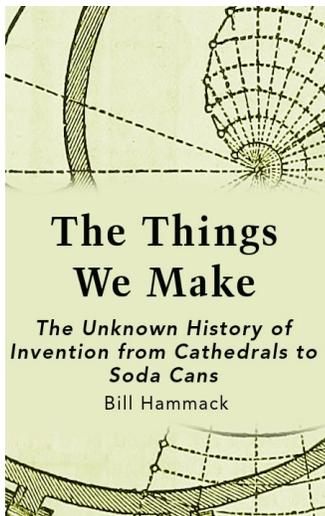


Biography

Bill Hammack is the William H. and Janet G. Lycan Professor at the University of Illinois — Urbana-Champaign. As an engineer his mission over the last twenty-five years has been to explain engineering to the public. His media work — from his work in public radio to his book to his pioneering use over the last decade of internet-delivered video — has been listened, read, or viewed over seventy million times. In clear, accessible, but technically accurate language, he has excited the next generation of engineers and scientists, and aided the public in appreciating the impact of science and engineering in our society and economy. *Make* magazine described Bill as a “brilliant science and-technology documentarian” noting that his short films “should be held up as models of how to present complex technical information visually.” *Science* magazine said “Bill Hammack can rhapsodize over the clever design of a soda can or a Scotch tape dispenser.” *Wired* called the videos “dazzling.”



All of his videos can be viewed on YouTube, but he is perhaps best known for his video on the aluminum beverage can, which was described by Roman Mars, host of the podcast *99% Invisible*, as “for my money the greatest video on YouTube.”

He has just finished a book on the engineering method, which will be published in late 2022. Entitled *The Things We Make: The Unknown History of Invention from Cathedrals to Soda Cans*. The book shares with a popular audience, for the first time, the details of the powerful, revolutionary and, oddly, unknown engineering method that has influenced readers lives intimately, deeply, and lastingly. The book features human stories, perception-changing histories of invention, and accessible explanations of technology. These stories reveal a panorama of human creativity across millennia and continents. They hear of technologies invisible to them, yet which profoundly affect their lives. The stories in the book will delight, but its implicit message is

deeper. A fuzzy understanding of the engineering method impoverishes the national conversation about the technological forces that influence our lives; an ignorance of how engineers work and invent deters the public from their civic duty to shape these forces. And bringing the engineering method to national attention can start a conversation about how we create innovative engineers who will battle climate change and other catastrophes. He is at work on a companion video series reflecting the themes in the book, also due out in late 2022.

Bill's videos are licensed under creative commons so they can be fully used to serve the public. They have been used by both industrial giants and small firms to train their workforce, in college classrooms to hone budding engineers, in K-12 classroom, and by home schools to excite the next generation of engineers. They have also been used to educate the broader public. For example, a science museum in Wisconsin plays Bill's video on LCD monitors in an exhibit and the Titanic Museum in Branson, Missouri features his video on the doomed ship. Elsewhere volunteers in Myanmar used the videos to, in their words, "help millions of disadvantaged people leapfrog traditional education," and a US-based non-profit uses the videos to create interest in manufacturing careers and thus close the skills gap in the American manufacturing workforce. One viewer described Bill as an "academic of of the people so to speak." Indeed, the video have appeared on *Wikipedia*.

He often serves the engineering community: as a consultant to Chicago's Museum of Science and Industry, as a member of the National Academy of Engineering's committee exploring the *Extraordinary Engineering Impacts on Society* for the National Science Foundation, and advises the Dreyfus Foundation on topics for videos.

His work has received national awards from a diverse group of scientific, engineering, and journalistic societies. These are listed below.

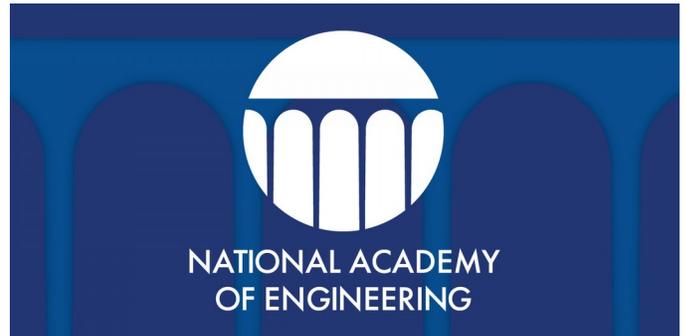
Bill earned a B.S. in Chemical Engineering at Michigan Technological University, and a M.S. and Ph.D. in Chemical Engineering at the University of Illinois — Urbana-Champaign. He taught at Carnegie Mellon for a decade before returning, in 1999, to the University of Illinois, where he now teaches in the Department of Chemical and Biomolecular Engineering. He lives in Urbana, Illinois with his wife and two sons.

Awards & Recognition

Member

National Academy of Engineering

Bill was are among the 111 new members and 22 international members elected to the National Academy of Engineering for 2022. Election to the National Academy of Engineering is among the highest professional distinctions accorded to an engineer. Academy membership honors those who have made outstanding contributions to "engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature" and to "the pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing/implementing innovative approaches to engineering education."



Hoover Medal

Various engineering societies, 2020



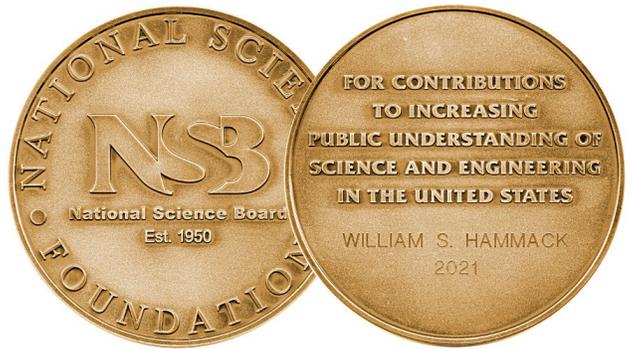
This 14 kt gold medal “commemorates the civic and humanitarian achievements of engineers.” It is conferred upon an engineer whose professional achievements and personal endeavors have advanced the well-being of humankind.” Administered by a board representing five engineering organizations: The American Society of Mechanical Engineers, the American Society of Civil Engineers, the American Institute of Chemical Engineers, the American Institute of Mining, Metallurgical and Petroleum Engineers and the Institute of Electrical and

Electronics Engineers.

Public Service Award

National Science Board, 2020

The Public Service Award honors individuals and groups that have made substantial contributions to increasing public understanding of science and engineering in the United States. These contributions may be in a wide variety of areas that have the potential of contributing to public understanding of and appreciation for science and engineering, including: media, education, training programs, and entertainment.



Ralph Coats Roe Medal

American Society of Mechanical Engineers, 2020

This Gold Medal, and a \$12,000 prize, “recognizes an outstanding contribution toward a better public understanding and appreciation of the engineer’s worth to contemporary society.”

Carl Sagan Award for the Public Appreciation of Science

Council of Scientific Society Presidents,
2019

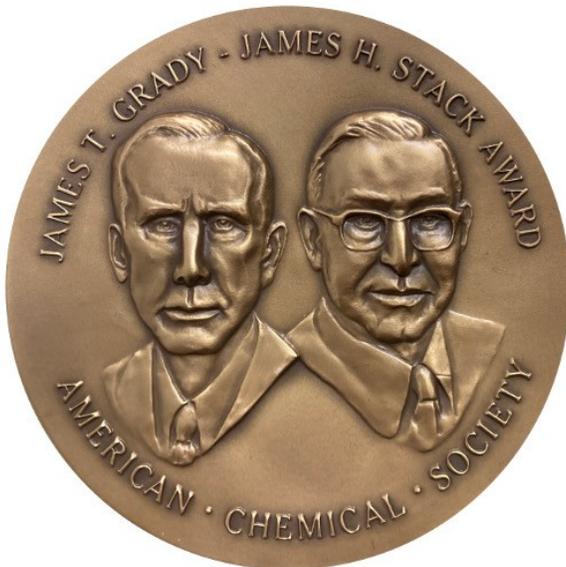
For increasing the public appreciation of science. Its purpose is to honor those who have become concurrently accomplished as researchers and/or educators, and as widely recognized magnifiers of the public's understanding of science.



James T. Grady-James H. Stack Award for Interpreting Chemistry for the Public

American Chemical Society, 2004

To recognize, encourage, and stimulate outstanding reporting directly to the public, which materially increases the public's knowledge and understanding of chemistry, chemical engineering, and related fields. The award consists of \$5,000, a medallion with a presentation box, and a certificate.



Edwin F. Church Medal

American Society for
Mechanical Engineers,
2002

The Edwin F. Church Medal,
established in 1972, is awarded



to an individual who has rendered eminent service in increasing the value, importance and attractiveness of mechanical engineering education. Education is used here in its broadest sense of preparation for any aspect or level of mechanical engineering through any appropriate mechanism including universities, technical institutes, professional society educational activities, continuing education programs of professional societies and private groups, in-house professional development programs of industrial concerns and governmental agencies, programmed learning and self-instruction systems.

O t h e r A w a r d s a n d R e c o g n i t i o n

First Prize, 2011, Science OnLine Film Festival (inaugural prize)

Fellow, 2009, American Association for the Advancement of Science (AAAS)

Fellow, 2009, American Institute of Physics

Jefferson Science Fellow, 2005, U.S. Department of State

Science Writing Award, 2004, American Institute of Physics

Distinguished Literary Contribution Furthering the Public Understanding of the Profession, 2004, IEEE

President's Award, 2003, American Society for Engineering Education

Silver Reel National News & Commentaries, 2003, National Federation of Community Broadcasters

Science-in-Society Award, 2002, National Association of Science Writers

Service to Society Award, 2002, American Institute of Chemical Engineers

C o n t a c t I n f o

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