

Invention: Lapotron
Age: 19
School: Quince Orchard H.S.
Home: Gaithersburg, Maryland

Richard Barton

Richard Barton demonstrated his problem-solving abilities at an early age. When he was eighteen months old, he could open any child-proof container in the house.

As he grew up, he loved to disassemble and reassemble anything he could get his hands on. Richard is also an excellent swimmer, and has swum competitively since the eighth grade.

Richard combined his mechanical and swimming skills when he invented the Lapotron - a battery-powered device that displays a swimmer's lap count and times underwater. In 1997, the Lapotron won the Duracell/NSTA Scholarship Competition.



Richard earned an Air Force ROTC scholarship and presently studies electrical engineering at the Rose Hulman Institute of Technology in Indiana.

RUMBERT

JOSEPH HEREMANS

Joseph Heremans was born in Belgium where he lived until he was two. He loves music, and has been playing the piano since he was four. Joseph also has a love of airplanes, computers, and science.

Invention: Thermoelectric Relative Humidity Meter
Age: 17
School: Detroit Country Day
Home: Troy, Michigan

While looking for ideas for a science project, Joseph read about how a hygrometer works. A hygrometer indirectly measures humidity levels by measuring the dew point of humid air.



Joseph saw a way to improve upon this method, and invented the Thermoelectric Humidity Meter, which measures directly the relative humidity of the air.



This invention won the NSTA/Duracell Scholarship Competition, and the Junior Science Humanities Symposium. After high school, Joseph plans to study computer engineering.

JEFFREY MARTZALL



Jeffrey Martzall has always been a "control freak". As a child, Jeffrey automated his workshop so that he could control everything by means of switches and motors.



Invention: Two-Dimensional Audio Tracking for Aviation Guidance Systems
Age: 17
School: Northrop High School
Home: Fort Wayne, Indiana

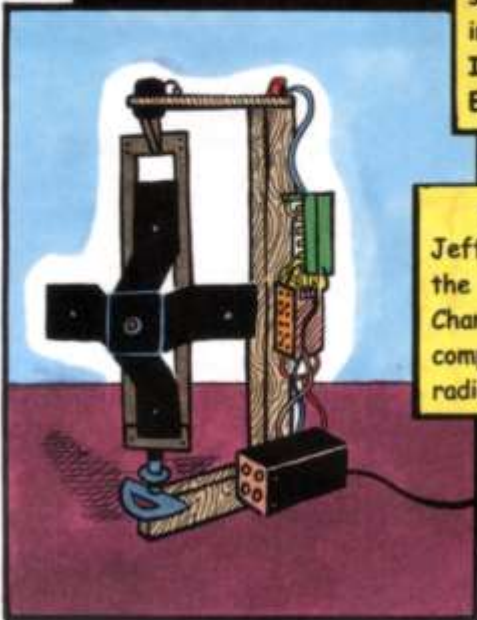


In 5th grade, Jeffrey taught himself how to build and fly radio-controlled model airplanes; and in 8th grade, he invented a working laser-guided missile control system.

For his high school science project, Jeffrey incorporated his love of planes and automated control to invent the Two-Dimensional Audio Tracking for Aviation Guidance Systems.



This device uses four microphones to track a specified sound source. His invention won the Intel International Science and Engineering Fair.



For the last four years, Jeffrey has been a finalist in the National Aeromodeling Championship, a global competition dealing with radio-controlled gliders.



After high school, Jeffrey plans to become an aeronautical engineer.

Austin Meggitt



"I'm thinking, I'm thinking!" That is the response you were likely to get from two-year-old Austin Meggitt when he seemed to be daydreaming. Austin loved to ponder and think about practical problems. In fact, instead of bedtime stories, he asked his parents to read him science books.

Invention: Glove and Battie Caddie
Age: 11
School : Shupe Middle School
Home: Amherst, Ohio



But this does not mean Austin is a nerd. He loves acting, music, and playing baseball. At the age of ten, Austin had problems carrying his glove and bat while riding his bicycle to the baseball field. This gave him the idea for the Glove and Battie Caddie.

RHAINSBERT
1999



The Glove and Battie Caddie fastens to the handle bars of a bicycle and safely carries a baseball, bat, glove, and everything he'll need for a good game.

This invention won the **Ultimate Invention Contest**, sponsored by **MediaOne** and the **Discovery Channel**. Austin has applied for a U.S. Patent, and has been featured on **Discovery Channel**, in **Boys' Life** magazine, and on various television news programs.



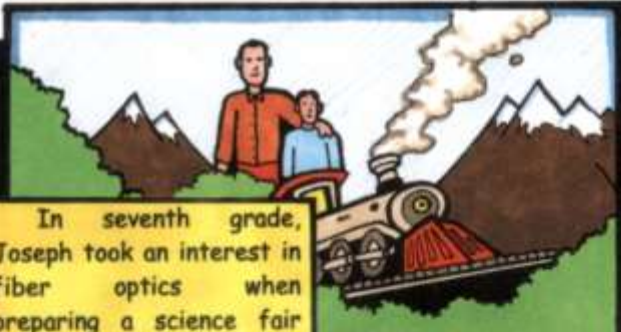
Now, preparing to enter the 6th Grade, Austin keeps busy by taking orders for The Glove and Battie Caddie at his Mom's garage sales!



Joseph Schuh

Invention: Universal Self-Contained Fiber Optic Sensor Network
Age: 19
School: Satellite High School
Home: Cocoa Beach, Florida

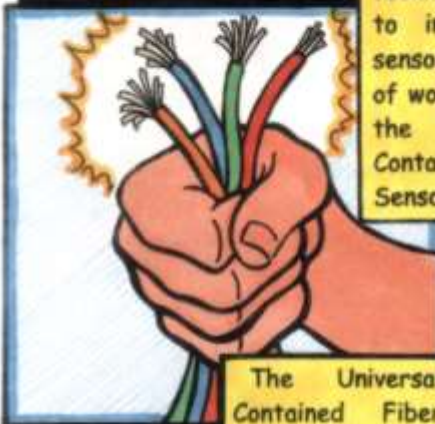
Joseph Schuh's fondest childhood memories are of working with his dad on their train set, spending many hours constructing buildings, roads, lakes, and mountains. Joseph's love for building carried into all areas of problem-solving, especially computers and electronics.



© MURBERT 1999

In seventh grade, Joseph took an interest in fiber optics when preparing a science fair project. Realizing the potential of fiber optic technology, Joseph set out to improve fiber optic sensors. After five years of work, Joseph developed the Universal Self-Contained Fiber Optic Sensor Network.

This invention is an improvement over existing technology. Unlike present fiber optic sensor networks, Joseph's invention does not rely upon outside power sources for its sensors. Instead, it is powered by the light traveling through the fiber itself.



The Universal Self-Contained Fiber Optic Sensor Network won the International Science & Engineering Fair in 1998, as well as 52 other science and engineering awards.



Joseph has applied for a U.S. patent for his invention, and it is presently being considered by NASA for use in their space shuttle upgrades.



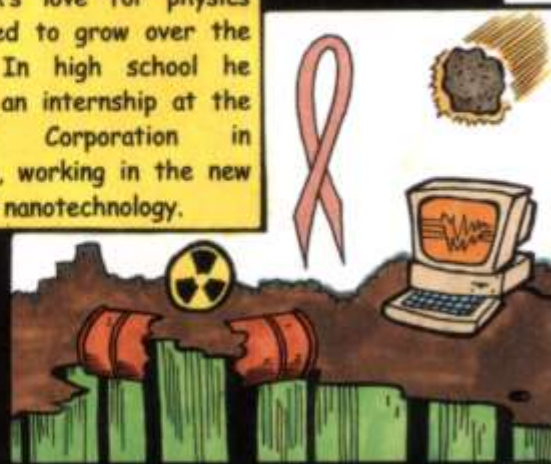
ALEX WISSNER-GROSS

Invention: Fullerene Based Nanofabrication System
Age: 17
School: Great Neck South High School
Home: New Hyde Park, New York



Alex combined his love for physics with his experience in nanotechnology to develop a method for mass-producing molecule-sized components for implementation in machines that are so small they are measured in billionths of a meter.

Alex's love for physics continued to grow over the years. In high school he served an internship at the MITRE Corporation in Virginia, working in the new field of nanotechnology.



According to family lore, Alex's love for science began at the age of 11 months when he was mesmerized by an electrical display at a science museum. Ever since, the family has had to visit science museums wherever they travel.



In the future, these miniature machines may be able to do everything from cleaning up toxic waste to fighting cancer.

Alex's invention won the Intel Science Talent Search, and the International Science and Engineering Fair. In 1998, Alex traveled to Portugal to represent the United States at the International Olympiad in Informatics.

R. J. WISNER