

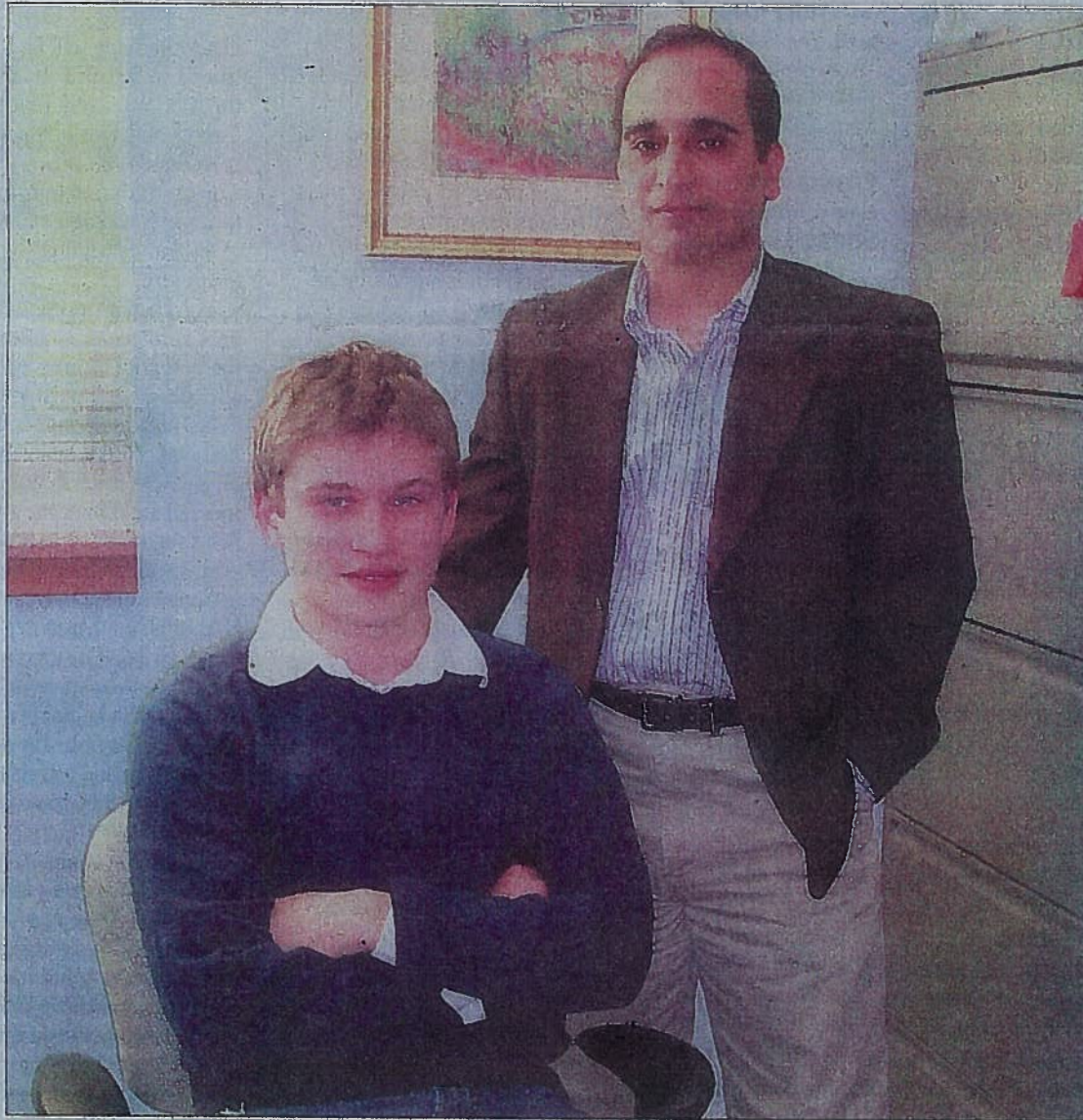
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## THS senior among nation's brightest young scientists



Talawanda High School senior Dmitriy Brezhnev (seated) received national recognition for his research last summer in a mentoring program with Dr. Amit Shukla (standing), an associate professor at Miami University. Contributed photo by Eleni Snider

### Student a semifinalist in science competition

By Eleni Snider  
Contributing Writer

Talawanda High School senior Dmitriy Brezhnev, 17, is one of 300 semifinalists for the 2009 Intel Science Talent Search, the most prominent science research competition for high school students.

Brezhnev completed his research report, "Nonlinear Dynamics of Curved Beam: Parametric Space Classification," last summer when he served as a research assistant to his adviser, Dr. Amit Shukla, an associate professor in Miami's Department of Mechanical and Manufacturing Engineering.

"I analyzed a simple simulation of the structures that make up the outside of an airplane ...

by the sound of the engines and the environment," Brezhnev said. He described his study as involving a hypersonic aircraft structure, which is five or more times faster than the speed of sound. Along with his study, Brezhnev ran tests to get different graphs to derive to his conclusions.

Shukla said neither this study nor the graphs has ever been done, creating a unique contribution from Brezhnev.

"He can understand mathematics at a very high level ... (this past summer) he was right on par with the seniors here at Miami ... it never felt like he was from the high school," said Shukla about Brezhnev.

The 300 students were picked from a poll of 1,608 high school students nationwide. Brezhnev

also is one of nine high school students in Ohio to be named a semifinalist in the competition.

Each semifinalist receives an award of \$1,000 along with \$1,000 given to his or her high school.

According to Shukla, Dmitriy's main achievement is researching a topic the Air Force is currently researching and being able to learn new techniques and science jargon in a 10-week period.

Although Brezhnev was not named as a finalist Jan. 28, his report has been submitted to an international science conference sponsored by the American Society of Mechanical Engineers.

Brezhnev said he is not sure where he would like to attend college in the fall, but said he wants to major in applied science.