Hertz Fellowships

www.hertzfoundation.org

Deadline: November 1

Fields of Study

Applied Physical Sciences. These are the fields—applied physics, applied chemistry, applied mathematics, applied modern biology and all areas of engineering—which apply results from the basic physical sciences to generate solutions to problems of comparatively near-term, widespread human interest.

The proposed field of graduate study must be concerned with applications of the physical sciences to problems, as contrasted with work that extends the basic physical sciences. The Foundation does *not* support students pursuing both Ph.D. and professional degrees; e.g., joint PhD/MD programs. It is up to each fellowship applicant to advocate his or her specific field of interest as an "applied physical science."

Description

Valued at over $250,000, Hertz Fellowships are unique no-strings-attached fellowships allowing exceptional applied scientists and engineers the freedom to pursue their own ideas with financial independence under the guidance of the finest professors at the country's top universities. Hertz Fellows are chosen for their intellect, their ingenuity, and their potential to bring meaningful and lasting change to our society. The highly competitive selection process includes a comprehensive application and two rounds of exacting interviews by recognized leaders in applied science and engineering.

Hertz Fellowships are given to support the graduate education of students of outstanding potential in the applied physical sciences. The award consists of a stipend ranging from $31,000 to $36,000 for the academic year in addition to a payment equivalent to full tuition. Hertz Fellows therefore have no liability for any ordinary educational costs, regardless of their choice among tenable schools. Awards are renewable for fellowship tenure of up to five academic years. The Hertz Foundation's standing policy is that the Fellowships will be structured to be the most attractive in their class in both material terms and duration of tenure.

The Foundation permits its fellows to hold tenure of their fellowships at certain universities listed on its website. The fellowship may be held at a university other than those listed if approved by the Hertz Foundation. The Fannie and John Hertz Foundation carefully evaluates, on a continuing basis, the quality of the environment for applied science education provided by leading educational institutions in the United States.

Only applicants who will have received a bachelor's degree by the time they propose to commence tenure of their fellowship and propose to complete a program of graduate study leading to an advanced degree are eligible. Applications are accepted from students

who have already commenced graduate study. Undergraduate preparation should include a year each of calculus and physics.

United States citizenship or permanent residency in the United States is required of all applicants. The Foundation requires all fellows to commit themselves morally to making their skills and abilities available for the common defense in the event of national emergency. The Hertz website explains what this means and why they require it.

Criteria for Selection

Applicants are screened for qualities that the Hertz Foundation believes are essential ingredients of future professional accomplishment and/or reasonably reliable leading indicators of future professional success. These include:

- **Exceptional Intelligence and Creativity** with particular emphasis on those aspects pertinent to technical endeavors
- **Excellent Technical Education** evidenced not only by transcripts and reference reports from senior technical professionals, but also by the results of a personal, technical interview
- **Orientation and Commitment to the applications of the physical sciences** as is typical of most applicants
- **Extraordinary Accomplishment in technical or related professional studies** which may offset slightly lower academic records, or add luster to outstanding ones
- **Features of Temperament and Character conducive to high attainment as a technical professional** the assessment of which is difficult, albeit important to the Foundation
- **Appropriate moral and ethical values** of considerable interest to the Foundation in the furthering of our basic goals
- **Leverage:** what difference the award of the Hertz Fellowship is likely to make in the kind, quality, and/or personal creativity of the student's graduate research

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Application Procedure

The application is completed online and is available through links from the Foundation website. Candidates are encouraged to meet with the campus fellowships advisor. Students must submit their applications online to meet the late October deadline. Transcripts for fall terms in which application is made should be forwarded to the Foundation as soon as final grades are available. Applicants must take the general aptitude portion of the GRE and have the results sent to the Hertz Foundation. The Foundation selection committee awards fellowships on the basis of the application, the academic transcript, reference reports, and the report of a personal, technical interview conducted with selected applicants.

Additional Information

Perhaps the most competitive of all scientific fellowship awards, the Hertz Fellowship differs from the NSF Graduate Research Fellowship and similar competitions by including a personal technical interview in the selection process. The Hertz technical interview provides the selection committee with evidence to compare students from different universities or different disciplines with one another rather than relying on GPAs or GRE scores for this purpose. After an initial review of 700 applications, approximately 180 candidates are invited to first-round technical interviews. From this pool, about 70 candidates are selected for a second round interview which is conducted by "four experienced PhD engineer/scientist interviewers, who worked together for many years," according to the Foundation. About 15 students are awarded a Hertz Fellowship each year.

Hertz technical interview: Each candidate is interviewed by a technical interviewer, many of whom are Hertz Alumni Fellows. The interview process, which measures the leadership and creative potential of the candidate, is the hallmark of the Hertz Foundation's program. It is similar to an open-ended oral exam lasting about 1 hour and usually takes place at a hotel. Applicants should expect questions from outside of their field as interviewers test for breadth across the applied physical sciences in general. Interviewers test technical knowledge, the ability to handle pressure, to think broadly, and to speak articulately. According to one Hertz fellow, "Going into the interview, it's important for you to understand your material, but what they're really interested in is your ability to apply your ideas. You may not know the answer to every question they ask, but the panel is impressed by your ability to come up with an answer based on what you do know." According to a Hertz interviewer, questions are intended not to find out what you do not know, but rather to see whether you "have the knowledge, physical intuition, and vision to enter into and explore questions that don't have pat or memorized answers." Each interview is tailored to the individual applicant. They are looking for evidence of the curiosity, creativity, drive, and research ability that are predictors of future innovation and characterize a successful Hertz Fellow. All interviews are scheduled directly with applicants between late October and February.

See also: "So what exactly are we looking for in Hertz interviews?"
http://www.hertzfoundation.org/lib/Literature/Hertz_News_Fall2006.pdf