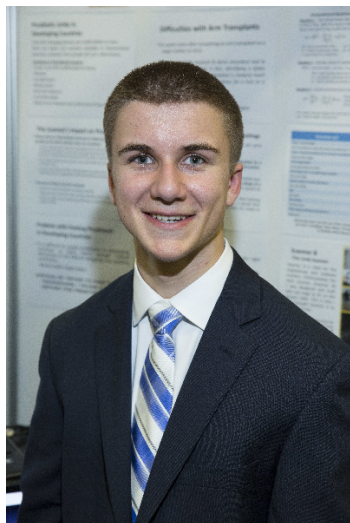


CWSF 2014 - Windsor, Ontario



Daniel McInnis

Picture This!: A Novel Approach to Limb Donor Identification & Prosthetic Design

Challenge: Innovation

Category: Senior

Region: Ottawa

City: Ottawa, ON

School: St. Francis Xavier High School

Abstract: By developing an improved method for low-budget structured light scanning, extremely high resolution 3D scans were achieved. This scanner has shown to be a valid option for making comfortable, but low-cost prosthetic limbs that are aesthetically accurate for the users wearing them. Also, this scanner is the first to show potential for being the correct solution for accurately matching donor limbs with ideal recipient amputees.

Biography

I spend a lot of time focusing on academics, but that's not all I'm up to. Whether I'm playing hockey, going for runs, hanging out with friends or trying to get my patented hockey and football helmet design to market, I'm constantly doing something. I don't really get any time to be "bored" and I absolutely love that! I would like to be a mechanical engineer when I'm older and possibly run my own business. I have strong interests in product design and in 3D modelling to really interpret and analyze all of my designs. I have been using SolidWorks 3D CAD software for a couple of years now and it has helped me at my summer job at an engineering company and also with this 3D medical scanner project. I think even with my keen focus in engineering, I am really driven by more. My motivation stems from "WHY I am doing something" and that helps me find inspiration for my projects or ventures. I always look to pursue something in the science and engineering field, but hope to find an idea that can help make a difference in the lives of others on a large scale.

Awards

Value

The Manning Innovation Achievement Award Sponsor: Ernest C. Manning Awards Foundation	\$500
The Manning Innovation Achievement Award and \$4000 Manning Young Canadian Innovation Award Sponsor: Ernest C. Manning Awards Foundation	\$4 000
Challenge Award - Innovation - Senior Sponsor: BlackBerry	\$1 000
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$700
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
University of Windsor Entrance Scholarship Grand Award Recipient - \$5000 Entrance Scholarship Sponsor: University of Windsor	\$5 000
University of Windsor Entrance Scholarship Senior Challenge Award Recipient - \$2000 Entrance Scholarship Sponsor: University of Windsor	\$2 000
Best Project Award Sponsor: BlackBerry	\$10 000
Total	\$45 200

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