



**TMS Member Profiles**

**Meet a Member: Symposium Celebrates the Life and Contributions of Morris Fine**

By Lynne Robinson

**Editor's Note:** The following was excerpted from a longer article, which is posted in its entirety at <http://materialstechnology.tms.org/edu/article.aspx?articleID=4694>.

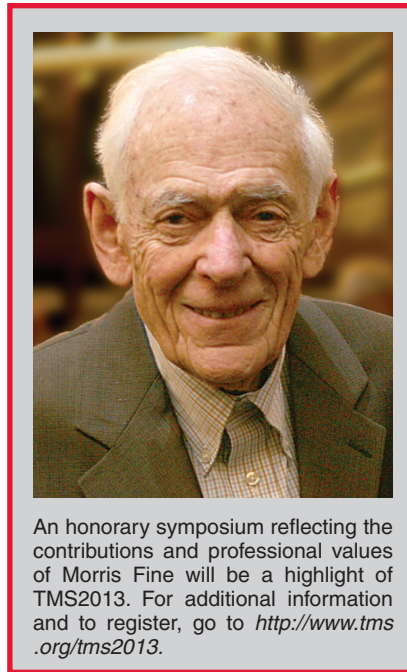
The history that Morris Fine has lived and created in materials science and engineering (MSE) would fill volumes. The focus of the symposium being held in his honor at the TMS 2013 Annual Meeting and Exhibition (TMS2013), however, is intended to underscore one key principle guiding his career, accomplishments, and professional interactions. "As researchers and educators, we are a privileged group of people," said Yip-Wah Chung, professor, Materials Science and Engineering, Northwestern University, and symposium organizer. "Professor Fine always emphasized that we have an obligation to give something back to the community by educating the next generation of scientists and engineers and by applying the knowledge gained in research to solve challenging problems confronting the world today. That is the focus of this symposium."

The symposium, Materials Research Applied to National Needs in Honor of Professor Morris E. Fine, will specifically reflect Fine's dedication to improving mechanical, fracture, fatigue, corrosion and other properties of steels and alloys. Said Semyon Vaynman, research professor, Materials Science and Engineering, Northwestern University, and symposium organizer, "A goal of this event is to bring together scientists from academia, industry, and government to highlight the cooperation that is required among them to meet the demand for advanced and sustainable materials."

Fine, who will celebrate his 95<sup>th</sup> birthday in April 2013, is still very active in research as the Technological Institute Professor Emeritus In-Service, Materials Science and Engineering, at Northwestern. "I have always tried to do fundamental research that

might have applications," said Fine. "This is still of great interest to me. I am very fortunate to be able to continue."

As a case in point, Fine received the 2009 TMS Application to Practice Award with Vaynman for the development of a high-performance steel used



An honorary symposium reflecting the contributions and professional values of Morris Fine will be a highlight of TMS2013. For additional information and to register, go to <http://www.tms.org/tms2013>.

to construct a new highway bridge in Illinois. He added this to an already extensive list of honors, including being elected a TMS Fellow in 1975. The professional contribution that he looks upon with particular pride, though, is his role in establishing the world's first university MSE department at Northwestern in the 1950s.

"In its infancy, MSE started as individual disciplines of metallurgy, ceramics, polymers, and semiconductors," said Chung. "Professor Fine felt that the fundamental principles governing the behavior of different materials obey the same laws and should be studied as one unified discipline. The rest, as they say, is history."

Fine himself had explored many of the disciplines that he would help pull

under the MSE banner, starting with an early interest in mining engineering as a student during the Great Depression at the University of Minnesota. He eventually switched to metallurgy "because there seemed to be more opportunities in that field at the time, but my interests were always broader than just metals." He joined the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME)—TMS's parent society—as a student member in 1938.

After earning his Ph.D. from Minnesota, Fine spent a year working on the Manhattan Project before joining the technical staff at Bell Labs. He recalled being interviewed by Bell legends, James Fisk and William Shockley, for his position. "They were interested in me because I had studied solid state physics as well as traditional metallurgy," he said. It was also at Bell Labs that Fine gained the experiences and insights that eventually guided him in establishing the MSE department at Northwestern. When considering particular milestones in his career, though, Fine points to his experiences as a teacher and mentor. "Each of the 70 students that I advised through their Ph.D. was a highlight for me," he said.

While his honorary symposium at TMS2013 will give his colleagues and friends a chance to celebrate his decades of contributions, Fine stressed that he is more interested in making sure that MSE continues to have a positive impact on daily human experience. "Research may solve existing problems but important new problems are always brought to light for future research," he said. "There is always plenty of interesting things to be done."

Each month, *JOM* profiles a TMS member and his or her activities both in and out of the realm of materials science and engineering. To suggest a candidate for this feature, contact Lynne Robinson at [lrobinson@tms.org](mailto:lrobinson@tms.org).