

DAVID SHOEMAKER

Senior Research Scientist

Kavli Institute, Massachusetts Institute of Technology

EDUCATION

Diplôme de Doctorat, Université de Paris-Sud 1987

Contributions à l'étude de la détection interférométrique des ondes de gravitation

Subject: general systems analysis of interferometric gravitational wave detectors; specific conceptions, analysis, design, and application of multiple pendulum test mass suspension systems and frequency-stabilized Nd:YAG lasers

Master of Science, Massachusetts Institute of Technology 1980

A Fourier transform spectrometer for millimeter and submillimeter wavelengths

Subject: The design and characterization of the spectrometer used in the COBE mission to measure the cosmic microwave background spectrum

RESEARCH EXPERIENCE

Cosmic Explorer Gravitational-Wave Antenna

Project Manager	2021 –
Nascent project to build next generation gravitational wave observatories	

LISA – Laser Interferometer Space Antenna

NASA Goddard Subject Matter Expert	2020 –
Consulting, reviews	
ESA Science Study Team, NASA-appointed member	2017-2024
NASA LISA Study Team member	2019-2024
NASA LISA Study Team chair – Technology selection	2016-2018
US Representative, LISA Consortium Executive Board	2017 –

LIGO – Laser Interferometer Gravitational-wave Observatory

Spokesperson, LIGO Scientific Collaboration	2017-2019
1500-person international collaboration	
Coordination of publication of GW170817	
Leader, Advanced LIGO Upgrade Project	2007-2017
\$200M NSF MREFC Project to build the LIGO Detectors making 1 st GW detection	
Leader, Advanced LIGO R&D	2003-2006
Deputy Group Leader for Detector, Initial LIGO	1995-1999

APPOINTMENTS

1975-77	Laboratory Instructor, MIT Physics Department
1980-84	Staff member, MIT Gravitation and Cosmology research group
1984-86	Gast Wissenschaftler, Max-Planck-Institut für Quantenoptik (Germany)
1986-87	Poste Rouge, Centre Nationale de la Recherche Scientifique (France)
1987-89	Ingénieur, Centre Nationale de la Recherche Scientifique
1989-91	Research Scientist, MIT Kavli Institute
1991-97	Principal Research Scientist, MIT Kavli Institute
1997-	Senior Research Scientist, MIT Kavli Institute
2001-2016	Director, MIT LIGO Laboratory
2006-	Visiting Associate Faculty, California Institute of Technology

RECOGNITION

Fellow of the American Physical Society (2001)
Fellow of the American Association for the Advancement of Science (2021)
AAS Berkeley Prize (2017)

Special Breakthrough Prize In Fundamental Physics, Gruber Cosmology Prize, Rossi Prize
(to LIGO Scientific Collaboration; 2016-17)

Albert Einstein Medal, Princess of Asturias Award, National Air and Space Museum Trophy
(Accepted as Spokesperson on behalf of the LIGO Scientific Collaboration; 2017, '19)

SELECTED COMMITTEES AND SERVICE

Executive Committee of the APS Topical Group on Gravitation, 1995
NASA Microgravity Proposal Review panel 1997
Chair, STEP Science and Engineering Review Panel. Stanford, 1999
Chair, NASA Microgravity Proposal Review Panel, 2000
Member, NASA Goddard Space Sciences Directorate Review Panel, 2003
Chair/Member, Scientific and Technical Advisory Committee, Virgo Project, 2003 – 2023
Invited Witness, House committee on Science, Space, and Technology, 2016
IUPAP Gravitational-Wave International Committee, Executive Secretary 2016 –
Chair, Scientific Organizing Committee, Amaldi Meeting, 2017
Chair, Dawn meeting on Global Strategies for GW Astronomy, 2019, '21, '23
Member, the LabEx UnivEarthS Scientific Committee of the Université de Paris, 2019 –
Member, Comité Stratégique Externe, Laboratoire des Matériaux Avancés (Lyon), 2019 –
Chair, Einstein Telescope Pathfinder Scientific and Technical Advisory Committee, 2020 –
Member, NOIRLab Management Oversight Council, 2024 –