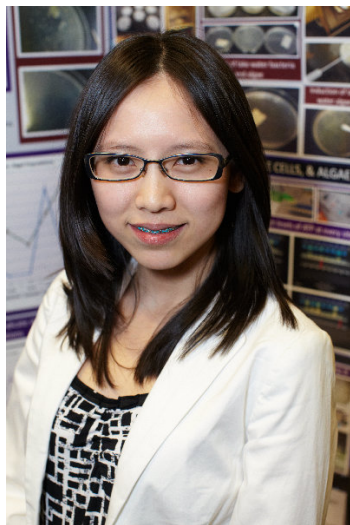


# CWSF 2012 - Charlottetown, Prince Edward Island



## Julia Ziyue Peng

### The Environmental Impact and Bioaccumulation of Pollutants in Wascana Creek

**Challenge:** Discovery

**Category:** Senior

**Region:** Regina

**City:** Regina, SK

**School:** Campbell Collegiate

**Abstract:** In 2011, Regina's Wascana Creek was amongst the most polluted in the world. Water samples were collected and analyzed for organic pollutants, showing stabilization after 3 days. The induction of lakewater into algae cultures indicated a significant increase in algal population. Bacteriological water analysis was then performed using prototype BART biodetectors for active cell and algae populations along with ATP levels to investigate growth causation.

#### Biography

Julia Ziyue Peng is a tri-lingual IB Diploma student at Campbell Collegiate in Regina, Saskatchewan. Her keen interest in science developed after competing at nationals the previous year. Apart from science, she is heavily involved in leadership, mathematics, speech arts, visual arts, and business. She has been published in international math magazines, such as the *Crux Mathematicorum* journal. She also travels extensively to compete in speech and debate tournaments, including the CanWest Speech Nationals and the National Debate Seminar. Her experience with leadership started with her role of student body prime minister, and she recently spent two weeks travelling her province on the Lieutenant Governor's Leadership Forum. In addition, she is a business and entrepreneurship enthusiast, participating and winning in case competitions and national econ conferences. She fosters a passion for arts, having been provincial champion and national finalist for several art contests. She is the student leader of her school's Social Justice club, and is currently founding a charity. Julia has always excelled in academic fields, having attained one of top 3 academic averages every year. She is on the Youth Advisory Council, and aims to pursue a career in international affairs or international...

#### Awards

#### Value

Statistical Society of Canada Award	\$1 000
Sponsor: Statistical Society of Canada	
<b>Total</b>	<b>\$1 000</b>