

crux of my collapse, my 'surrender' [*'Lebens-Muedigkeit'*]." And he asks them to keep an eye on and mentor his older son: "From you in particular, I am not asking for any material support for the children. But I do ask you, through a loose organization of all of you, to promote especially Pawlik's healthy, strong development." (Pawlik became a cosmic-ray physicist and was later killed in an avalanche.)

In his final letter, Ehrenfest writes that Pawlik will give Burgers correspondence about Jewish German intellectuals, and he makes a request: "Please arrange, together with [Adriaan] Fokker, that at least some of the cases are handled." From the time Hitler came to power, explains Martin Klein, who wrote a biography of the first part of Ehrenfest's life, "Ehrenfest was very active in trying to rescue German Jews—in particular he used his influence to find jobs for physicists." Ehrenfest, who was Jewish, felt guilty about "occupying a principal chair in Europe and being unproductive, especially with all the Jewish physicists being dismissed from their jobs," Klein adds.

Ehrenfest wrote a letter similar to the one foreshadowing his suicide, but with a different tone, to Albert Einstein, Niels Bohr, Abram Ioffe, and other contemporaries, according to Klein, who refers to page 408 of Abraham Pais's book, *Niels Bohr's Times* (Oxford Clarendon Press, 1991). "I don't think [those letters] were sent," says Klein. "I can't imagine that if [they] had been sent, that there wouldn't have been a recorded and visible reaction from some if not all of the recipients." The group letter is the only typed one among the four newly found letters.

In autobiographical notes published posthumously last year by the J. M. Burgers Centre in the Netherlands and the University of Maryland at College Park, where Burgers was on the physics faculty, Burgers wrote,

Sometimes it looked . . . as if he [Ehrenfest] gave away everything he had found or observed, without building up a reserve, a kind of stronghold, within himself. . . . His analytical mind stirred up everything. . . . On the long run this pushed his students somewhat away from him and I have also experienced this effect. There were things which we did not like to have analyzed. It may look as if this betrays a lack of intellectual interest, but in several cases it was an instinctive protective reaction from our side.

About a 1918 meeting for physics

teachers that Ehrenfest arranged, Burgers wrote,

This meeting naturally gave him great pleasure, but what was strange to us was that he said it had given him more pleasure than the birth of his youngest child in that same year. . . . I spoke with [physicist Hendrik] Lorentz and asked him whether he could talk with Ehrenfest, and help him find a way back to feelings which looked more normal to us. . . . While we perceived that Ehrenfest's self-analysis could take dangerous forms and lead to utter despair, we could not help him.

Toni Feder

Lockheed Martin seeds Rice center

Lockheed Martin Corp and Rice University announced in April the creation of a new center that will pursue applications of nanotechnology relevant to the advanced-technologies defense contractor. The Lockheed Martin Advanced Nanotechnology Center of Excellence at Rice University, or LANCER, will be based at the university's Richard E. Smalley Institute for Nanoscale Science and Technology and will initially be funded by the company at \$3 million over three years. "Areas we expect to explore include super-sensitive detection devices with space-based applications, fast communications systems, and greatly improved devices for energy generation and storage," says Lockheed Martin's director of advanced technology Sharon Smith.

The new center grew out of the relationships that formed between Rice researchers and Lockheed Martin engineers in a summer nanotechnology short course that the Smalley Institute has offered the company every year since 2005. "The folks in the labs are the ones who came to [their managers] and said, 'Make it easier for us to work together,'" says Smalley Institute director Wade Adams. "We have labs across Lockheed Martin," says Smith, "but one of the many benefits we see to participating in LANCER is access to some of the equipment we need for fundamental nanotechnology research."

Most of the LANCER seed money will go toward research that is of potential business value to Lockheed Martin, with little for overhead, says LANCER's inaugural director Daniel Mittleman, who hopes to attract funds

JEFF FITLOW/RICE UNIVERSITY



Daniel Mittleman will lead a Lockheed Martin-Rice University partnership to pursue nanotechnology applications in aerospace, security, and energy.

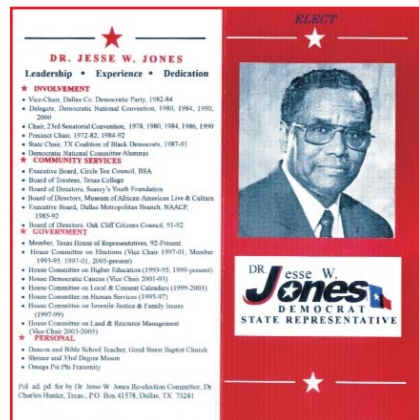
from other corporate investors and the federal government to continue the center after the third year.

Jermey N. A. Matthews

From school board to state senate: Running for office

Ever considered running for the school board? City council? State legislature? Some 70 scientists and engineers attended a workshop last month to learn about campaigning for local office. The 10 May event was held at Georgetown University and was sponsored by 10 professional organizations, including the American Physical Society and the American Institute of Physics (AIP).

The idea, says APS associate executive officer Alan Chodos, "is to give



A campaign flyer from one of chemist Jesse Jones's runs for the Texas House of Representatives.