

**Where are they now?**  
**A former grad student fills us in!**

**Perspective: An adopted First**  
**Nations woman shares her story!**

# The Gradzette

university of manitoba's graduate student magazine • november 2008 • volume 25 , issue 1



## **The Gradzette is BACK!**

### **Featured:**

- > A new concept for Winnipeg's waterways !**
- > Perspective: A New Beginning in Canada!**
- > Canada, according to its philosopher king!**
- > How to achieve a killer conference presentation! AND MORE!**

## Contributors This Issue

Andy Bonar - Karine Duhamel - Kyle Gibson - Corey Greenham - Suresh Neethirajan - Maggie Penfold - Bryan Penfound - Pavitra Rajan - Mallory Richard - Mickey Sahib - and the members of the GSA executive.

The *Gradzette* is published four times per academic year by the University of Manitoba Graduate Students' Association (GSA). It provides information for and about graduate students in all disciplines, and serves as a place for U of M graduate students to share their work and ideas with wider communities — both at the U of M and beyond. Opinions expressed in letters and articles are solely those of the authors.

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Submissions and suggestions regarding content are welcome. Please include your name, telephone number, and student number with all correspondence.

## Contact the Gradzette

c/o the Graduate Students' Association  
221 University Centre,  
University of Manitoba,  
Winnipeg, MB R3T 2N2  
phone: 204.474.9181  
fax: 204.474.7560  
email: [Gradzette@umgsa.ca](mailto:Gradzette@umgsa.ca)

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## Cover and index Photos

Pavitra Rajan, Assiniboine Park in the Fall

# Notes from the editor

**Karine Duhamel**, *Gradzette* editor

Ahhh, the fall! The excitement, the new books, the heart full of enthusiasm and students bustling with initiative! It is all very exciting-- but like all good things, this too must come to an end.

As all grad students know, September is a breeze, October is mildly annoying, and November is just, well, horrific. This issue of the *Gradzette* then, is an attempt to make all of you CALM

**You are the few,  
the privileged,  
the academic elite--  
you are GRAD  
STUDENTS!**

DOWN, TAKE DEEP BREATHS and SMELL THE ROSES! Come on people, you are the few, the privileged, the academic elite-- you are GRAD STUDENTS! Undergrads stare at you with eyes brimming with admiration, department members have already decided you are worth their time, and let's face it-- you know you rock!

This will also be my first issue as new Editor of the *Gradzette*, and I come to this position like I came to class on that first, crisp fall day-- full of enthusiasm, excitement and happiness. I am proud to be working on a publication for grad students, by grad students, which promises not only to look at serious issues, but also to try to entertain you, make you laugh, or just give you something to read when you are sick of all the academia!

The diverse contributors to this issue of the *Gradzette* come from many different faculties, backgrounds, and even different countries! From a self-admitted 'old fogey' to a new grad student experiencing Manitoba for the first time! From a great book review—as if you had time to read for fun-- to a how-to to ensure any conference presentation you do is a success! Check out what your GSA executive have to say, and read this month's research profiles to discover some exciting project going on in our midst!

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Above all, though, take time to read this issue, to enjoy it, and to consider joining our team as a contributor for upcoming issues. If there is something you're passionate about, mad about, or just like to read something you yourself has written, please contact me, or join my Facebook group to have your say!

I look forward to bringing you several exciting new issues throughout this school year, and hope you enjoy this-- the inaugural 2008-2009 issue of the *Gradzette*. This is our attempt to make the graduate community just a little bit smaller, so take the time to take a break, and find out what's going on in other areas. Laugh, cry, or rant- either way, we hope you are entertained!

# Research Profile:

## Nanotechnology can help farmers, too!

*By Karine Duhamel, editor*

**Science junkie? Love Bill Nye, the science guy? Mythbusters aficionado?**

**Check out this new exciting strand of scientific research being done right here at the University of Manitoba!**

What they are:

**Smart Nanosensors**

Who is working on it:

**Suresh Neethirajan, Department of Biosystems Engineering**

Why is this technology important:

Every year, millions of dollars worth of grain and oilseeds are lost to spoilage. While there do exist parameters to detect spoilage inside a grain bulk, there are currently no efficient quality monitoring systems available for farmers.

How it works:

Nanotechnology is an avenue being pursued in the hopes of reducing these annual losses for farmers. Nanotechnology is the engineering of systems at a molecular scale, and nanotechnology is essentially very very tiny technology on a nano scale, that is 80,000 times smaller than the width of a human hair. Anything smaller than a hundred nanometers is considered nanotechnology.

Neethirajan, along with Dr. Digvir Jayas, is working on the development of a sensor which uses nanotechnology and microelectronics to help farmers understand why their stores spoil. In other words, the smart sensor chip, a device the size of a sugar cube, would be an early warning system that could provide information on the source of spoilage, from insects to fungi. In turn, this could help farmers take appropriate quality control measures much earlier on, and would lead to reduced spoilage of the harvest.

Though this sensor is still in development, Neethirajan anticipates having this device in use within the next couple of years. A stand alone device, it could be used without a computer or software and integrated into actual thermocouples inside the grain bulks. In addition to being a marvel that could help reduce waste, the smart sensor would be sensitive, power smart, affordable and monitorable online. Its applicability, once used in the grain and oilseed context, could also be extended to other industries such as dairy, fruit and vegetables.

Real-world application:

Aside from the obvious benefits to the farming industry, this technology could impact you. Why does this matter to me, for example? Well for starters, haven't you ever gone to buy yourself a nice bin of mandarin oranges from Safeway only to realize that half the box is rotten? As a fan of both mandarin oranges and Safeway, I get awfully tired of this around the holidays when all I want is a sweet sweet vitamin boost!

*Working on a great project and want to see it translated into extreme laymen's terms for the non-scientifically literate? Working on an arts project and want to wow us with your mastery of complex Foucauldian jargon? Write up a profile of your research and email to the editor at [gradzette@umgsa.ca](mailto:gradzette@umgsa.ca).*