

S&C Division

Annual General Meeting

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2020

Agenda

1. New members (3 mins)
2. Treasury Report -Nicholas Hudon (2-3 mins)
3. President's Report
 1. PSEcommunity.org/LAPSE
 2. Communications
 3. ISO Standards Development
 4. Website Changes
4. New Initiatives for 2020-2021
 1. New website initiatives!
SystemsCanada.org
 2. West Coast Conferences?
 3. CCEC Conference or OQSC Meeting Proceedings?
5. Other Business?

New members

- ▶ Are you new? Introduce yourselves!

Report: Treasury

► Nicolas Hudon



Report: communications

- ▶ Listserv still hovering around 400 emails
 - ▶ Encourage your students to join
- ▶ Job posts continue to be popular
- ▶ <http://systemscanada.org/listserv>
- ▶ If anyone wants to volunteer to manage this, please let us know
 - ▶ Idea: Link with website posts
 - ▶ Idea: User submitted direct

The screenshot shows a web browser window with the URL `syscon.mcmaster.ca/?page_id=32`. The page features a navigation menu with links for 'About Us', 'Awards', 'Conferences', 'Education', 'Listserv', and 'Recorded Seminars'. Below the menu is a banner image of an industrial facility with the text 'Systems & Control Division' and 'Canadian Society for Chemical Engineering'. The main content area is titled 'Listserv' and contains the following text: 'We are proud to announce the Systems & Control Division listserv!', 'Sign up for the Listserv', and 'This is your first step to staying informed with division activities.' There is an input field for 'Enter email address to join!' and a 'Subscribe!' button. A link is provided for users having problems subscribing. A 'Sign up to:' section lists a checkbox for 'Get important messages and announcement about Systems & Control Division news, events, and deadlines'. On the right side, there is a search bar and a 'Recent Posts' section with several article titles, including 'S&C Division Annual General Meeting' and 'McMaster Tenure-Track Position in Bioengineering and Other Areas'. A 'Meta' section is also visible at the bottom right.

Report: LAPSE

- ▶ Pre-print / Post-print repository for the Process Systems Engineering Community
- ▶ Made to help satisfy NSERC / tri-council open access requirements
- ▶ Over 3500 submissions and going
- ▶ Put your conference talks on it!
- ▶ In discussions with Wiley for *Can J Chem Eng* automatic deposits
- ▶ [PSEcommunity.org/LAPSE](https://www.psecommunity.org/LAPSE)

The screenshot displays the LAPSE website interface. At the top, a navigation bar includes links for HOME, LAPSE, PSE TECHNOLOGY TREE, STANDARDIZATION, EDUCATIONAL MATERIALS, and ABOUT US, along with a search icon. Below this, the main header features the LAPSE logo and tagline "Living Archive for Process Systems Engineering", a search bar with a dropdown menu set to "all fields", and a "SEARCH" button. A secondary navigation bar contains links for "Login | Register | Submit New | About | Contact Us | Help".

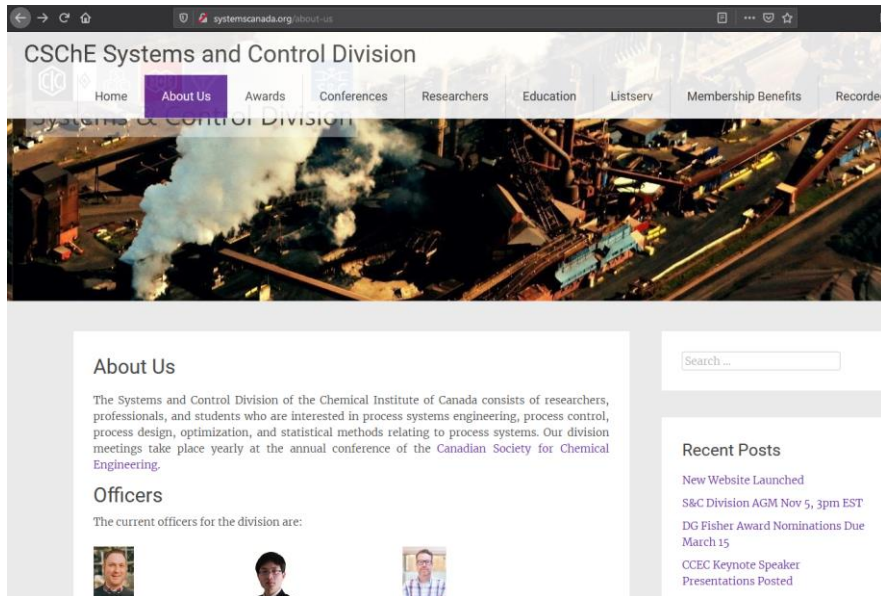
The main content area is divided into two columns. The left column, titled "Browse", lists various subjects and keywords with their respective counts. The right column, titled "Recent Submissions", displays a list of new records verified within the last 30 days, showing record numbers 1 to 25 of 64. Two articles are highlighted:

- 1. LAPSE:2020.1079**
Prediction of Particle-Collection Efficiency for Vacuum-Blowing Cleaning System Based on Operational Conditions
Yuan Xi, Yan Dai, Xi-long Zhang, Xing Zhang
October 26, 2020 (v1)
Subject: [Process Operations](#)
Keywords: [Computational Fluid Dynamics](#), operational condition, separation efficiency, uniform design, vacuum-blowing cleaning system
The dust-collection system, as the core of a sweeper vehicle, directly inhales dust particles on the pavement. The influence of variable operational conditions on particle-separation performance was investigated using computational fluid dynamics (CFD) Euler-Lagrange multiphase model. The particle-separation performance efficiency and retention time were used to evaluate the dust-collection efficiency. The uniform design (UD) and multiple regression analysis (MRA) methods were employed to predict and optimize the effects of reverse-blowing flow rate, pressure drop, and traveling speed on separation efficiency. The results indicated that the dust-collection performance initially increased and then decreased with increasing reverse-blowing flow rate. As the pressure drop increased, there was an increase in total dust-collection efficiency. However, the efficiency decreased with increasing traveling speed. The regression model showed that the proposed approach was able to predict the part... [\[more\]](#)
- 2. LAPSE:2020.1078**
Reckoning the Dearth of Bioinformatics in the Arena of Diabetic Nephropathy (DN)—Need to Improve
Jae-Wook Oh, Manikandan Muthu, Steve W. Haga, Vimala Anthonydhasan, Piby Paul, Sechul Chun
October 26, 2020 (v1)
Subject: [Intelligent Systems](#)
Keywords: bioinformatics, diabetes, diabetic nephropathy, microalbumin, proteomics
Diabetic nephropathy (DN) is a recent rising concern amongst diabetics and diabetologist. Characterized by abnormal renal function and ending in total loss of kidney function, this is becoming a lurking danger for the ever increasing population of diabetics. This review touches upon the intensity of this complication and briefly reviews the role of bioinformatics in the area of diabetes. The advances made in the area of DN using proteomic approaches are presented. Compared to the enumerable inputs observed through the use of bioinformatics resources in the area of proteomics and even diabetes, the existing scenario of skeletal application of bioinformatics advances to DN is highlighted and the reasons behind this discussed. As this review highlights, almost none of the well-established tools that have brought breakthroughs in proteomic research have been applied into DN. Laboratories

Report: ISO Standard Development

- ▶ We're leading a CSChE Initiative for the development of a new ISO standard
 - ▶ Gave first presentation at ISO Plenary this week
 - ▶ Got resolution to proceed
- ▶ eco-Technoeconomic Analyses (eTEAs)
- ▶ Would standardize how we conduct eTEAs
 - ▶ Standard basis of comparison
 - ▶ Standard metric definitions
 - ▶ Standard supply chains
 - ▶ Standard financial parameters
 - ▶ Standard LCA Framework
- ▶ Scope is chemical and energy systems
- ▶ Makes systems research immediately cross-comparable
- ▶ Easier to value and identify good technologies
- ▶ Lowers investment risk
- ▶ Join the mailing list if you want to be a part of this project at the link below or contact me.
- ▶ Find out more at:
PSEcommunity.org/standards

New! SystemsCanada.org



- ▶ SystemsCanada.org
- ▶ Yankai Cao taking over!



Floated Idea 1: Develop West Coast Conference, opposite Ontario-Quebec S&C

- ▶ We support OQS&C Meeting yearly with a small amount of funds
- ▶ Would support the west coast conference in the same way
- ▶ Travel distances may still be too much
- ▶ Would potentially include outside of chem eng and have more general systems or control focus

Floated Idea 2: Conference Proceedings for CCEC or OQSM

- ▶ Short papers (6 pages) a la *Computer Aided Chemical Engineering* book series that is a part of ESCAPE, PSE, FOCAPD, etc.
- ▶ Peer review within conference participants
- ▶ Optional
- ▶ Published on LAPSE, special hosting place on SystemsCanada.org
- ▶ Can get ISBN, etc, cite like journal or conf. proceedings.

Any Other Business?

