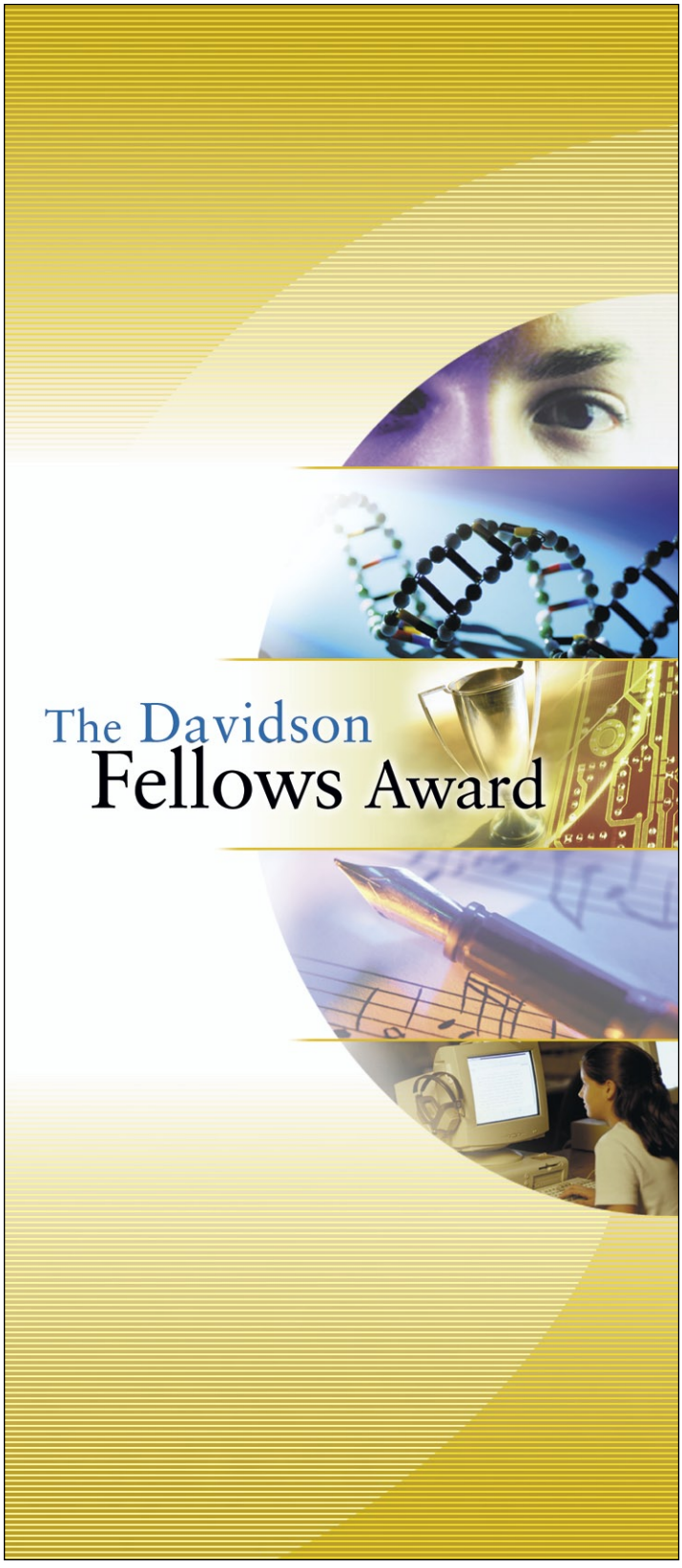
The Davidson
Fellows Award

The Davidson Fellows Award

The Davidson Fellows Award recognizes the outstanding achievements of young people who can demonstrate the development of their talents with a significant piece of work in one of the following submission categories:

Science
A prodigious work in the form of a computer or physical model in the areas of engineering, physics, biology, chemistry, earth science, space science, environmental science and/or medicine

Technology
A prodigious work in a specific domain area of technology, such as artificial intelligence, computer programming, etc.

Mathematics
A prodigious work in a specific domain area of mathematics, such as calculus, fractals, number theory, etc.

Music
A prodigious work, in the form of a portfolio, that is representative of the applicant's talent as a composer, classical instrumentalist, jazz instrumentalist or vocalist.

Literature
A prodigious work in the form of a portfolio displaying a number of literary styles and genres.

Philosophy
A prodigious work in the form of a portfolio exhibiting depth and breadth of knowledge concerning the study of philosophy, human thought and culture.

"Outside the Box"
A prodigious work that is a unique combination of Science, Technology or Mathematics WITH Music, Literature or Philosophy.

Davidson Fellows are awarded scholarships of $50,000 or $10,000 and are recognized for their achievements at a special awards reception in Washington, D.C.

Davidson Fellows are encouraged to make a moral commitment to support others in the development of their talents by serving as role models and mentors to other profoundly gifted young people.

Who Should Apply

Davidson Fellows applicants are individuals who recognize the wisdom in the adage, "it's the journey, not the destination." They are passionate about their work and value the opportunity to learn. If you see these qualities in yourself and have been pursuing the development of your talents for an extended period of time, we encourage you to apply.

How to Apply for a Davidson Fellows Award

To request a Davidson Fellows application, go to the Davidson Fellows section of the Davidson Institute's web site: **www.davidson-institute.org.**

The Davidson Fellows application includes:

- A detailed description of the significant piece of work and, in some categories, a portfolio containing copies of the original work and/or audio recordings.
- Information about the work, why and how the work was pursued, the challenges that were encountered, and a description of why the submission is a "significant piece of work."
- Three copies of a 15-minute videotape, narrated by the applicant, describing and showing the work.
- Three nomination forms: one from a mentor and/or supervising scientist; one from a teacher, tutor, or school administrator; and one from a professional in the field who is familiar with the applicant's work.
- A statement of commitment that, if named as a Davidson Fellow, the applicant and a parent/guardian will attend the award reception in Washington, D.C. in September 2003.

Applications must be received by the Davidson Institute by 5:00 p.m. Pacific Standard Time on March 28, 2003.

2002 Davidson Fellow Laureates

$50,000 Scholarship Recipients

Wenyi Cai (Technology)
A 17-year-old young woman from Naperville, Illinois, Wenyi Cai explored mathematical modeling and numerical analysis of X-radiography to analyze gasoline sprays with amazing results that may have significant influence on gasoline direct-injection technology and the entire automobile industry.

Sebastian Chang (Music)
A 14-year-old young man from Trabuco Canyon, California, Sebastian Chang composed and performed five innovative pieces of music filled with self-discovery, complexity and depth of emotion for piano, orchestra and violin.

Allan Chu (Technology)
A 17-year-old young man from Saratoga, California, Allan Chu invented a dictionary-based file universal lossless data compression algorithm, *LZAC*, that can be used to ease Internet traffic congestion, increase the rate of data transmission and increase the data storage in handheld and wireless devices.

Jason Chu (Science)
A 16-year-old young man from Hockessin, Delaware, Jason Chu had an original idea that he translated into an experimental laboratory procedure to prove that the addition of fibroblast growth factor antibodies retard the spread of a malignant tumor. Jason's results could revolutionize cancer treatment and extend the life of a terminal cancer patient by several months, if not years.

Marcin Mejran (Science/Technology)
A 16-year-old young man from Brooklyn, New York, Marcin Mejran measured transcriptional states with a highly parallel single molecular resequencing approach with error models, probabilistic analysis and algorithms based in genomics, bioinformatics, computational mathematics and computer programming. Marcin's work is an innovative breakthrough in a specific area of human genome research.

2002 Davidson Fellows

$10,000 Scholarship Recipients

Jennifer Alyono (Science/Technology)
A 17-year-old young woman from Silver Spring, Maryland, Jennifer Alyono developed an interdisciplinary, nanotechnology project in which a biosensory coating can detect changing membrane permeability for any type of molecule. Jennifer's discovery has practical applications in medicine, national security and life science research.

Christopher Falzone (Music)
A 16-year-old young man from Richmond, Virginia, Christopher Falzone performed an impressive portfolio of piano pieces to express his prodigious understanding, sensibility and profound love of music. Sharing his love of music as a concert pianist, a chamber musician, a composer and a conductor, Christopher continues to make an incredible impression on the music world.

Sheel Ganatra (Mathematics)
A 17-year-old young man from Newark, Delaware, Sheel Ganatra proved a conjecture in combinational geometry through intense research and problem solving. In taking a creative new approach by applying topology to a ten-year-old, unresolved problem involving circular mirrors and light rays, Sheel opened a number of avenues for further research and his results have broad implications in the study of illumination and the abstract shape of space.

Alexander Power (Mathematics)
A 15-year-old young man from Cedar Falls, Iowa, Alexander Power explored advanced theories and problems in graph theory specifically in chromatic growth ratios and chromatic polynomials. Significant applications of Alexander's results include future mathematics and graph theory research, communication networks, robotic vision systems and the expansion of the Internet.

2002 Davidson Fellows

$10,000 Scholarship Recipients

Jennifer Hall (Literature)

A 17-year-old young woman from Mt. Pleasant, South Carolina, Jennifer Hall writes about the ordinary aspects of life in an exceptional style filled with original plots, characters and images all focused on the goal of capturing her reader. Using observation as a key component, Jennifer transforms the mundane into the extraordinary, as she did throughout her portfolio entitled *Afloat*.

Louis Malcolm Hutson, III (Technology)

A 17-year-old young man from Mandeville, Louisiana, Louis Malcolm Hutson, III developed a computer application using evolutionary logic with techniques that "evolve" the framework of a computer database using processes modeled after those found in nature. Malcolm's work has practical database applications in the business world.

Alexandra Morris (Literature)

A 10-year-old young woman from Ventura, California, Alexandra Morris penned an impressive portfolio of six pieces that included a thought-provoking essay entitled *Biodiversity: A Metaphorical Silkworm*, a dramatic script published last year in an anthology of "twisted fairy tales" and a clever fantasy fiction novel excerpt entitled, *The Archway of Silver Flame*, set in a mythological world.

Ashvin Mysore (Technology)

A 17-year-old young man from Louisville, Colorado, Ashvin Mysore delved into the complex realm of computer graphics fractal terrain generation, and succeeded in developing an innovative solution to generating very realistic terrains. Ashvin's work has broad applications in scientific visualization terrain rendering, meteorology, geology, space science and military training.

Britta Redwood (Literature)

A 14-year-old young woman from Grapevine, Texas, Britta Redwood wrote a collection of literary pieces entitled *The Singing Earth* composed of essays and poems presenting human life as valuable, intense and beautiful. Britta's work is an argument for the validity of emotion. Her project is meant to restore belief in life, and to inspire readers to live more actively during their time on Earth.

Benjamin Schwartz (Science/Technology)

A 16-year-old young man from Westport, Connecticut, Benjamin Schwartz developed a computer program, *AFMetric*, which uses data from Atomic Force Microscope to accurately measure grain boundary energy. An accurate measurement of grain boundary energy is necessary for the next generation of microchips, superconductors, corrosion-resistant alloys and materials with directional strength characteristics.

Kavita Shukla (Science)

A 17-year-old young woman from Ellicot City, Maryland, Kavita Shukla recognized the antibacterial and antifungal properties of the herb fenugreek, and translated her inquisitiveness into a multidisciplinary science study resulting in a patent for a fenugreek food packaging paper. Kavita discovered multiple uses for the plant as a cost-effective, safe and natural way to preserve fresh fruits and vegetables, and as a non-toxic water purifier.

Amyie Vuong (Science)

A 16-year-old young woman from Oklahoma City, Oklahoma, Amyie Vuong investigated the linkage of autoimmunity and cancer, significantly bridging the gap between the two by assessing the possibility that autoantigens may be responsible for an increased risk of cancer. Her research sheds new light on one group of cancer and will potentially lead researchers closer to a cure.

About the Institute

Our Mission

The mission of the Davidson Institute for Talent Development is to recognize, nurture and support profoundly gifted young people and to provide opportunities for them to develop their talents in positive ways to create value for themselves and others.

Our Programs & Services

Davidson Young Scholars
An individualized, family-oriented program aimed at nurturing profoundly gifted young people between the ages of 4 and 18.

Davidson Fellows
Recognizes the outstanding achievements of highly gifted young people and awards substantial scholarships annually to students up to age 18.

Services for Professionals
Provides educators, school administrators, psychologists, pediatricians and others with presentations, in-service training, professional opinions, and referrals to experts in the field.

PG-CyberSource
www.pgcybersource.org is the largest collection of online resources for and about profoundly gifted young people.

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