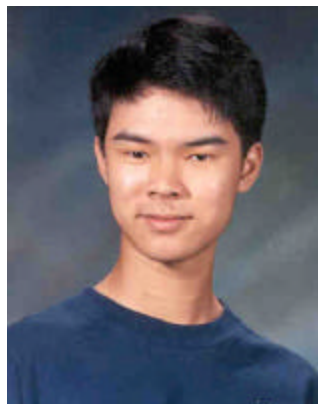




## Davidson Fellow Laureate Allan Chu

(\$50,000 Scholarship Recipient)



### Personal Info

Allan Chu

Age: 17

Saratoga, California

### School, College and Career Plans

With his senior year at Saratoga High School beginning this fall, Allan hopes to enter a college with renowned faculties as well as world-class research programs and facilities. He plans to take individually designed majors in engineering, math and science. He seeks a future as a scientist and entrepreneur.

### Davidson Fellows Submission (*Technology*)

In his project, *LZAC Lossless Data Compression: A Novel Approach to Minimum Redundancy Coding*, Allan Chu brilliantly invented a dictionary-based universal lossless data compression algorithm, *LZAC*, that can be used to ease Internet traffic congestion, increase the effective rate of data transmission and improve the effective data storage in handheld and wireless devices.

### Biography

Allan was born in San Jose, California and raised in Saratoga. His parents came from Taiwan to further their college educations and then settled in the Silicon Valley. Allan wrote his first computer program at age 6. In fifth and sixth grades, he self-studied Algebra and Geometry, and finished each course in three weeks at Johns Hopkins University's Center for Talented Youth.

At age 12, Allan scored a perfect 800 on the SAT-I Math. As a high-school freshman, he finished Calculus BC. Allan has been honored as a guest speaker at the AFCEA, where he presented the lossless data compression research that he has performed over the past two years.

Allan has served as president of the Math Club; as founder and vice president of the Internet Technology and Computer Club (ITCC); and, as a member of the French Club, the Debate and Speech Varsity Team, and the National Forensic League (NFL).

*Please see next page.*

**The Davidson Institute for Talent Development**

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## Davidson Fellow Laureate

**Allan Chu**

*(Cont.)*

### Honors/Awards

- 2002 Davidson Fellow Laureate (September)
- 2002 American Invitational Mathematics Examination (AIME), Scholarship Winner
- 2002 Intel International Science and Engineering Fair (ISEF), First Place
- 2002 Junior Science and Humanities Symposium (JSHS) Northern California and Western Nevada, Regional First Place and National Second Place
- 2002 U.S. Mathematical Olympiad Summer Program (MOSP), Qualifier
- 2002 U.S. Physics Olympiad Team, Semi-Finalist
- 2002, 2001 Synopsys Silicon Valley Science and Technology Competition, Best of Championship Grand Prize and Best Research Paper
- 2001 California State Science Fair, First Place
- 2000 Siemens Westinghouse Science & Technology Competition, Southwest Regional First Place and one of six national finalists
- 2000 American High School Mathematics Examination (AHSME), First Place
- 1999 MathCounts, California State First Place and National Third Place
- 1998 Johns Hopkins University Talent Search, California State First Place and National First Place
- Siemens Scholar
- College Board AP Scholar
- Research paper "LZAC Lossless Data Compression" published in the 2002 IEEE Data Compression Conference (DCC) Proceedings
- US Patent Pending: "Efficient Data Encoding and Decoding Processes"

### Community Activities

Allan founded the tutoring and coaching program at Redwood Junior High School for the MathCounts Team.

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