

Exponent®
Engineering & Scientific Consulting

Andrew Smith, Ph.D., P.E.

Principal Engineer | Mechanical Engineering
Chicago
+1-312-999-4223 | asmith@exponent.com

Professional Profile

Dr. Smith is a mechanical engineer with expertise in investigating the mechanical design and performance of manufacturing equipment and consumer products. This expertise is brought to bear in the context of both industrial incident/accident investigations and intellectual property litigation.

Leveraging his experience in investigating machinery failures in both the industrial and consumer product sectors, Dr. Smith regularly assists clients by synthesizing complex sources of information, physical evidence, and regulatory requirements yielding valuable insights into accident causation, prevention, and relevant standards of care.

Dr. Smith has also qualified in many engagements as a testifying expert for intellectual property disputes across a diverse set of mechanical and electro-mechanical technologies. His work has supported district court litigation, IPR proceedings, and ITC investigations, with experience in presenting and defending his positions in both deposition and trial testimony.

Dr. Smith has extensive experience communicating complex technical concepts to diverse audiences through his former faculty appointments at Northwestern University, University of Utah, and University of Maryland, where he taught both technical and non-technical students in physics at the graduate and undergraduate levels.

Prior to joining Exponent, Dr. Smith worked at NASA's Goddard Space Flight Center, designing sensor systems for astrophysics applications. Dr. Smith has been invited to present lectures on a wide variety of topics in physics at conferences and workshops in the United States, Europe, and Asia. He has served as both a primary and contributing author on over 50 peer reviewed articles in the physical sciences.

Academic Credentials & Professional Honors

Ph.D., Physics and Astronomy, University of Leeds, UK, 2008

M.Sc., Particle Physics, Durham University, England, 2002

B.A., Astrophysics, University of California, Berkeley, 2001

Pre-doctoral Research Fellowship, Harvard-Smithsonian Center for Astrophysics, 2005-2008

Licenses and Certifications

Professional Engineer Mechanical, California, #39547

Professional Engineer Mechanical, Texas, #155233

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OSHA 30 Hour Outreach Training Program - General Industry

Prior Experience

Associate Research Professor, Particle Astrophysics, NASA Goddard Space Flight Center/University of Maryland, 2014-2017

Associate Research Professor, Physics and Astronomy, University of Utah, 2011-2014

Visiting Lecturer, Physics, Northwestern University, 2009-2011

Postdoctoral Researcher, Argonne National Laboratory, 2008-2011

Project Experience

Selected Intellectual Property Investigations By Venue

ITC:

- Construction-related hand tools
- Self-balancing transportation devices
- Storage containers and modular toolboxes
- Electrical connectors and cages

PTAB:

- Culinary tools
- Oil and gas drilling technology
- Pneumatic pumps
- Portable canopy tents

District Court:

- Road construction equipment
- Self-balancing personal transportation devices
- Remote-controlled mechanical devices
- Plumbing fixtures
- Outdoor/garden products
- Oil and gas drilling technology
- Automotive door hinges
- Textile manufacturing machinery
- Fuel storage technology
- Mechanical sifters and filters

Selected Industrial Safety Investigations

- Press brake machinery

- Molding equipment
- Industrial Lathes
- Industrial Mixers
- Dock levelers
- Drilling Equipment

Selected Product Liability Investigations

- Power tools: table saws, band saws, circular saws, and electric pole saws.
- Pressure cookers
- Indoor/outdoor furniture
- Exercise equipment
- Magnetic toys

Additional Education & Training

Pre-doctoral Research Fellowship, Harvard-Smithsonian Center for Astrophysics, 2005-2008