AIP|Matters

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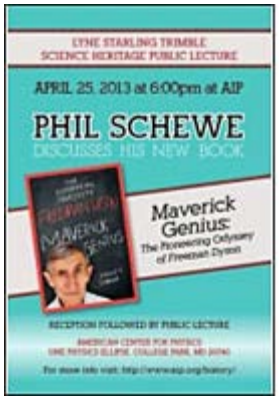
Director's Matters

By H. Frederick Dylla, Executive Director & CEO

Maverick Genius



Independence makes a maverick—acting outside of a group, not mainstream. A genius is someone whom we identify as possessing exceptional intellect. You might say that, by nature, true genius is predicated on thinking outside of the box. But Freeman Dyson has brought this association to a whole new level throughout his 70-year career as a scientist—he celebrates his 90th birthday in August. Science communicator and author Phil Schewe provided insight into Dyson the man, the scientist, the cultural figure, and orator/activist to an enthusiastic audience who gathered at the American Center for Physics on April 25th for the Lyne S. Trimble Science Heritage Public Lecture.

Schewe's lecture complemented his new book, Maverick Genius: The Pioneering Odyssey of Freeman Dyson. This first biography of Dyson tells the stories of his interactions with several influential figures, such as Richard Feynman, J. Robert Oppenheimer, George Kennan, Julian Schwinger, and Edward Teller, and how Dyson learned from them, collaborating with them in some cases and challenging their theories in others.

Schewe's lecture was the first in the series of science heritage lectures organized by the Center for History of Physics to bear the name Lyne S. Trimble Science Heritage Public Lecture. The series was renamed when Trimble's daughter, Dr. Virginia Trimble, made a donation to start an endowment to fund this program. Organized for the public, the series features prominent science historians and writers who highlight the important roles that science plays in modern society and culture. The events also enable the public to gain a greater understanding of science through our History Program's community of scholars.

Greg Good, Director of the Center for History of Physics (right), presents Phil Schewe with a photograph from the Emilio Segrè Visual Archives as a token of appreciation for his lecture.

Dyson has often attributed the successes in his career to timing and opportunity. The events that unfolded on the world stage leading up to and following World War II created tremendous

opportunities for science. Nevertheless, Schewe notes that Dyson's contributions to science and society were as pioneering as they were diverse. Among his most notable were launching new fields of science exploration, such as quantum electrodynamics, and making major contributions to solid-state physics and atomic physics. He helped introduce the method of adaptive optics, designed what became a widely used nuclear reactor for providing medical isotopes, and crafted and promoted a nuclear test ban.

As a cultural figure, Dyson is also esteemed for his writings reconciling science and religion. As a visionary, Dyson sees incredible potential in the Internet and biotechnology, and predicts a future of space colonization and eventually, different species of humans. Amazingly, Dyson does not possess a PhD. Impressed yet? His practice of science isn't so much a career but a vocation. Indeed, Dyson is an icon. But what enabled Schewe to hold the attention of 85 people for the full hour-long talk was his depiction of Dyson as a man—as a son, brother, husband, father, and grandfather, as well as a student, among his peers, and as a professional who decides to change career directions. All of us can relate to that.

The History Programs also hosted a reception and book signing in association with the lecture. The photos above show Phil Schewe discussing his work with interested participants.

From AIP Publishing

Solid support of the fluids community

The 7th International Conference on Microtechnologies in Medicine and Biology was held in Marina Del Rey, CA, from April 10–12. Journal Manager Jennifer Simmerer attended on behalf of the journal *Biomicrofluidics.* The conference had a unique structure: a few keynote talks on biomaterials, biophysics, and medicine led into a long poster session where all 100 conference attendees were able to interact. The conference showcased a great deal of the work being done on the US West Coast and Japan in microtechnologies and the development of devices for biomedical uses. *Biomicrofluidics* caught the interest of attendees with its 2013 Best Paper Award, aimed at early-career researchers for the purpose of recognizing significant contributions by emerging authors in microfluidics and nanofluidics. Authors who submit a paper to *Biomicrofluidics* throughout 2013 are eligible to participate. The winner will be invited to give a keynote presentation at the 2014 Advances in Microfluidics and Nanofluidics Conference (AMN 2014) in Taiwan.

Physics Resources Matters

2014 edition of GradSchoolShopper.com open for submission

The 2014 edition of AIP's *Graduate Programs in Physics, Astronomy, and Related Fields*, along with its online version GradschoolShopper.com, is now open for submissions. Departments with graduate programs in the physical sciences and engineering from inside and outside the US can update or create their program's profile through the easy-to-use online submission system. AIP has been publishing the graduate programs print directory annually since 1965—almost 50 years. The directory enjoys an excellent reputation and long-term customer loyalty in the community. The online directory, GradschoolShopper.com, with its wealth of content and highly organized, easy-to-navigate interface, is widely used by prospective students from over 130 countries.

GradschoolShopper.com is strengthening its reputation as another core product in AIP's education services. To enhance global awareness, AIP has been conducting a series of marketing campaigns so that prospective students and researchers have more channels to become aware of and have access to this product. Marketing efforts include promotion at scientific conferences all over the world where AIP exhibits, graduate school fairs co-organized by AIP and APS, campaigns to SPS's chapters and members, student surveys, campus tours of leading Chinese physics and materials science departments, and advertisements in AIP's online magazines, journals, and newsletters.

AIP invites more graduate programs in physical sciences and engineering or from outside the US to be part of this resource. For more information, check the "For Departments" section at GradschoolShopper.com.

Off the Press

Physics Today, May 2013 issue

Cover: Fifty years have passed since Edward Lorenz published his discovery of a surprising behavior now known as chaos. With a simple, three-equation weather model, Lorenz demonstrated that even fully deterministic systems can behave in ways that are intrinsically unpredictable. Shown here is a simulation of one of the model's iconic solutions—the Lorenz attractor—plotted as a trajectory in phase space. (Image courtesy of Stefan Ganev.)

Coming Up

May 7–8

- Staff professional development training: “How to be Accountable during Culture Change” (College Park)

Wednesday, May 8

- Staff birthday breakfasts (Melville and College Park)

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