

Focal Point

The handwriting's on the wall

Lab researcher leaves his mark among the greats

It's not often a researcher is remembered in the presence of Albert Einstein, Enrico Fermi, J. Robert Oppenheimer, Ernest O. Lawrence, Max Planck, John von Neumann, or other titans of science who have left their mark on human understanding during the past century. Along with their mark on physics, these scientists literally left their mark on a wall—the wall of Leiden University.

Condensed-matter theorist Alexander Balatsky recently joined a handful of Los Alamos researchers who have had the privilege of signing their names alongside signatures of preeminent scientists who have given colloquia at the Lorentz Institute at Leiden University in the Netherlands.

"It is quite an honor to speak at the Institute," Balatsky said. "The colloquia was started by Austrian physicist Paul Ehrenfest back in 1912, when he joined the Leiden faculty, and is very highly ranked in Europe."

The Colloquium Ehrenfestii transformed into regular public lectures on theoretical physics in 1921. The university has drawn presentations on the leading edge of physics ever since. To commemorate each talk, presenters are invited to sign a wall at the Institute. After the Institute was rebuilt in the 1960s, the original wall, which contains signatures of Einstein and similar luminaries, was retained and incorporated at the Institute's present location. Los Alamos researchers Kevin Bedell and Wojciech Zurek are among more recent signers.

In the tradition of colloquium founder Ehrenfest, speakers are asked to present their subject matter so anyone in attendance can easily understand it. To do so was not such an easy task for Balatsky, who was refining ideas about how certain types of crystals don't necessarily transform from one state to another—such as from an electrically conducting state to an electrically resistive one—in a smooth, homogeneous fashion. His research into this inhomogeneity was part of a recently published paper in *Nature* that helped view a Mott metal-insulator transition in a vanadium crystal, something that had never been witnessed before.

"As I was preparing my talk, I attended a banquet held in the cafeteria, and I noticed that some of the faculty members were, you know, looking at me. It was kind of like they were thinking, 'Well, we will see how

good a speaker he is.'" Balatsky said. "Of course, I could not eat very much, as the pressure was on."

Some time later, during the questions and discussion that followed the colloquium, several people came up to Balatsky and said they enjoyed his talk very much. "I didn't see anyone out in the halls laughing, so I guess I did okay," he said with signature good humor.

"Then Jan Zaanen, the organizer, comes over with this very fancy screwdriver and leads me to the wall," Balatsky recalls. "They have glass over the wall, and the glass is held in place with these special screws. He removed the glass, I signed the wall, and he put the glass back up. Even though it happened very quickly, one has a sense of touching something important . . . a piece of science history."

—James E. Rickman

Alexander Balatsky of
Condensed Matter and
Statistical Physics

