

NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC
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A Most Boring Subject?

by Leigh Cummings

Everybody has heard the expression “writers block,” used to describe when someone cannot seem to get started on a writing project. It describes what I have experienced over the last couple NOVA issues, if I actually considered myself a writer. Ever since our last council meeting, I have been trying to come up with something to write as it seems I had promised Gordon an article for our NOVA. Last week an idea came sliding through my mail slot.

My annual house insurance renewal documents had arrived. As I reviewed my coverage and costs it occurred to me that I get asked from time to time by the public and fellow members about the risk of

bringing equipment to public events. On a more general note, council had a recent discussion about our club coverage at public events. That



got me thinking that maybe I could write, if not an informative article, at least one to help you fall asleep at night.

First I should clarify our clubs insurance a little. RASC national provides us with insurance coverage for the club at all events that we attend.

As long as we supply to the provider information on location and type of event we are presenting, we have coverage. The coverage we have is for liability claims only. In other words, we are protected from lawsuits arising when a member of the public suffers an injury attributable to us. The same holds true if a member has just cause to sue one of us for causing injury during an event. What is not covered is if you suffer

an injury at your own hands or through accidental causes. For example, if you trip over your own equipments or walk into a tree in the dark.

So how do you protect yourself from injury or loss caused by accident, yourself,

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Image by Alan Cleaver

MARCH 9

Jon Willis, Assoc. Prof. of Astronomy at UVic: “All These Worlds Are Yours: The Scientific Search for Alien Life.”
Room SWH10041

SFU

SFU

APRIL 13

Members’ Night, featuring short talks from several Vancouver Centre members. Room SWH10081

SFU

SFU

NO MAY LECTURE

Instead, join us Saturday, May 13 for Astronomy Day.



Mars, Moon and Venus by Phil Porter

A beautiful sight on the evening of Feb. 1st. Rokikon 85mm lens at $f/2$ on a Canon 6D at ISO 320 for 1 sec. Photo cropped and contrast enhanced with GIMP.

President's Message

Spring is in the air. The weather is less frigid and, fingers crossed, we will have some warmer, clearer nights in the coming months. Although—typical Vancouver—we will likely have a very wet spring but here's hoping otherwise.

As happens every year, the spring also brings us numerous invitations for RASC Vancouver to attend public

events. Within the last month, our event calendar has already booked up through to the end of September. Our ongoing and successful partnership with Metro Parks means we will again be at the Night Quest event at UBC Pacific Spirit Park in March and the Perseid Meteor Shower event at Aldergrove Park in August. But we also have some new invitations this year includ-

ing Club Day at the Vancouver Public Library (also in March) and the Salm-on Fingerlings Festival in Port Moody for May. Take note that Council does try to limit our events to no more than two a month so as not to suffer "volunteer fatigue."

We also have our biggest event of the year coming up, International Astron-

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by Suzanna Nagy

About RASC

The RASC Vancouver Centre meets at 7:30 PM on the second Thursday of every month at SFU's Burnaby campus (see map on page 4). Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$78.00 per year (\$45.00 for persons under 21 years of age; family memberships also available) and can be obtained online, at a meeting, or by writing

to the Treasurer at the address below. Annual membership includes the invaluable Observer's Handbook, six issues of the RASC Journal, and, of course, access to all of the club events and projects.

For more information regarding the Centre and its activities, please contact our P.R. Director.

NOVA, the newsletter of the Vancouver Centre, RASC, is published on odd-numbered months. Opinions expressed herein are not nec-

essarily those of the Vancouver Centre.

Material on any aspect of astronomy should be e-mailed to the editor or mailed to the address below.

Remember, you are always welcome to attend meetings of Council, held on the first Thursday of every month at 7:30pm in the Trotter Studio in the Chemistry wing of the Shrum Science Centre at SFU. Please contact a council member for directions.

2017 Vancouver Centre Officers

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Trustee Pomponia Martinez
Honourary President J. Karl Miller

Library

The centre has a large library of books, magazines and old NOVAs for your enjoyment. Please take advantage of this club service and visit often to check out the new purchases. Suggestions for future library acquisitions are appreciated.

On the Internet

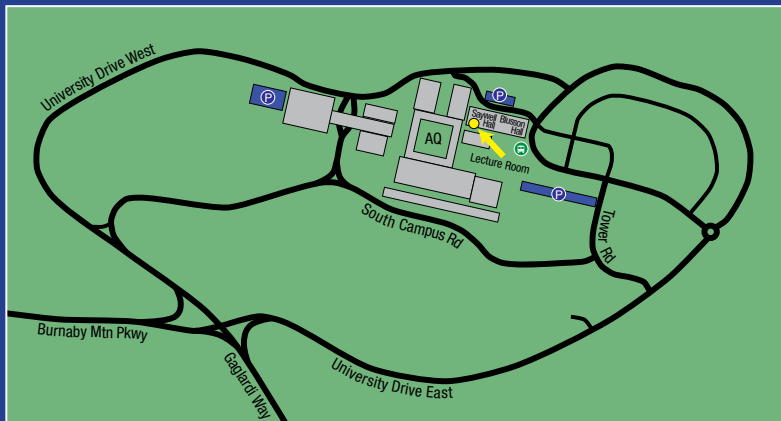
<http://rasc-vancouver.com> or
<http://www.rasc.ca/vancouver>
<http://astronomy.meetup.com/131/>
<http://www.facebook.com/RASC.Van>

 @RASC Vancouver

Mailing Address

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Map to Meeting Site



Our March meeting is in room SWH10041 of Saywell Hall, about halfway down the main corridor. The April meeting is in SHW10081, indicated by the arrow on the map.

Pay parking is available at several locations located around campus (indicated as "P" on the map).

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omy Day, on Saturday, May 13, and we will require a small army of 40 volunteers in order to pull off the event.

As always, members of your Council do our best to attend each event, but, as we also have our own Council duties to perform, we rely heavily on our member volunteers to supplement participation.

As I mention at every meeting, I would love to see more of our membership consider getting involved. Volunteering is truly a lot of fun and

a great way to further your love of astronomy by sharing it with others. You can volunteer as much or as little as you wish. Even if you can only volunteer once or twice a year, that is very helpful too. Volunteer duties include engaging with the public, handing out promotional materials, manning a telescope, giving powerpoint presentations, hosting a display booth, or assisting children with a craft activity. We always take into consideration a volunteer's preference because not everyone likes to do crafts with children or not ev-

eryone owns a telescope. As the duties vary widely depending on the nature of the event, so does our need for assistance from our volunteers vary as well.

If you are interested in getting involved with your RASC Centre more than just attending a monthly lecture, please do not hesitate to reach out to me personally at a meeting, or via email. Alternatively, you can also reach out to our Event Coordinator, Jeremy. Contact details are located on our website at www.rasc-vancouver.com.

★



Teen Tuesday at Science World on Feb. 7, where crowds were small due to the snowstorm. From left to right are RASC volunteers Francesca, Karl, Milan and Wilfred. Photo by Jeremy van den Driesen.

Astronomers in Petticoats

by Bill Burnyeat

Our previous National reports, all across the country, meetings of our club are dominated by grey-haired males, and, in spite of efforts to attract youth and women, things aren't improving.

Why are so few women inclined to take part in astronomy clubs? The new fetish of computer generated pleasantries has been blamed for making the world increasingly obscure since reality now has competition. Yet, the astronomy club as a male preserve has been the case for

decades. The computer's bad karma explains nothing.

In the hunt for a better explanation, I began to suspect that the female avoidance of club meetings may be a subset of a general malaise felt by

women towards a sort of male approach to the world.

A personal, but I hope not self-indulgent, example slowly came into focus. When I was a child, there was a sort of local hero who lived across the



Taurus and the Pleiades. Credit: T. Credner & S. Kohle, AlltheSky.com

street in a small, plain house with roses in the garden. An old man puttered about in the garden and was known to us youngsters as an old time ball player who played in the days of Babe Ruth and Ty Cobb.

Old Mr. White was not one to boast of his achievements; he was a man of very few words. When my father, a long time baseball fan, tried to engage White in across-the-hedge banter about the old days, he found the old man would just nod and, turning away, talk about the outlook for his roses. This reticence only added to the mystique.

The old man was a sort of community symbol linking the neighbourhood to the greater world and pointing to intersections between the rows of houses and the great beyond. It told us that important things were indeed taking place beyond our homes but that we were not divorced from the rest

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Membership has its Privileges!

New members, did you know? The Vancouver Centre has several telescopes available for loan free of charge! We have telescopes ranging from 60mm to 10" in diameter. For more information see the Director of Telescopes after the members meeting. The loaner period is for one month, to be returned after the next meeting. Telescopes are not allowed to circulate outside of these meetings. You

can now reserve two different telescopes per year and use what is left at the end of the meeting anytime.

Your greatest opportunity as a member of the RASC is to take advantage of the company of other enthusiasts to increase your knowledge, enjoyment and skill in astronomy.

The best thing you can do to gain the most from your membership is to get ac-

tive! Take in the club meetings; engage other members with questions; come out to observing sessions (also known as "star parties"), and, by all means, volunteer to take part in our many public events.

For the usual observing sites and times, visit our website at <http://rasc-vancouver.com> or contact the Observing Chair at observing@rasc-vancouver.com.

Upcoming Events

March

25 – Night Quest at Pacific Spirit Regional Park

May

13 – Astronomy Day at SFU

June

30 - July 30 – RASC General Assembly in Ottawa

July

22 - 30 – Mt. Kobau Star Party

August

12 – Perseid Meteor Shower at Aldergrove Lake
19 - 26 – Merritt Star Quest

December

14 – AGM

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or some unknown agent? First and foremost you should have medical coverage. In BC we all should have basic medical coverage. I recommend having additional coverage, especially if you are travelling to star parties or have medical conditions that might require you to be transported from a remote site. You do not have to be old to fall into this category.

I get asked quite often about coverage for equipment. I recommend you talk to your insurance broker about additional coverage on your home owner's or renter's insurance policy. Most people think of jewelry when they think of something being added to their policy, however I find that it is relatively inexpensive to add such things as cameras, laptops, cell phones, and astronomy equipment. The insurance company I deal with charges \$2.00 per \$100.00 of all perils coverage on listed items. For \$5000.00 worth of coverage that works out to \$100.00 per year. For that price, my deductible for these

items is lowered to \$100.00 per claim compared to \$1000.00 for the home insurance claims in general. Also it is all risk insurance, which means that even if something is lost or falls overboard or is left behind, you have a good chance of making a successful claim. I once left my camera bag with all its content in a parking lot. I had taken it out to pack other items and didn't put it back in. I was halfway home before it struck me that I hadn't repacked it. I immediately drove back and by then the store was closed and the lot empty. To my amazement the camera bag was sitting out in the open for all to see. I couldn't even blame my age then.

It takes a little bit of work to get this coverage on your policy. With jewelry, we all know that it has to be independently appraised. We also have to show replacement value for the other items we insure. The internet is a real help here as you can search out your equipment (or modern replacement) and print a page with pricing to prove the value you wish to insure for. Supplying

photos of your equipment to your agent is also a good idea. The agent will keep them on file for you in case you have to make a claim in the future.

I know that everybody loves to hate insurance. I have been fortunate that all my dealings with insurance companies has been pretty cordial throughout my life. Even my few claims with the much-maligned ICBC have all been reasonable and pleasant. If you do your homework and back up your claims with documentation and reasonable explanations of why a claim came about, I find most companies have treated me very well. We have a tendency to think of insurance premiums as a waste of money, but I think of it as gambling in reverse. We only win the insurance lottery when we lose in life. When we buy a lottery ticket we are playing absurd odds that we will have a winning ticket. The odds of cashing in on the insurance ticket are actually much better, so I recommend that you bite the bullet and buy yourself a little piece of mind. Good night now. *

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of the culture since, right in our backyard, we had a hero dropped into our midst from an exalted plane.

Years went by. The old man died and I used to see Mrs. White in the garden and she would always wave to me. More time went by and I moved away. As a young reporter, I mentioned our neighbour to someone in the sport's department. He had access to a complete list of everyone who ever suited up and played, even for one inning, in the Major leagues. The old man's name was not included even going back to the 1890s. At first I was exasperated but, soon, I understood that it didn't really matter. No list or catalogue could show or prove that I lived in the neighbourhood, too. The list just was another piece of information in a world that can't be summed up by lists. My talks with my father about the old days of ball, my throwing and catching in the field with boyhood friends, none of these precious memories are undercut by the verdict of an abstract and impersonal authority represented by the list. Absent from the list was the smell of a new baseball glove, the grass and the sunset as the ninth inning excitement overcomes the day.

And in this, is a clue to the initial complaint. Saturn is a wonderful sight in the small telescope but its wonder and

the individual circumstances of its sighting don't appear in the handbook. Nor does the sight of Vega, a point of white coming out of the darkening sky, benefit from the information that the star has a velocity in approach or recession of so many kilometres per second.

A few years ago, Simon Fraser University's "over 55" programs offered a course called: "Astronomers in Petticoats," the story of a little-known group of women astronomers and popular writers who had a great influence on stargazers and yet are almost unknown today. The writers flourished between the later 19th Century and about 1950 when this sub-genre faded and was not replaced by fresh women writers.

An entry into this group is difficult but 40 years of haunting old book stores and peeking into boxes of books whose dust-covered contents have been hidden from eyes for decades has allowed this writer to uncover the group.

Mary E. Byrd (1849-1934) is an excellent choice to begin this survey. In her *First Study of Heavenly Bodies* she outlines the issues in the following anecdote:

"It is a pleasant memory that has staid with me for years, the memory of two young girls as they came into the observatory study one morning to inquire about course 3 in astronomy. They seemed really

interested in the subject and it puzzled me why they hesitated. Then I understood. They feared that if they studied the stars according to the ways of science, they would lose them as friends." (Byrd; 1920).

That a small group of stars in Taurus, the famous Pleiades, cast fear into snails in the garden sending the little visitors into a headlong rush (albeit at a few centimetres per hour) is mentioned by early Greek writers but dredged up and repeated by Miss Mary Proctor, one of the astronomy writers.

Does she or anyone think the snails really look skyward, spot the offending stars and in obedience to some antediluvian squabble fly from their sky-borne enemy? No. No one thinks this, least of all Miss Proctor. The story points to the fact that the Pleiades rise and drift through the sky to introduce winter. Their appearance marked the end of the navigation period in the Mediterranean, the time when boats were hauled up onto the beach for winter. The snails too, marked the onset of winter but it was cold and not the seven sisters that drove them away. But the cold cannot be seen nor measured in the time of the story but the stars were on hand as silent witnesses to the change in the garden. How much more fun to think the snails were at least astronomi-

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cally sensitive enough to spot the star they should stay away from. This draws a visible connection between the sky and the earth and makes understandable the connection between earth and the upper air. The Pleiades and the garden make a kind of system both of information and values like the old man in his garden I enjoyed as a boy. The stars are not far away and irrelevant except as another body to be inventoried. Keats said science would unravel the rainbow and enter it into a catalogue of dull things.

This type of narrative, from snail to star, is spun to perfection in a certain type of mind and, it seems, a female body. At least that is the thesis of the astronomers in petticoats followers. Although many males write interesting books, none tell the story of the sky in such personal and engaging ways.

The point is to make a connection between the increasingly dwarfed individual and the largest possible meaningful array: the whole cosmos.

Alice M. Earle, wrote of sundials and roses gardens: Why is the sundial so much more pleasing than an illuminated digital readout?

“The sun-dial is a creature of equal sentiment and sense. Its good sense is proven by its being so perfectly satisfying, so absolute. You may deem

its sphere a restricted one, its message a short one; but it fulfills its duty, and tells its story to perfection- it is satisfying.” (Earle; 1922).

She is another writer with an eye to the undefinable interest in things whose simple form mirrors function in ways in which modern devices never achieve. The sundial is a model of the solar system as well as an attractive ornament. The two things go hand in hand and never conflict.

This is not to say this little genre is lacking in rigour or precision. The book also contains do-it-yourself instructions on making your own sundial and there are two versions—one for the educated and a simplified one for the math-phobic.

Mary Proctor’s *Evenings with the Stars* tells of the “surprising ray” of Alphecca, brightest star in the Northern Crown. Why surprising? It seems that the star’s standing out from the other six make it attention grabbing and, like all brighter stars, it twinkles and shimmers, giving off rays more than the neighbouring faint stars.

This reminds me of another ray. It was the “adventitious ray” of Galileo. The surprise recalls one of the simplest observations that can be made of the nighttime sky: all stars are not equal in brightness. Why should this be? The next thing to observe is: are brighter

stars larger than faint stars? Surprisingly, faint and bright stars appear just as large, as a simple test can reveal. From my observing station near the beach in Kitsilano, I can look out over English Bay and see the lights on the north shore. It’s at least five kilometres from where I stand to the lights. These lights seem to be the same size as stars. The size of a bright, remote object is fixed by the diameter of the human eye. All stars are of the same size but the “surprising ray” fools us, making it seem bright stars are larger than faint stars. It was Galileo who first investigated this problem. Holding a thin string and letting it hang from a tree, he calculated its apparent size, in angular measure, from his spot of observation. He waited until a star just approached the string, and, holding one hand over an eye looked with his remaining eye and saw the star disappear behind the string although appearing much larger until it was so hidden. Galileo concluded that stars are, for all practical purposes, like a mathematic point and will always be hidden behind a small terrestrial feature. I have duplicated this myself in and have seen stars hide completing behind distant telephone wires even though they sparkled away and seemed larger than the thin cable they were completely concealed by. The thinnest wire will conceal the

body of the star.

The surprising ray leads into the depths of astronomy, stitching a little history lesson out as the consequences of following a line of inquiry that starts with a chance remark or a portion of an early belief. Just as Galileo has his adventitious ray, these women writers have an adventitious story that leads us far. A piece of data, no matter how factual, leads nowhere unless it's merely to the next item in the list.

All of these artifices, rather than leading astray, go into the heart of the matter, unearthing, albeit in the cosmic field, new perspectives, shards of meaning which, growing out of one beat, are amplified into fresh takes by free associations.

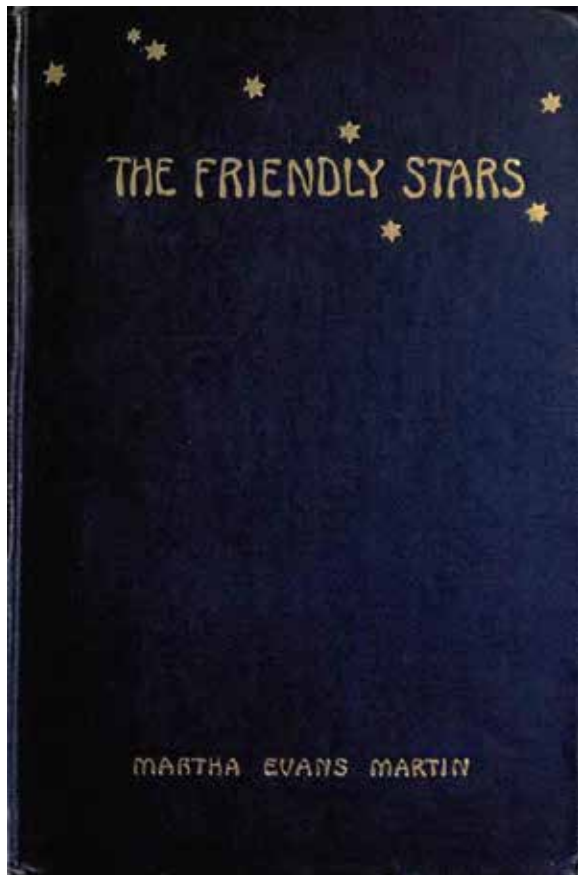
An example is taken from Miss Proctor's book:

Simon Newcomb was traveling on an ocean liner when, from a deck chair in the evening, he chanced to spot Vega high above. He began to calculate in his head the speed of the vessel and how many hundreds of millions of year might elapse if the vessel could upend itself and travel with undiminished

speed all the way to the star.

Then, he realized that his fantasy was based on fact, for the earth, and at a higher speed than any ocean going vessel, is in fact on a journey with the

How different this is from the usual plodding from fact to fact and then to another fact: all correct but leading not to wonder but to another series in a list.



These writers also include Florence A. Grondal, *The Romance of Astronomy* (1926), Alice Morse Earle, *Sundials and Roses of Yesterday* (1902) as well as *The Friendly Stars* by Martha Evans Martin (1907). Only this last book is easily found today.

The origins of these books is in a type of nature essay where personal experiences, thoughts and reflections go hand in hand with observations. Masters of these essay forms were Henry David Thoreau, John Muir and the nature writers whose subject was the American forest and field.

In *The Friendly Stars*, Martha Martin (1907) calls the rising of the stars an event of recognition and greeting. Martin takes the visibility of stars rising as the object of explication. She is not big on constellations, those confusing patterns of stars that usually only old hands will know. The rising of a star as it passes

sun and entire solar system rushing to an unknown port at Vega.

It is this type of cascading fancy that takes the astronomical thinker on journeys not arbitrary nor divorced from reality but offer a gauge encouraging new aspects of the problem to come forth freely.

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into the densest regions of the atmosphere is extinguished and only bright stars can be seen when rising. The lack of pale and faint companions makes the bright one stand out and aids to its identification. The star is an actor in the universe, Martin sees, whereas the constellations are mere stage props, signifying nothing. As John Dobson says, the constellations are not objects in astronomy—they get too much press.

Why are these women writers now sidelined? It seems to have come about soon after the Second World War, in a large expansion of university attendance. This, by itself, was a good thing but it brought in its wake a sort of insistence on credentials and more and more “authorities” based on university degrees came to be needed to comment in prose on the

stars. This had two grave effects. First, the university was male, until recently, and so the women writer, or would-be writer, was at a disadvantage. Secondly, and more important, the mental attitude of positivism gained, by default, to be the new model for literary form. Some women, it is true, came up and through the system; Helen Hogg, for example, and a few others write books much like others in the tradition of academia. So the women can write like men but the reverse does not seem to be true.

The tradition of the women writers grew up after local historians, folk beliefs and the history of small places, the garden and the local church attracted literate ladies with time on their hands and a desire to impress the lives they lead onto the page. The notion that the writer must be a pro-

fessional with fear of faculty club taboos was not in the air; the pen was not yet enslaved to business and the status quo.

Resistance to a manacled approach is illustrated in the story of Mary Byrd. She was the daughter of an abolitionist who opposed the slave trade in their home state. Mary imbued the radical politics of her father and after becoming director of the Smith College observatory, and at the height of her career, she abruptly quit in protest after Carnegie and Rockefeller, the Donald Trumps of the day, donated money to the college, funds she believed would compromise the independence of the institute.

The old, if recycled, can be fresh once more. What is needed is a return to a narrative that can be both seen and felt. Who will take up the cause? *



More from Teen Tuesday at Science World on Feb. 7. Here, Francesca and Karl are chatting with Samsara Marriott, (Science World's event coordinator, supreme). Despite the snow, a good time was had by all, especially when the Sun peeped out and Karl delighted a few people with views of solar flares and a couple of sunspots.

Photo by Jeremy van den Driesen.

Members' Gallery



Mars, Moon and Venus by J. Karl Miller

Another shot of the conjunction, this time captured on Jan. 31. Notice the earthshine in the “dark” parts of the Moon.



Saturn, Titan and Rhea by Ken Jackson

A composite image of Saturn with two of its moons taken with a Celestron Edge HD8 and ZWO ASI 224mc camera on Jun 29th, 2016. Stacked 500 frames for Saturn and combined it with stack of 1500 frames for the moons.



Club Day at the Vancouver Public Library on March 4th. Representing RASC–Vancouver on that Saturday were council members Kenneth Lui, Elena Popovici (above) and Suzanna Nagy (right).

