RECOGNITIONS

2018 – 2021	President-Elect (2018-19), President (2019-2020), Retiring President (2020-2021) of the National Science Teachers Association (NSTA)
2017 – 2018	Member of Smithsonian Science Education Center Board of Advisors
2017	Asteroid 25232 was renamed Asteroid Schatz by the International Astronomical Union IAU) in recognition of leadership in astronomy and science education.
2016 – 2018	Member of the National Academies Teacher Advisory Council
2016 – 2019	Member of nominating committee of Education Section of AAAS (American Association for the Advancement of Science)
2015	Designated a Fellow of the Sydney University International House – one of only three non-Australians to receive the award in the 44 year history of the House
2015 – 2018	Informal Science Director on National Science Teachers Association (NSTA) Board of Directors
2014 – present	Board Member of BSCS Learning Sciences, an organization that develops science curricula and provides professional development for K-12 educators
2014	Presented with the 2014 Robert-Klumpke Award by the Astronomical Society of the Pacific for lifetime achievement in astronomy education and communication to the public
2011 – 2013	Field reviewer of the Next Generation Science Standards

2011 – present	Contributing Editor for Classroom Fieldtrips curriculum units for elementary and middle schools produced by becker & mayer, ltd.
2010 – 2011	Co-chair of Seattle City Club Education Taskforce
2010	Member of five-person design team to develop the Earth and Space Science Frameworks for the National Research Council – the first step in developing the Next Generation Science Standards
2010	Invited researcher and lecturer at the University of Queensland, Australia
2009 – present	Seminar leader at museums and conferences internationally regarding translating learning theory into museum practice
2009	Advisor to National Research Council's Science Ambassador's Program, a team of energy experts who work with local and regional communities in the United States to improve the public's understanding of energy
2009	Resolutions passed in both houses of the Washington State Legislature honoring his selection as the 2009 NSTA Faraday Science Communicator
2009	Presented with the 2009 Faraday Science Communicator award by the National Science Teachers Association (NSTA)
2008 – 2009	Leadership Member of the Washington State Science Standards Revision Team and member of State's Science Education Strategic Planning Committee
2007 – present	Create and publish <i>PacSci-Doku</i> , a bi-weekly science-based word puzzle based on Sudoku. It is published in the Pacific Science Center eNewsletter (click <a href="https://example.com/here">here</a> to find the current edition)
2007 – 2011	Member of Seattle City Club Program Committee
2007 – 2009	Member of National Research Council (NRC) Expert Oversight Panel to assist in the development of a practioner's book (Surrounded by Science) based on the NRC study, Learning Science in Informal Environments

2007	Washington State LASER selected to be featured in <i>Exemplary Science in Informal Education Settings</i> , a NSTA publication featuring standards-based success stories
2006	Named an ASTC (Association of Science-Technology Centers) Fellow for lifetime achievement in service to the field and furthering the public's understanding of science
2006	Resolutions passed in both houses of the Washington State Legislature honoring his outstanding achievements in science education reform
2006	Fossil Detective Woolly Mammoth received iParenting Media award.
2006 – 2011	Washington Science Teachers Association Board Member
2005 – present	Member of AAAS' Science Books and Films (SB&F) expert panel to select the best young adult science book each year
2005 -2007	Member of NSTA Nominations Committee
2005	Awarded Distinguished Service to Science Education award by the National Science Teachers Association (NSTA)
2004 – 2008	Founding member of Leading Edge Awards Committee for Association of Science-Technology Centers (ASTC) – Chair from 2004 to 2007
2004	Profiled in feature article, <u>Seattle Child</u> , Spring 2004
2003 2004	Program Chair for NSTA Regional Conference, Seattle, Washington November 18 – 20, 2004
2004 - Present	Invited lecturer and directed studies presenter at the National Youth Science Camp
2004	Member of National Review Committee of the National Youth Science Camp
2003	Uncover A T.rex received 2003 Parents Choice Award

2003 – 2008	Advisor for Assessing Science Knowledge (ASK), a curriculum assessment research project funded by NSF and led by FOSS staff at the Lawrence Hall of Science
2002 – 2005	Member of ReDiscover Advisory Board, an international board of the Wellcomme Trust and Millennium Fund to revitalize science centers in the United Kingdom
2002 - 2008	Member of NSRC (National Science Resources Center) Board of Directors – a center jointly run by The Smithsonian and The National Academies
2001 - 2002	Member of Task Force to review NASA Office of Space Science (OSS) Education programs
2000	Member of panel for 10-year review of Hubble Space Telescope's Education Outreach Program
1997 - 2008	Member of Astronomical Society of the Pacific Board of Directors (President 2005-2007)
1998 - 2004	Member of Association of Science-Technology Centers (ASTC) Professional Development Committee
1998	General Chair of Regional National Science Teachers Association Area Conference. October 29 – 31, 1998
1997 - 2002	Member of Education and Public Outreach Advisory Committee for NASA's SOFIA Project
1996	Awarded the 1996 Distinguished Informal Science Educator by the National Science Teachers Association
1995 - 1996	Member of NASA Office of Space Science (OSS) Education Task Force
1994 - 1997	Representative for science centers on the Institute of Museum Services (IMS) Problem Review Panel
1994 - 1998	Chair of Association of Science-Technology Centers (ASTC) Education Committee
1994	Program Chair for NSTA Regional Conference, Portland, Oregon, October 13 - 15, 1994

1990 - 1995	Member of ASTC Program Committee
1987	General Chair of ASTC National Conference, Seattle, Washington
1983 - 1986	Member of the NSTA Special Education Advisory Board (Chairman in 1985/86)
1981 - 1982	Member of NSTA Awards and Recognition Committee (Chairman in 1982)
1980 - 2002	Chair, V. M. Slipher Committee of the National Academy of Sciences
1980 - 1983	Member of organizing committee and charter board member for Association of Astronomy Educators (President in 1982/83)
1980	Presented with a Ohaus Exemplary Science Education Program award from the National Science Teachers Association
SELECTED PROGRAM LEADERSHIP ACTIVITIES	
2018 – present	Co-PI of NSF funded On-the-Spot Assessment project to develop assessment strategies for scientist to embed in public presentations to assess how well the audience is understanding them.
2017 – present	PI of NSF funded Broader Impact Design (BID) Partnerships award to develop sustained institutional relationships between universities and ISE institutions regarding the delivery of broader impact activities provided by research scientists.
2015 - present	PI of NSF funded project to develop a Professional Learning Framework for informal science education practitioners.
2015 – present	Member of leadership group for the STEM Ambassador Program, a NSF funded project to have research scientists engage with hard-to-reach public audiences (e.g. prison inmates, members of refugee communities)
2007 - 2011	Director of <i>Portal to the Public</i> , a National Science Foundation funded project to build effective models to convey current science research through face-to-face interactions between research scientists and public

audiences.

2004 - 2009	Program developer and workshop presenter for <i>Astronomy from the Ground Up</i> (AFGU), a NSF funded project at the Astronomical Society of the Pacific, which develops a professional learning community at small nature centers and science centers around the topic of astronomy.
2002 - 2006	Principal Investigator of <i>The Space Spot</i> , a National Science Foundation funded project to develop an exhibit for display in shopping malls to attract an audience that does not normally attend museums and/or is not highly interested in science.
2002 – 2005	Led development of the Education Outreach materials (funded by NSF and NASA) that accompany the four-part NOVA Television series dealing with Origins – of the universe, the solar system, Earth and life on Earth.
1999 – 2003	Program developer for <i>Family ASTRO</i> , a NSF funded extension of the <i>Project ASTRO</i> national network, which developed family-based astronomy activities for use by <i>Project ASTRO</i> partnerships.
1998 – Present	Co-Director of <i>Washington State LASER</i> (Leadership and Assistance for Science Education Reform), a statewide effort to implement K-12 science education reform in 295 school districts statewide.
1996 - 2000	Creator of <i>Other Worlds! Other Beings?</i> exhibit concept, a NSF funded, nationally touring exhibit.
1995	Organized international review session concerning science centers roles in supporting the formal school setting - for the First World Science Center Congress, Helsinki, Finland
1995	Featured presenter at Astronomical Society of the Pacific Astronomy Education Symposium - Topic: Implications of the National Science Education Standards on the Teaching of Astronomy.
1995	Prepared "Program Bible" for <i>Magic School Bus</i> segment concerning lunar phases.
1994 - 1999	Principle Investigator for <i>Community Leadership Project</i> , National Science Foundation funded project to develop science teaching capabilities of community center staff in centers that serve individuals traditionally under-represented in science.
1994 - 2000	Principal Investigator for STAFF Leadership for Rural School

	<i>Districts</i> project, a national Science Foundation funded project to bring about long term, district wide improvement in science learning in the districts.
1992 - Present	Workshop Leader and member of advisory board for <i>Project ASTRO</i> , a National Science Foundation funded project at the Astronomical Society of the Pacific that develops ongoing partnerships between astronomers and classroom teachers.
1992 - 1993	Astronomy and education expert reviewer of the television version
1990 - 1993	of <i>The Magic School Bus</i> tour of the Solar System.  Co-developer of astronomy curriculum ( <u>Astro-Adventures</u> ) for Space Grant program at the University of Washington. Revised in 2002.
1989 - 1997	Principal Investigator of <i>Science Carnival</i> and <i>Science Carnival Consortium</i> , two National Science Foundation funded projects. Science Carnival project designed and toured a science center in tents to shopping malls, parks and county fairs in Washington, Idaho and Montana. Second project provided copies of Science Carnival exhibits and education programs, plus staff development for 15 museums across the country.
1989 - 1991	Co-developer of astronomy education materials for <i>Mission to Mars</i> exhibit, a National Science Foundation funded exhibit and space travel simulation.
1988	United States representative at the International Seminar on Science Education and Science Centres, Helsinki, Finland.
1987 - 2001	Project Leader for development and travel of robotic dinosaur exhibit ( <i>Dinosaurs: A Journey Through Time</i> ) and robotic whale exhibit ( <i>Whales; Giants of the Deep</i> ).
1987	Leader of Indo-U.S. workshop on "New Approaches to Planetarium Education," Calcutta, India.
1977 - Present	Leader of teacher workshops for the Astronomical Society of the Pacific.

### **MEMBERSHIPS**

National Science Teachers Association

Washington Science Teachers Association
Society of Children's Book Writers and Illustrators (National and State Chapters)
National Association of Science Writers (plus the Northwest chapter)
American Association for the Advancement of Science
Astronomical Society of the Pacific

#### SELECTED PUBLICATIONS

<u>Uncover History: Dinosaurs</u>, Schatz, D. Quarto Publishing, 2018

When the Sun Goes Dark, Fraknoi A., Schatz, D. NSTA Press, 2017

Solar Science, Schatz, D., Fraknoi, A., NSTA Press, 2015

<u>Portal to the Public Implementation Manual,</u> Schatz, D., Russell, L, Leigh, K. (primary authors), Pacific Science Center, 2011

<u>Custom Creatures, Inc.</u> (A K-8 Science Curriculum Unit), Schatz, D., Contributing Author, becker & mayer Educational Initiatives, 2011

<u>Crimes and Clues</u> (A K-8 Science Curriculum Unit), Schatz, D., Contributing Author, becker & mayer Educational Initiatives, 2011

<u>Dinosaur Hunters</u> (A K-8 Science Curriculum Unit), Schatz, D., Contributing Author, becker & mayer Educational Initiatives, 2011

Amazing Squishy T.rex, Schatz, D, SmartLab, 2011

<u>The Path Forward: Lessons Learned and Recommendations from the Portal to the Public Second Synthesis Meeting, Schatz, D. and Russell, L. Pacific Science Center 2010</u>

Look Inside A T.rex, Schatz, D, Scholastic, 2010

Dinosaur Stereobook, Schatz, D, Chronicle Books, 2009

<u>Face to Face with Scientists: Exploring the Features of Face-to-Face Interactions between Scientists and Public Audiences</u>, Schatz, D. and Russell, L, Pacific Science Center 2008

World of Inventors: Thomas Edison, Schatz, D, Silver Dolphin, 2008

Fossil Detective: Neanderthal, Schatz, D, several foreign publishers, 2008

Can an Informal Science Institution Really Play the Key Role in K–12 Science Education Reform?, Schatz, D, Exemplary Science in Informal Education Settings, NSTA Press, 2007

<u>Handbook for Small Science Centers</u>, Editors: Yao, Cynthia; Dierking, Lynn; Anderson, Peter; Schatz, Dennis; Wolf, Sarah, AltaMira Press, 2006 (Book also includes article by me: *The Why and How of Doing Outreach Programming: Fulfilling My Fantasy*)

My Essential Booklist for Museum Educators Wearing Many Hats, Schatz, D, <u>Journal of Museum Education</u>: The Professional Relevance of Museum Educators, Fall 2006

Fossil Detective: T.rex, Schatz, D, Silver Dolphin, 2005

Fossil Detective: Triceratops, Schatz, D, Silver Dolphin, 2005

Fossil Detective: Woolly Mammoth, Schatz, D, Silver Dolphin, 2005

Walking T.rex Skeleton, Schatz, D, Scholastic, 2005

Stars and Planets, Schatz, D. SmartLab, 2004

Totally Sea Creatures, Schatz, D, Silver Dolphin, 2003

Astro-Adventures II, Schatz, D. and Allan, P., Pacific Science Center 2003

<u>Astro-Adventures: An Upper Elementary Curriculum</u>, Allan, P. and Schatz, D., Pacific Science Center 2002

<u>Uncover T. rex</u>, Schatz, D, Silver Dolphin, 2002 – Awarded 2003 Parent's Choice Award. Now available in 21 languages

Totally Prehistoric Beasts, Schatz, D, Silver Dolphin, 2002

Totally Reptiles, Schatz, D, Silver Dolphin, 2001

Totally Aliens, Schatz, D, Silver Dolphin, 2001

Totally Dinosaurs, Schatz, D., Silver Dolphin, 2000

Totally Bugs, Schatz, D., Silver Dolphin, 2000

<u>More Universe At Your Fingertips</u>, Edited: Andrew Fraknoi and Dennis Schatz, Astronomical Society of the Pacific, 2000

<u>Collaboration: Critical Criteria for Success</u>, Schatz, D. et al, Association of Science-Technology Centers, 1997

Science Center Know-How, Schatz, D. et al, Association of Science-Technology Centers, 1996

Build Your Own Bugs, Schatz, D., Andrews and McMeel, 1995

*Making A Comet,* Odyssey, February 1995 (This article provides a recipe for creating a comet in the classroom or home, a recipe I created in 1985 and is now featured in hundreds of documents and on electronic bulletin boards on the internet)

Build Your Own Dinosaurs, Schatz, D., Andrews and McMeel, 1994

Astro Adventures, Schatz, D. and D. Cooper, Pacific Science Center, 1994

Astronomy Activity Book, Schatz, Dennis, Simon & Schuster, 1991

<u>Planetarium Educators Workshop Guide</u>, Lowery, L., A. Friedman, C. Sneider, D. Schatz, S. Pulos, International Planetarium Publications, 1989 (First Edition, 1979)

<u>Dinosaurs: A Journey Through Time, A Children's Activity Book with Adult Teaching Guide,</u> Schatz, Dennis, Pacific Science Center, 1987

The Return of the Comet, An Activity Book for Skywatchers from 9-14 with Parent/ Teacher Guide, Schatz, Dennis, Pacific Science Center, 1985

The Return of the Comet, Science and Children, November 1985

<u>Effective Astronomy Teaching and Student Reasoning Ability</u>, Schatz, Dennis, A. Fraknoi, R. Robbins, C. Smith, University of California, Lawrence Hall of Science, 1978. (Outcome of a grant from the National Science Foundation)

*Effective Astronomy Teaching: Intellectual Development and Its Implications,* Mercury, Vol. 5, No. 4, pp. 6 - 13, July/August 1976 (with A. Lawson).