

# *Pulp Digest*

*Issue #1  
January to June 2019*



Pulp and Paper Centre

# Issue #1

Highlights

January

New paths forward with President's Excellence Chair.

Highlights

February

Are we on course to host an international conference next June?

Highlights

March

NIFTI program and dates announced.

# *Pulp Digest*

*Our community newsletter*

# Pulp Digest

Our community newsletter



Highlights

April

CERC announcement, and how this affects PPC.



Highlights

May and June

4-day NIFTI course. Gearing up for PACWest and ERMP Steering Committee meeting.



Highlights

PPC graduate researchers

Our student community at PPC.

# PPC's Safety Recognition



Reanna Seifert, research lab technician, turns off compressed air in labs as part of safety procedure.



In the High Head Lab, Reanna checked windows on the second deck to ensure that they were shut.

Thanks to George Soong, Safety and Operations Officer, and his diligence and efforts in maintaining our building's safety environment, PPC was awarded one of the three prizes in the 2018 year-end shutdown competition for rigorously applying safety procedures during UBC's annual year-end office closure over the Christmas break.



George recorded that the power supply and water valves to water coolers were turned off.

## P2P program

Chitra Arcot, PPC's Communications Coordinator was invited to conduct an afternoon's workshop "Get Your Research Paper Published By Leading Journals" for graduate researchers in a P2P program on January 30.

The Pathways to Professorship (P2P) program is a new pilot program in the Faculty of Applied Science designed to prepare PhD students for the rigours of applying to, and holding, an academic position.

*The year began with an important and exciting appointment.*

The buzz in activity and prospects from last year's efforts at PPC, developed firmly and stridently into 2019.

This issue records those successes, achievements and strengths we build on.



Dr. Emily Cranston

**President's Excellence Chair in Forest BioProducts**

Dr. Emily Cranston joined UBC's Departments of Chemical and Biological Engineering and Wood Science as associate professor. The Canada Research Chair in Bio-based Nanomaterials and the UBC's PEC in Forest Bio-products, she was previously an associate professor of Chemical Engineering at McMaster University, Hamilton, Ontario.

Among Prof. Cranston's primary research aims is to better understand and develop valuable applications for nanocellulose, a sustainable material derived from wood pulp. Flexible, lightweight and exceptionally strong, it has the potential to improve everything from cars and cosmetics to biomedical devices and food.

[Excerpted source.](#)

# What's the buzz about?

The buzz in February got going with our Dean and ERMP Principal Investigator, Dr. James Olson initiating proceedings to field Vancouver as a prime location to host the biennial and 32nd International Mechanical Pulping Conference at UBC.

Dr. Olson presented his proposal in Sweden at the 11th Fundamental Mechanical Pulp Research Seminar, and it was well received by industry leaders in Europe, the US and Canada.

Chitra Arcot was entrusted as project management of this enterprise, and has since then been instrumental in preparing presentations, posters, minutes and in convening meetings of the organizing committee. Dr. James Olson is Chair, Mark Frith of FPInnovations is co-chair, and other members are George Court from Irving, Christer Sandberg of Holmen Paper, Thomas Granfeldt of Valmet, Guigan Fang of Institute of Chemical Industry of Forestry Products in Nanjing and Prof. Mark Martinez of UBC.

March took on a shade of the Mad March Hare month. We were energetic in our efforts to announce a sparkling new course offering from the Advanced Papermaking Initiative. And were the outcomes thrilling!

Prof. Nuwan Sella Kapu developed the course curriculum for New Innovation in Fibre Technology for Industry (NIFTI) with input from consultant, Dr. Trevor Stuthridge. More on NIFTI soon.

Sona Kazemi who had filled in a leave vacancy as the ERMP Program Manager since the start of November 2018, accepted another appointment at the VPRI Office at UBC mid-March. Sona worked to develop Phase 3 Proposal of the ERMP program with our industry partners, and principal investigators of Phase 2 and 3, Drs. Olson and Martinez.

# Nurturing Innovation in Fibre Technology for Industry

*Tomorrow's solutions to today's challenges in the pulp and paper industry*

## Tech Bootcamp — April 30 to May 3, 2019

If your career is connected to bioproducts, wood and natural fibres, pulp and paper, **NIFTI** provides a fundamental grounding of the technologies and science involved. Learn from the wealth of expertise of UBC's faculty through classroom lectures and laboratory work.

### Classroom Components

- Natural Resources
- Mechanical Pulping
- Pulp Processing
- Pilot Refiner and Screens
- Kraft Pulping
- Recovery and Bleaching
- Papermaking
- Papermaking Chemistry
- Biorefinery and Biofuels
- Bioenergy
- Biomaterials and Biochemicals

### Laboratory Components

- Fibre Quality Analysis
- Freeness
- Handsheet Making
- Handsheet Testing
- Solvent Extraction
- Surface Analysis
- Confocal microscopy
- HPLC
- MFC

**NIFTI's** [intensive 3½-day workshop](#) is optimally suited to:

- Personnel in the pulp and paper industry to advance their understanding of the growing bioeconomy.  
*Profile:* You could be an accountant, a safety officer, policy maker, scientist, pulp mill operator, marketing executive, superintendent, or technical assistant ... You are keen to get a great handle about the industry, strengthen your credibility or advance your career.
- Graduates and technicians aspiring for jobs in the forestry sector and with the pulp and paper industry.
- Consultants who have pulp and paper industry as their clients.
- Undergraduates, mainly in the engineering and science fields, who will be stepping out of their university portals and have set their sights on the bioproducts industry.

**[Register now!](#)**



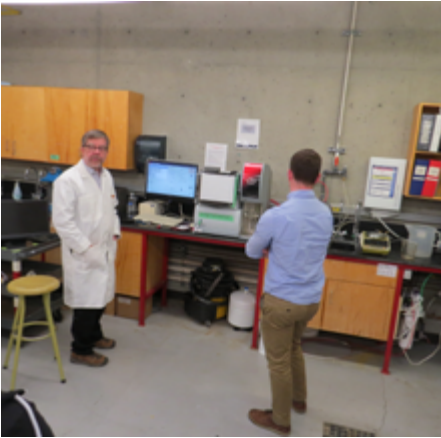
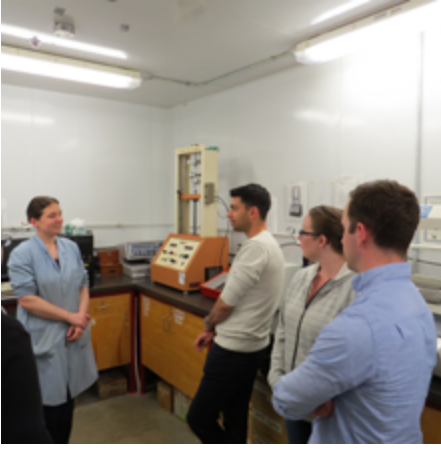
Pulp and Paper Centre

### Contact

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# NIFTI 2019

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# April's Rewards

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## NIFTI delivers

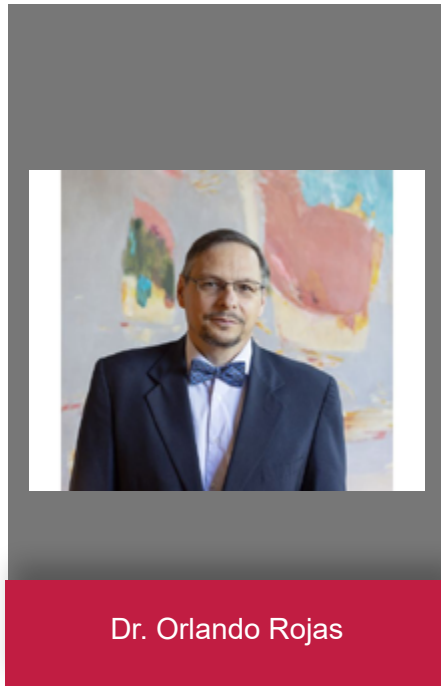
API's 4-day course, New Innovation in Fibre Technology for Industry, was get set, ready, go at the end of April and into early May. Special credit goes to Drs. James Olson, Mark Martinez, Robert Gooding, Rodger Beatson, Peter Englezos who have volunteered in this role for 19 years. We are also grateful to Drs. Scott Rennekar, Heather Trajano, Nuwan Sella Kapu, Tony Bi, Savvas Hatzikiriakos, for stepping in graciously to extend the course format to include novel technologies. Drs. Matyas Kosa and Mark Kirby of Fortress Advanced Bioproducts Inc. presented both a lab and lecture and additionally gave the course registrants a tour of their facility.

"I'm spreading the word at work so my colleagues can attend this course next year," said one registrant. And an intent echoed.

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Dynamic sheet former



## Canada Excellence Research Chair announced

As the CERC in Forest Bioproducts, Dr. Rojas will establish a world-class research program in genomics, synthetic biology, materials science and engineering. Together with his team and by applying cutting-edge nano- and biotechnologies, he will discover new strategies to isolate and transform biomass components as well as side-streams and residuals from forestry and agriculture, oils and biomolecules. The work will lead to the generation of new bio-based precursors and advanced materials critical to the

future bioeconomy. Prof. Rojas will be the scientific director of the UBC BioProducts Institute, synergizing a distinguished group of professors and researchers across campus who will conduct multi- and cross-disciplinary research that will position UBC at the forefront in the area.

[Excerpted source](#)

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## Dynamic Sheet Former installed

We successfully obtained funding from NSERC Research Tools and Instrumentation (RTI) to purchase a Dynamic Sheet Former (DSF), dryer and press. The equipment arrived at PPC and was installed in the papermaking lab this April.

The DSF's key feature is the four separate stock chambers that enable several different pulp types be used to create a single multilayered sheet of paper. Reanna Seifert, our lab technician has been trained by the manufacturer in its basic operation, and will be working on fine-tuning its many settings, functions and sample preparation capabilities.

# UBC at PACWest

## PACWest Conference in Whistler, June 5-8.

Our participation at the PACWest conference this year was as enthusiastic as ever. Our six researchers' presentations were integrated in the rest of the program topically, which worked really well in attracting industry interest by way of attendance, questions, and applause. Mohammad Shanbghazani won the Best Student Award for his research. Dr. Heather Trajano was present to facilitate students with their responses in the Q&A sessions. Miguel was appointed Student Representative to the PACWest Organizing Committee in a volunteer role.

## ERMP Steering Committee meeting at Fairmont, Whistler

ERMP Steering Committee met to hold the last gathering of its Phase 2 project all day on Wednesday, June 5 at Hotel Fairmont Whistler.



UBC's team at PACWest (from left): Reanna, Edward, Miguel, Chitra, Prof. Heather, Prof. Rodger, Jennifer (coop), Matthias and Bryan

## OUR PRESENTERS

### BIO PRODUCTS AND ENERGY

BioRefining and Machine Learning  
**Edward Wang**, UBC

### INNOVATION AND RESEARCH

Method for Continuous Fractionation of MFC  
**Mohammad Shanb Ghazani**, UBC

### MECHANICAL PULPING

Spatial Registration of Bar Force Profiles in Low Consistency Refining  
**Matthias Aigner**, UVic.

### MECHANICAL PULPING

BioRefining and Machine Learning  
**Miguel Villalba**, UBC

### TECHNOLOGY

Performance Monitoring of Centrifugal Pumps  
**Bryan Bohn**, UBC

### MACHINE ROOM

Modelling of Pulp Dewatering  
Tom Eaves was ill, and his co-supervisor Prof. Mark Martinez delivered the presentation on Tom's behalf.



Mohammad, centre, winner of Best Student Paper with other PACWest awardees.

## Tomograph in PPC

A grant from the Canada Foundation for Innovation enabled PPC to purchase a \$2 million tomograph. The tomograph was installed in lab 123; Prof Mark Martinez will undergo training to run this equipment in July.



### Mech. student tour

Mechanical department conducted a guided tour of PPC's papermaking and lab facilities on Friday, June 7. The tour was well coordinated with nearly 40 visitors being taken around the premises. George Soong helped with the passage of traffic with signage and quiet efficiency.

### Contact Us

Please share news and photos of your achievements at UBC. We'll be happy to post such news on our website or in our newsletter, *Pulp Digest*.

Contact Chitra Arcot, PPC's Communications Coordinator at [Chitra.arcot@ubc.ca](mailto:Chitra.arcot@ubc.ca)

# Our Student and PDF Community at PPC

Adel Mohammed Redha	Masoud Daneshi
Amir Farzad Foroughi	Mehr Negar Mirvakili
Arthur Rostami	Miaoran Li
Daniel Paterson	Miguel Villalba
Farzin Golkhosh	Mohammad Shanb
Gaoyang Liu	Ghazani
Guilin Hu	Na Zhong
Hatef Rahmani	Nicholas McIntosh
Hui Tian	Omid Hajieghrary
Jaehyug Choi	Reza Harirforoush
Jingqian Chen	Ryan Melnick
Jordan Mackenzie	Sjors van Adrichem
Junnan Chao	Sudipta Mitra
Lee Rippon	Thomas Eaves
Long Cheng	Timm Treskatis
Louis Belgrand	Weiyin Li
Lubing Shi	Xinyan Zhang

### Publications and Presentations

All of our researchers' publications in peer reviewed journals are recorded in the 2019 Advanced Papermaking Initiative Annual Report available online at <http://www.ppc.ubc.ca/api/api-annual-report/>

You will also find details of their presentations at conferences listed in the link given above.



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