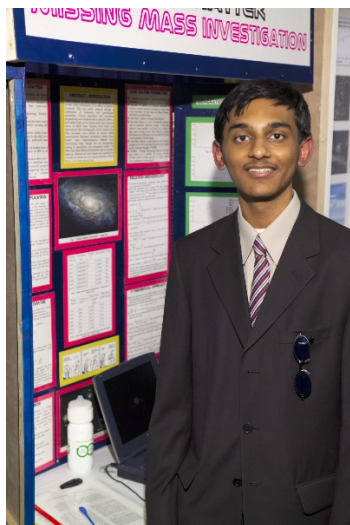


# CWSF 2005 - Vancouver, British Columbia



## Karthik Ramanathan

### Dark Matter: Missing Mass Investigation

**Division:** Physical & Mathematical Sciences

**Category:** Senior

**Region:** Toronto

**City:** Toronto, ON

**School:** Marc Garneau Collegiate Institute

**Abstract:** The existence of dark matter is suggested in galactic structures through the use of a unique algorithm. Luminosity, density, and mass relations were investigated to determine the ideal distributions of dark matter in spiral galaxies, pursuant to observed rotational velocity curves. Further, hybrids of conventional and classical theories were implemented.

| Awards  | Value   |
|---|---------|
| The Canadian Society for the Weizmann Institute of Science Scholarships<br>Arthur and Beatrice Minden Scholarship<br>Sponsor: The Canadian Society for the Weizmann Institute of Science<br>(Weizmann Canada) | \$8 000 |
| Petro-Canada Peer Innovation Award - Senior - Ontario South<br>Sponsor: Petro-Canada  | \$200   |
| The University of Western Ontario Scholarship<br>Bronze Medallist - \$1000 Entrance Scholarship<br>Sponsor: University of Western Ontario   | \$1 000 |
| Bronze Medal - Physical & Mathematical Sciences - Senior<br>Sponsor: Encana Corporation   | \$300   |
| Total   | \$9 500 |