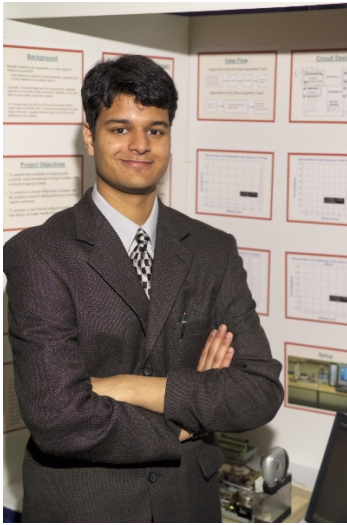


CWSF 2005 - Vancouver, British Columbia



Sarvesh Varma

Image Guided Robotic Needle Insertion

Division: Engineering & Computing Sciences

Category: Senior

Region: London District

City: London, ON

School: A.B. LUCAS SECONDARY SCHOOL

Abstract: A robot has been developed that locates a target for needle insertion using digital camera image processing. It analyzes forces acting on the needle during the insertion, providing a controlled motion that avoids unwanted tissue ruptures. This technology can be utilized in brachytherapy, biopsies and the treatment of prostate cancer.

Awards	Value
Honourable Mention - Engineering - Senior Sponsor: Youth Science Foundation Canada	\$100
Total	\$100