

CURRENT APPOINTMENTS (active)

2014	Research Professor	UMass Boston	Computer Science
2015	Visiting Research Scientist	Massachusetts Institute of Technology	MIT STEP
2014	Visiting Fellow	Harvard Graduate School of Education	Mind Brain Education
2014	Board of Advisors	Boston Children's Museum	

PAST APPOINTMENTS

1979-2014 **Harvard-Smithsonian Center for Astrophysics (CfA)** Cambridge, MA

2005-2014: Director, Laboratory for Visual Learning
2010-2012: George E. Burch Fellow in Theoretic Medicine and Affiliated Sciences
1990-2014: Exec Director, Science Media Group, Science Education Department
1983-1990: co-Director (with M. Kurtz), Wolbach Image Processing Laboratory
1979-1983: Research Scientist, Radio Astronomy and Astrophysics

EDUCATION

Massachusetts Institute of Technology	Physics	PhD	1979
City College of New York	Physics	BS	1974

CURRENT INTERESTS AND ACTIVITIES

Schneps investigates how differences in the brain (whether inherited or developed through learning) alter insights and capabilities people bring to STEM. An important focus of this research investigates how technology can foster the exchange of information between people and machines, given wide ranging differences in the neurology of individuals (including dyslexia, ADHD, and autism spectrum disorders). An important example of this seeks to reengineer the technology we use for reading, to make this process more efficient and effective for all. As a scientist with dyslexia, Schneps serves as a public advocate for people with dyslexia and ADHD.

PRIOR AREAS OF FOCUS

STEM Education **Founding member of the Science Education Dept at CfA.** Investigations focused on how cultural and personal learning ("misconceptions") interacts with learning and understanding in STEM. Created award-winning programs A PRIVATE UNIVERSE (with Sadler) and MINDS of OUR OWN.

Ed Media **Founding director of the Science Media Group at CfA.** PI of over \$30M in funded science education programs that have produced more than 350 hours of television media, and numerous major online interactive STEM education resources. Ran Annenberg/CPB Channel.

Astrophysics **Radio astronomer.** Schneps conducted original research in star-formation, and using a technique known as Very Long Baseline Interferometry, and helped devise techniques used to measure the galactic distance scale.

SELECTED GRANTS (by end date)

2015	Neurotechnologies...Multimedia Learning	NSF (anticipated): U of FL Gainesville	\$760,000
2014	Dyslexia & STEM (various)	NSF HRD 0726032,0930962,1131039	\$710,299
2014	Dyslexia Research Smithsonian	Youth Access Grant YAG12	\$200,000
2014	Chemistry: Challenges and Solutions	Annenberg Foundation	\$2,000,000

2012	Neuroscience & the Classroom	Annenberg Foundation	\$985,000
2011	Physics for the 21st Century	Annenberg Foundation	\$2,027,071
2008	Annenberg/CPB Channel	Annenberg Foundation	\$11,396,898
2007	The Habitable Planet	Annenberg Foundation	\$1,999,925
2005	Essential Science for Teachers	Annenberg Foundation	\$3,635,865
2002	Harvard-Smithsonian Digital Video Library	NSF DUE 0226354	\$929,992
2000	Interactive Video Workshops (various)	Annenberg Foundation	\$1,200,216
2000	Private Universe Project Mathematics	Annenberg Foundation	\$1,573,345
1998	Case Studies in Science Education	Annenberg Foundation	\$1,104,850
1998	Interactive Children's TV Series	NSF DRL 9627171	\$1,620,565
1992	Private Universe Project	Annenberg Foundation	\$2,720,718
1992	Misconceptions Video Project (MVP)	NSF DRL 9155229	\$1,165,536
1989	A Private Universe: Project STAR	NSF DRL 8550297,8850424	\$1,671,216

SELECTED PUBLICATIONS

- Schneps, Matthew H. 2014 "The Advantages of Dyslexia," *Scientific American*, Mind Matters
<http://www.scientificamerican.com/article/the-advantages-of-dyslexia/>
- Schneps, MH, Ruel, J, Sonnert, G, Dussault, M, Griffin, M, & Sadler, PM. (2014). Conceptualizing astronomical scale: Virtual simulations on handheld tablet computers reverse misconceptions. *Computers & Education*, 70, 269–280.
- Schneps, MH, Thomson, JM, Chen, C, Sonnert, G, & Pomplun, M, 2013. "E-readers are more effective than paper for some with dyslexia," *PLoS ONE*, 8(9): e75634.
- Schneps, MH, Thomson, JM, Sonnert, G, Pomplun, M, Chen, C, & Heffner-Wong, A. (2013). Shorter Lines Facilitate Reading in Those Who Struggle. *PLoS ONE*, 8(8), e71161.
- Speiser, R, Schneps, MH, Heffner-Wong, A, Miller, JL, & Sonnert, G. 2012. "Why is paper-and-pencil multiplication difficult for many people?" *Journal of Mathematical Behavior*, 31 (4).
- Schneps, MH, Brockmole, JR, Sonnert, G, & Pomplun, M. (2012). History of Reading Struggles Linked to Enhanced Learning in Low Spatial Frequency Scenes. *PLoS ONE*, 7(4), e35724.
- Schneps, MH, O’Keeffe, JK, Heffner-Wong, A, & Gerhard, S. 2010. "Using Technology to Support STEM Reading." *Journal of Special Education Technology* 25 (3): 21–32.
- Schneps, MH, Griswold, A, Finkelstein, N, McLeod, M, & Schrag, D. 2010. "Using Video to Build Learning Contexts Online." *Science* 328 (5982): 1119.
- Grossman, RB, Schneps, MH, & Tager-Flusberg, H. 2009. "Slipped lips: onset asynchrony detection of auditory-visual language in autism." *Journal of child psychology and psychiatry, and allied disciplines* 50 (4) (April): 491–497.
- Schneps, MH, Rose, LT, & Fischer, KW. 2007. "Visual learning and the brain: Implications for dyslexia." *Mind, Brain, and Education* 1 (3): 128–139.
- Schneps, MH, Mintzes, J, Sahiner, A, Finkelstein, N et al., 1996, "Minds of Our Own," TV Series, PBS, Annenberg Media, Washington: DC at <http://www.learner.org/resources/series29.html>
- Schneps, MH & Sadler, P, 1987/1989. "A Private Universe." video 20 min. Annenberg Media: Washington, DC
- Reid, MJ, Schneps, MH, Moran, JM, Gwinn, CR, Genzel, R, Downes, D, & Roennaeng, B. 1988. "The

distance to the center of the Galaxy - H₂O maser proper motions in Sagittarius B2(N)."
Astrophysical Journal 330 (July 1): 809.

Genzel, R, D Downes, M H Schneps, M J Reid, J M Moran, L R Kogan, V I Kostenko, L I Matveenko, and B Ronnang. 1981. "Proper motions and distances of H₂O maser sources. II - W51 MAIN."
Astrophysical Journal 247: 1039.

Schneps, MH, Haschick, A, Wright, E & Barrett, A. 1981. "The stellar wind bubble NGC 2359 .1. CO, VLA, and optical observations." *Astrophysical Journal* 243 (1): 184.

Schneps, MH, Lane, AP, Downes, D, Moran, JM, Genzel, R, & Reid, MJ. 1981. "Proper motions and distances of H₂O maser sources. III - W51NORTH." *Astrophysical Journal* 249: 124.

Schneps, M H, P T P Ho, and A H Barrett. 1980. "The formation of elephant-trunk globules in the Rosette nebula - CO observations." *Astrophysical Journal* 240: 84.

MAJOR NATIONAL ONLINE RESOURCES

Schneps, M, Nemes, G., Schumann, N., Deutsch, F. (2015), VA Span, iTunes app,
<https://itunes.apple.com/us/app/vaspan/id929088589?mt=8>

Schneps, M, Scott, J, Aizuss, A, Heffner-Wong, A, & Nemes, G. (2014). Smithsonian IncTech Olympiad. Smithsonian Institution. <http://inctech.labvislearn.org>

Griswold, A., Schneps, MH, Morse, C. 2014, "Chemistry for the 21st Century," Annenberg Media Collections at <http://www.learner.org/courses/chemistry/>

Schneps, MH, & Heffner-Wong, A. (2013). ReadEasy (e-readers for dyslexia). Smithsonian Institution. <http://readeasy.labvislearn.org/>

Schneps, MH, Fischer, KW, Immordino-Yang, MH, Blodget, A. 2011. "Neuroscience and the Classroom: Making Connections." Annenberg Media Collections at <http://www.learner.org/courses/neuroscience/>

Schneps, MH, Stubbs, C, Griswold, A (2010), "Physics for the 21st century," Annenberg Media Collections at <http://www.learner.org/courses/physics/>

Schneps, M.H., D. Schrag, A. Griswold, (2007), "The habitable planet," (environmental science) Annenberg Media Collections at <http://www.learner.org/courses/envsci/>

Schneps, M.H., Benjamin, O., A. Griswold, Roseman, J.E., Molina, F., Willard, F. (2005), "Harvard-Smithsonian Center for Astrophysics Digital Video Library," K-12 multimedia resource: <http://www.hsdvl.org/>

Schneps, MH, Griswold, A, Maher, CA (2000), "Private universe in mathematics," Annenberg Media Collections at <http://www.learner.org/resources/series120.html>

SELECTED HONORS/AWARDS

2011	Hamilton Life Achievement Award	Hamilton Wheeler School (Providence, RI)	
2010	George E. Burch Fellowship	Theoretic Medicine and Affiliated Sciences	
2010	AAAS SCIENCE	Science Prize for Online Educational Resources	
2005	Davey Award (Video)	POVme	Gold
1998	Worldfest-Houston Film & Video	Can We Believe Our Eyes	Gold
1998	National Educational Film and Video	Can We Believe Our Eyes,	Gold Apple
1998	INTERCOM	Can We Believe Our Eyes	Gold Plaque
1992	National Educational Film and Video	A Light Dose of Murder	Gold Apple

1990	American Film and Video Festival	A Private Universe	Blue Ribbon
1989	Chicago International Film Festival	A Private Universe	Gold Award
1988	Houston International Film Festival	A Private Universe	Gold Award
1974	Simon Sonkin Award for Excellence and Originality in Research		CCNY