

Monthly Review

January 2014

PPC Director



Mark Martinez, P.Eng, Professor of Chemical and Biological Engineering takes over as Director of the Pulp and Paper Centre as of January 1, 2014. Director of UBC's Advanced Papermaking Initiative, Martinez received the BCIC Lieutenant Governor's Award for Innovation and an NSERC Synergy Award with Canfor and Advanced Fibre Technologies Inc. His research focuses on the behaviour of papermaking fibre suspensions. He collaborates with researchers in Mechanical Engineering, Mathematics, TRIUMF and with industry and government partners.

We wish Professor James Olson all the best in his new post as Associate Dean for Research and Industrial Partnerships at the Faculty of Applied Science.

New Faces



Jorge



Nicholas



Masoud



Xiangwei



Solmaz

Please join us in welcoming some new faces to the Pulp and Paper Centre

Jorge Rubiano

PhD candidate in Chemical and Biological Engineering under the supervision of Professors Mark Martinez and James Olson. Jorge is also a Research Assistant at the PPC working on the Energy Reduction Project, specifically on the advanced fractionation and low consistency refining project.

Nicholas McIntosh

MASc student in Chemical Engineering under the supervision of Professor Mark Martinez. Nicholas will be working on the Energy Reduction Project, specifically on the fibre separation through low energy processes project.

Masoud Daneshi

PhD candidate in Chemical and Biological Engineering under the supervision of Professor Mark Martinez. Masoud will work on the "Visualization of Motion of Particles in a gel" as his PhD thesis.

Xiangwei Liu

M.Eng student in Chemical and Biological Engineering under the supervision of Professor John Grace. Xiangwei will be working on the cyclone separator project, specifically on the CFD modelling of cyclone vortex finder.

Solmaz Fard

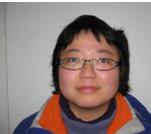
Solmaz is a PhD candidate at AIT University in Thailand. She is doing part of her thesis at UBC's Mechanical Engineering as a Visiting Scholar under the supervision of Professor James Olson. Solmaz will work on "Developing filter paper for production of safe drinking water" as her PhD thesis. This work aims to produce inexpensive antibacterial water filters with higher efficiency by creating a novel foam formed filter and handsheet with various porous structures and basis weights which must be water resistant. She aims to improve the antibacterial properties by adding nanomaterials.



New Faces cont.



Farzaneh



Wanjing



Minhee

Farzaneh Jalalinejad

Farzaneh is a recent PhD graduate from Chemical and Biological Engineering. Currently a Postdoctoral Research Fellow working with Professor James Olson and Mark Martinez, she will perform theoretical and computational modeling of the performance of an LC refiner.

Wanjing Xu

Wanjing joins us as a recent PhD graduate from Chemical and Biological Engineering. Currently a Postdoctoral Research Fellow working with Professor John Grace and Professor Loretta Li.

Minhee Kim

Minhee received her PhD from Korea University in 2011. Currently a Postdoctoral Research Fellow in Civil Engineering working with Professor Loretta Li and Professor John Grace (CHBE), she will work on "Estimating physicochemical properties of the full array of Perfluorinated Compounds (PFC's)".

Awards & Achievements



Pictured: James Olson, John Hepburn, Greg Rickford, Wai Young, Vancouver South MP; Mark Martinez.
Photo: Darryl Dyck, Canadian Press

NSERC Strategic Project Grant

Mark Martinez, Director of the Centre and Professor in Chemical and Biological Engineering was awarded an NSERC Strategic Project Grant. Martinez and his colleagues, Professors Olson, Frigaard and Bamforth, will seek to develop a production pathway to manufacture microfibrillated cellulose (MFC) from wood pulp. MFC is a green, sustainable material and the proposed research aims at developing the understanding to manufacturing this sustainably, inexpensively and in large quantities. Since MFC has the potential to displace a number of fossil-fuel derived consumer products that are not environmentally friendly, the team hopes to ensure that Canada leads the inevitable 'green' bio-economy revolution with a transformative technology applied to the Canadian pulp and paper industry. The team will combine scientists and engineers, in conjunction with local Canadian industrial sponsors. The funding was announced on January 9th by Greg Rickford, Minister of State for Science and Technology, along with UBC President Stephen Toope, Vice President Research and International John Hepbrun and NSERC Chief Operation officer Janet Walden.



Pictured: John Hepburn, Janet Walden, Madjid Mohseni, Greg Rickford, Wai Young, UBC President Stephen Toope.
Photo: Darryl Dyck, Canadian Press

NSERC Strategic Network Grant

At the same January 9th announcement ceremony, PPC Faculty Associate Madjid Mohseni received renewed funding of \$4.8 million from the Strategic Network Grant to continue developing innovative and affordable solutions for clean drinking water in small, rural and First Nations communities through the RES'EAU WaterNET network. For more information on the network, visit: <http://www.reseauwaternet.ca/>

PPC Safety Inspection Award

Negar Mirvakili is the latest recipient of PPC's Safety Inspection Award. Granted four times a year by George Soong, Safety & Operations Officer, the award encourages PPC occupants to keep their lab area neat, tidy and safe.



Publications

Journals

Rajabi Nasab, N., Mithrush, T., Olson, J.A. & Martinez, D.M. (2013), "Turbulent flow between two parallel corrugated walls: The case with motion of one wall perpendicular to the corrugation cavities", Canadian Journal of Chemical Engineering.

Newsletters

Ata Sina, PPC researcher and master's student in Mechanical Engineering is featured in the current issue of **Ingenuity** (Fall 2013/Winter 2014). Ingenuity is a magazine for UBC Engineering alumni and those interested in engineering. It is produced by the Faculty of Applied Science and reaches 30K readers.

The feature article elaborates on Ata's research on self-folding 3D paper designs and various applications that can benefit from this novel technology. Ata's 3D snowflake design - similar to the one used for PPC's 2013 Holiday cards - is featured on the cover of the magazine! Grab a copy of Ingenuity for the full article or visit the PPC website. Congratulations to Ata on this feature.

The Energy Reduction research group released a new issue of their newsletter in January. It is an update for the consortium of partners and includes information on mill visits, recent hires, publications, and other updates on the project.

To find out how to become a sponsor or to get involved in the project, please contact Professor James Olson at james.olson@ubc.ca



Pictured: 3D Snowflake design
Photo: Martin Dee

In the Media

University of British Columbia research in areas such as wearable electronics, fish ecology and oil spills received a \$9 million boost through the Natural Sciences and Engineering Research Council of Canada (NSERC). The funding was announced on January 9th - including grants to Mark Martinez, PPC Director, and Madjid Mohseni, PPC Faculty Associate (see *Awards & Achievements*).

Some wonderful stories made the news by various media outlets:

Globe and Mail

Vancouver Sun

The Province

Vancouver 24 Hours

Other Canadian Press includes: Huffington Post, Maclean's on campus, Times Colonist,

Calgary Herald, City News (Toronto), Metro, News 1130, CBC French

India Education Diary

Updates



Pictured: Nici Darychuk & Subhashini Vashisth at the APSC United Way Pumpkin Carving competition.

2013 United Way Campaign

The 2013 UBC United Way Campaign raised a grand total of \$495,454.31 - a combination of special event funds and pledge form donations - amazing!

Applied Science hosted a number of fun events including a Turkey 2K Trot, a Pumpkin Carving competition and a Bake Sale. Our own Subhashini and Nici came in 2nd place at the Pumpkin Carving contest for their spooky take on a baby dragon. APSC participants and volunteers contributed greatly to the overall success of the campaign, but equally important, built community engagement within Applied Science.

If you are interested in volunteering in the upcoming 2014 campaign - all students, staff and faculty are welcome - please contact Anna Jamroz, APSC United Way Co-Chair at anna.jamroz@ubc.ca

PPC

Reminder - the PPC is going keyless. The Keyless System has been installed at both the front and back doors which means your key will no longer work. Please register your UBC Student/Employee/Faculty card or FOB in-person with George Soong, located in office #114.



Upcoming Events

PAPTAC Annual Meeting (PaperWeek Canada)

February 3-6, Montreal, QC

Five students from the Centre will attend the conference and plan to visit Cascade, FPInnovations and UQTR while in Montreal.

OLD RED NEW RED

February 8, UBC

One of the year's most anticipated events is back! Old Red New Red brings together alumni and students to share stories, hear from the dean of Applied Science and meet up with old and new friends. This year is themed 'Cheers to the Cheeze,' so please join us for the toast and don't forget your red.

3 Minute Thesis (3MT) Competition

February 17, 3:00-5:00, CEME 1202

Open to all grad students at the Centre. You have only 3 minutes and one static slide to describe your thesis. There are cash prizes. To participate, contact: ashkan.babaie@alumni.ubc.ca no later than February 13.

FIBRE Western Canada Workshop

February 20, UBC

Program includes guest speakers from government and industry, presentations from Principal Investigators of various FIBRE Networks, a student poster session, networking and a tour of the Bioenergy Research & Demonstration Facility/Nexterra.

PACWEST

May 28-31, Jasper, AB

The Program Committee for the 2014 Pacwest Conference invites you to submit your interest in presenting a technical paper at the conference. The final selection of papers will be based on several criteria including originality, technical and mill relevance, and support of the chosen theme "Improving Mill Results - Keys for Success".

Paper submission deadlines:

February 28 - abstract

May 1 - complete papers

More info on pacwestcon.net

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Contact

To submit items to *PPC's Monthly Review*, please contact Anna Jamroz, PPC Communications Coordinator at: anna.jamroz@ubc.ca or 604.827.2117

