



CSBE | SCGAB

**ANNUAL REPORT**

**2023**

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# 2023 AGM Agenda

THE ANNUAL GENERAL MEETING OF  
**The Canadian Society for Bioengineering**  
**La Société canadienne de génie agroalimentaire et de bioingénierie**

Date: July 24, 2023 at 12:00 pm MST

## **Meeting Formalities**

1. Greetings and call to order by President
2. Attendance sign up
3. Appointment of Chairman & Secretary of meeting
4. Verification of Notice of the Meeting (requirement is 14 days)
5. Verification of Quorum (25 members including at least 5 Council members)
6. Additions to the Agenda

## **Agenda**

1. Approval of Agenda
2. Approval of Minutes of Previous Meeting on July 23, 2022
3. Correspondence
4. Approval of 2023 Council Member Annual Reports and Treasurer Report
5. Unfinished Business
  - a. Society Name Change Progress
6. New business:
  - a. Approval of 2023-2024 Budget
  - b. Approval of Nominating Committee Report
  - c. Introduction of Council Members
  - d. Approval of Bylaws changes
  - e. Appointment of Signing Authorities
  - f. Appointment of Auditor (Thornton & Co, Winnipeg, MB) for 2023 Financial Statements
7. Announcements:
  - a. 2024 CSBE/SCGAB AGM in Winnipeg and 2025 ASABE-CSBE Joint Meeting in Toronto
  - b. CSBE/SCGAB Foundation
  - c. Awards
8. Closing Remarks (President Adamowski passing the Gavel to President Elect Orsat)
9. Adjournment

# 2022 AGM Minutes

MINUTES OF THE ANNUAL GENERAL MEETING OF MEMBERS OF

**The Canadian Society for Bioengineering**

**La Société canadienne de génie agroalimentaire et de bioingénierie**

Held July 23, 2022 –12:00 to 13:20 pm AST

Call to order (President Chen)

Attendance sheets circulated and signed by membership.

## **CHAIRMAN AND SECRETARY OF THE MEETING**

Upon motion made (unknown) and duly seconded (unknown), it was unanimously resolved to appoint President Chen as chairman of the meeting. **Approved.** It was moved (unknown) and seconded (unknown) that (unknown) be appointed secretary of the meeting. **Approved.**

## **NOTICE OF MEETING**

The Notice of Meeting requirement (14 days) was met.

## **QUORUM**

The quorum requirements were met.

## **ADDITIONS TO THE AGENDA**

Update on 2025 ASABE/CSBE joint meeting (Manick Annamalai)  
CSBE Foundation (Don Petkau)  
CSBE representatives (Aitazaz Farooque, Tim Veldhuis) for EIC in participation in the United Nations Framework Convention on Climate Change (UNFCCC) (Ying Chen)

## **APPROVAL OF AGENDA**

Upon motion made (unknown) and duly seconded (unknown) the agenda was approved.

## **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion made (unknown) and duly seconded (unknown), it was unanimously resolved to accept the minutes as distributed. **Approved.**

## **CORRESPONDENCE**

None

## ANNUAL REPORT

An Annual Report document (compilation of Council members' Annual reports) was provided to members in advance via email. The Annual Report included the Agenda, the 2022 AGM Minutes, the proposed 2023 Budget and Statement of Revenues, Expenditures and Holdings. It was moved (**unknown**), duly seconded (**unknown**), and **Carried** that the Annual Report be approved as distributed.

## UNFINISHED BUSINESS

None

## NEW BUSINESS

- a) Upon motion made (**unknown**) and duly seconded (**unknown**), it was unanimously resolved to accept the Nominating Committee Report as included in the Annual Report. **Approved.**
- b) New Council members were introduced.
- c) The budget for 2022-2023 was included in the Annual Report and presented by Treasurer, Franklin Kains. Upon motion made (**unknown**) and duly seconded (**unknown**), it was unanimously resolved to accept the 2022-2023 budget as distributed. **Approved.**
- d) There were no Bylaw changes. The 2021 Bylaws are now listed as the 2022 Bylaws.
- e) Appointment of Auditor for 2022 Financial Statements. Upon motion made (**unknown**) and duly seconded (**unknown**), it was unanimously resolved to reappoint Thornton & Co. as auditors for the 2022 financial activities. **Approved.**
- f) Upon motion made (**unknown**) and duly seconded (**unknown**), it was unanimously resolved that Franklin Kains and Don Petkau be the signing authorities until the 2023 Annual Meeting. **Approved.**

## ANNOUNCEMENTS

Danny Mann presented Society name voting results in favor of Canadian Society of Agricultural and Biosystems Engineers or La Société Canadienne de génie agroalimentaire et des biosystèmes.

Chandra Singh introduced the location of 2023 CSBE AGM in Lethbridge.

## CLOSING REMARKS

President passing the Gavel to President Elect (Ying Chen to Jan Adamowski)

Remarks from President-Elect

## ADJOURNMENT

President Adamowski thanked all participants at the AGM, called for adjournment at 1:20 pm. **AST** that the meeting be adjourned.

*Minutes recorded by:*

**Unknown**, **Position**, Date of approval: **unknown**

## ATTACHMENTS

Members and visitor attendance list.

# 2023 Treasurer Report

The following is the treasurer's report for fiscal 2022 and is based on the year-end audit as compiled by Thornton and Co.

## Expenditures, Revenues and Budgets

The expenditures, revenues and budgets are shown in Table 1 for this and the previous years. The shaded column in Table 1 are the actuals for 2022. There was a deficit of \$38,217 for the year. This compares to a surplus of \$15,317 for the previous year. The bigger item was the loss in our investments of \$22,000 or about 11% of their value. Through this period (Jan 1, 2021, to Dec 31, 2022) both the Canadian and American stock markets dropped about 9%. The auditor/CRA filing was \$2000 higher than the previous year.

## Projected Budgets

At our July 2022 AGM, we budgeted for an excess of \$16,662 of expenses over revenue for the year, but the actual deficit reached \$38,217. This was a low and very conservative estimate given that in-person CSBE conferences will generate a significant excess of revenue for CSBE. However, The Conference spending was little higher than the revenue (deficit of \$5,273). We are expecting some revenue from the 2023 AGM.

## Net Assets

Table 2 shows the Assets and Liabilities for CSBE for the past 2 years as taken from the auditor's report. At the end of 2022, net assets stood at \$191,697 which includes the BMO operating account, the Nesbitt Burns long term investment account, accounts receivable and prepaid expenses. This is a decrease of \$49,774 over the previous year or about 20.6%.

## Bank and Investment Accounts

Table 3 shows a breakdown of the cash and investment assets at year's end compared to the previous 3 years. Through the year, the long-term investments went down mirroring an uncertainty in the stock market. We are expecting a recovery this year.

## Summary

CSBE has sufficient investments to prudently carry on for near term. However, membership revenue going down is a concern going forward.

**Table 1: Statement of Revenue, Expenses and Budgets for 2022**

Revenue	2021 Budget	2021 Actuals	2022 Budget	2022 Actuals	2023 Budget	2024 Budget
Membership fees	\$18,000	\$16,878	\$19,000	16,881	\$19,000	\$16,000
Annual Gen Meeting (AGM)	\$70,000	\$24,681	\$45,000	101,789	\$45,000	\$80,000
Canadian Bio Systems Journal	\$8,000	\$0	\$8,000	\$8,979	\$8,000	\$8,000
Advertising	\$500	\$0	\$500		\$500	\$0
Expense recoveries (rebates)	\$0	\$3,564	\$0	\$0	\$0	\$0
Investment income	\$3,500	\$147	\$3,500	\$1,841	\$3,500	\$2,000
Unrealized capital gains	\$4,000	\$20,899	\$4,000	(\$19,678)	\$4,000	\$4,000
<b>Total Revenue</b>	<b>\$104,000</b>	<b>\$66,169</b>	<b>\$80,000</b>	<b>\$109,812</b>	<b>\$80,000</b>	<b>\$110,000</b>
<b>Expenditure</b>						
Annual General Meeting (AGM)	\$50,000	\$17,316	\$40,000	\$107,062	\$40,000	\$70,000
President's travel to ASABE	\$3,500	\$677	\$3,500	\$806	\$3,500	\$3,500
CDN Bio systems Journal	\$2,000	\$0	\$2,000	\$707	\$2,000	\$2,000
Journal reviewer's incentives	\$2,500	\$0	\$1,500		\$1,500	\$1,500
Journal Translation	\$600	\$0	\$600	\$445	\$600	\$600
CIGR Dues	\$1,100	\$1,056	\$1,100	\$1,076	\$1,100	\$1,100
EIC dues, directors' insurance	\$2,200	\$1,436	\$2,200	\$1,706	\$2,200	\$2,200
EIC project	\$0	\$750	\$750	\$750	\$0	\$0
General and student awards	\$5,500	\$5,578	\$5,500	\$8,800	\$5,500	\$9,000
Grad student dues		\$1,724	\$1,500	\$1,202	\$1,500	\$1,500
Insurance		\$812	\$812	\$836	\$812	\$900
Interest, bank /credit charges	\$400	\$270	\$400	\$283	\$400	\$400
CSBE manager honorarium	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
CSBE manager office	\$3,750	\$1,337	\$3,750	\$2,250	\$3,750	\$3,750
Professional audit, CRA filing	\$2,000	\$1,680	\$2,000	\$3,649	\$2,000	\$3,750
Reg'l membership recruitment	\$7,000	\$241	\$7,000	\$200	\$7,000	\$7,000
Travel to AGM	\$5,000	\$0	\$5,000	\$3,294	\$5,000	\$5,000
Contributions and donations	\$1,000	\$3,971	\$1,000	\$0	\$1,000	\$1,000
Manager/president travel	\$4,000	\$0	\$4,000	\$0	\$4,000	\$4,000
Web site	\$800	\$754	\$800	\$463	\$800	\$800
Webmaster honorarium		\$1,250	\$1,250	\$2,500	\$1,250	\$1,250
<b>TOTAL EXPENDITURE</b>	<b>\$103,350</b>	<b>\$50,852</b>	<b>\$96,662</b>	<b>\$148,029</b>	<b>\$95,912</b>	<b>\$131,250</b>
<b>Revenues over (under) expenses</b>	<b>\$650</b>	<b>\$15,317</b>	<b>(\$16,662)</b>	<b>(\$38,217)</b>	<b>(\$15,912)</b>	<b>(\$21,250)</b>

**Table 2: Statement of Financial Position from Thornton & Co., 2022 Audit**

<b>THE CANADIAN SOCIETY FOR BIOENGINEERING</b>		
<b>Statement of Financial Position</b>		
<b>December 31, 2022</b>		
	<b>2022</b>	<b>2021</b>
<b>ASSETS</b>		
<b>CURRENT</b>		
Cash	\$ 10,444	\$ 39,414
Accounts receivable	9,318	9,566
Prepaid expenses	-	878
	<b>19,762</b>	<b>49,858</b>
LONG TERM INVESTMENTS (Note 9)	<b>171,935</b>	<b>191,613</b>
	<b>\$ 191,697</b>	<b>\$ 241,471</b>
<b>LIABILITIES AND NET ASSETS</b>		
<b>CURRENT</b>		
Accounts payable	\$ 1,961	\$ 9,123
Deferred income	-	4,395
	<b>1,961</b>	<b>13,518</b>
NET ASSETS	<b>189,736</b>	<b>227,953</b>
	<b>\$ 191,697</b>	<b>\$ 241,471</b>

**Table 3: Bank and Investment Accounts as of Year End**

	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>	<b>2018</b>
<b>Investments at Nesbitt Burns</b>					
Cash/short term	\$1,707	\$1,555	\$35,167	\$62,203	\$77,629
Fixed income	\$30,014	\$28,052	\$16,831	\$11,090	\$16,340
Equities	\$141,921	\$163,561	\$90,124	\$95,645	\$78,081
<b>Total of investments</b>	<b>\$171,935</b>	<b>\$193,168</b>	<b>\$142,122</b>	<b>\$168,938</b>	<b>\$172,050</b>
<b>Cash at BMO</b>	<b>\$8,736</b>	<b>\$37,859</b>	<b>\$32,326</b>	<b>\$32,326</b>	<b>\$39,645</b>
<b>Total bank/investment accounts</b>	<b>\$180,671</b>	<b>\$231,027</b>	<b>\$177,706</b>	<b>\$191,571</b>	<b>\$211,659</b>



# 2023-2024 Council

## Nominating Committee Report

Position	Name	Ideal term length	Term start	Term end
President-Elect	Travis Esau	1	2023	2024
President	Valerie Orsat	1	2023	2024
Past President	Jan Adamowski	1	2023	2024
Past-Past President	Ying Chen	1	2023	2024
VP Technical	Manickavasagan Annamalai	3	2021	2024
VP Regional	Pradeep Goel	3	2022	2024
VP Membership	Chelladurai Vellaichamy	3	2020	2024
VP Industry	Position has been posted	3	2019	2024
Regional Director Atlantic	Aitazaz Farooque	3	2022	2024
Regional Director QC	Nicholas Lefebvre	3	2022	2024
Regional Director ON	To be filled	3	2021	2024
Regional Director MB	Fuji Juan	3	2022	2024
Regional Director SK	Venkatesh Meda	3	2021	2024
Regional Director AB	Chandra Singh	3	2022	2024
Regional Director BC	Keith Duhaime	3	2020	2024

## Appointed Council Members or Representatives

Secretary Manager	Sébastien Fournel	5	2022	2027
Treasurer	Senthilkumar Thiruppathi	3	2023	2026
Web Master	René Morissette	3	2008	2024
Managing Editor	Ramanathan Sri Ranjan	3	2023	2024
Journal Editor	Position has been posted	3	2023	2026
Social Media Manager	Vacant	3	2023	2026
EIC Rep	Chandra Madramootoo	3	2021	2024
CIGR Rep	Stephane Godbout	3	2017	2024

## Fellows Committee

Chair	Ramesh Rudra	3	2020	2024
Vice Chair	Yves Choinière	3	2020	2024
Member	Suzelle Barrington	3	2020	2024
Member	Qiang Zhang	3	2020	2024
Member	Rick Atkins	3	2020	2024

## Awards Committee

Chair	Anthony Lau	3	2021	2024
Member	Erin Cortus	3	2020	2024
Member	Michael Ngadi	3	2020	2024
Member	Qamar Zaman	3	2019	2024
Member	Nazim Cicek	3	2020	2024
Past-President	Jan Adamowski	1	2023	2024

## Nominating Committee

Chair-Past President	Jan Adamowski	1	2023	2024
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Past-Past President	Ying Chen	1	2023	2024
President	Valerie Orsat	1	2023	2024
President-Elect	Travis Esau	1	2023	2024
Member-at-large	Pradeep Goel	3	2019	2024

**Meeting Committee**

Chair-VP Technical	Manickavasagan Annamalai	3	2022	2024
Past LAC Chair	Chandra Singh	1	2023	2024
President-Elect	Travis Esau	1	2023	2024
President	Valerie Orsat	1	2023	2024

# Council Member Reports

## Jan Adamowski – President

During 2022-2023, I carried out the following activities:

- Led the CSBE Search Committee to select a new EIC for our journal;
  - Selected a new CSBE Society Manager;
  - Selected a new CSBE Treasurer;
- Led CSBE council meetings;
- Liaised with ASABE;
- Helped organize the 2023 CSBE conference;
- Helped with the CSBE name change process.

## Ying Chen – Past President

During the 2022-2023, I have carried out the following activities:

- Led the CSBE Nomination Committee and filled the new council member positions;
- Revised the CSBE Bylaws;
- Participated in CSBE council meetings;
- Participated in CSBE executive committee discussion;
- Served as the member of CSBE Award Committee.

## Travis Esau – VP Regional

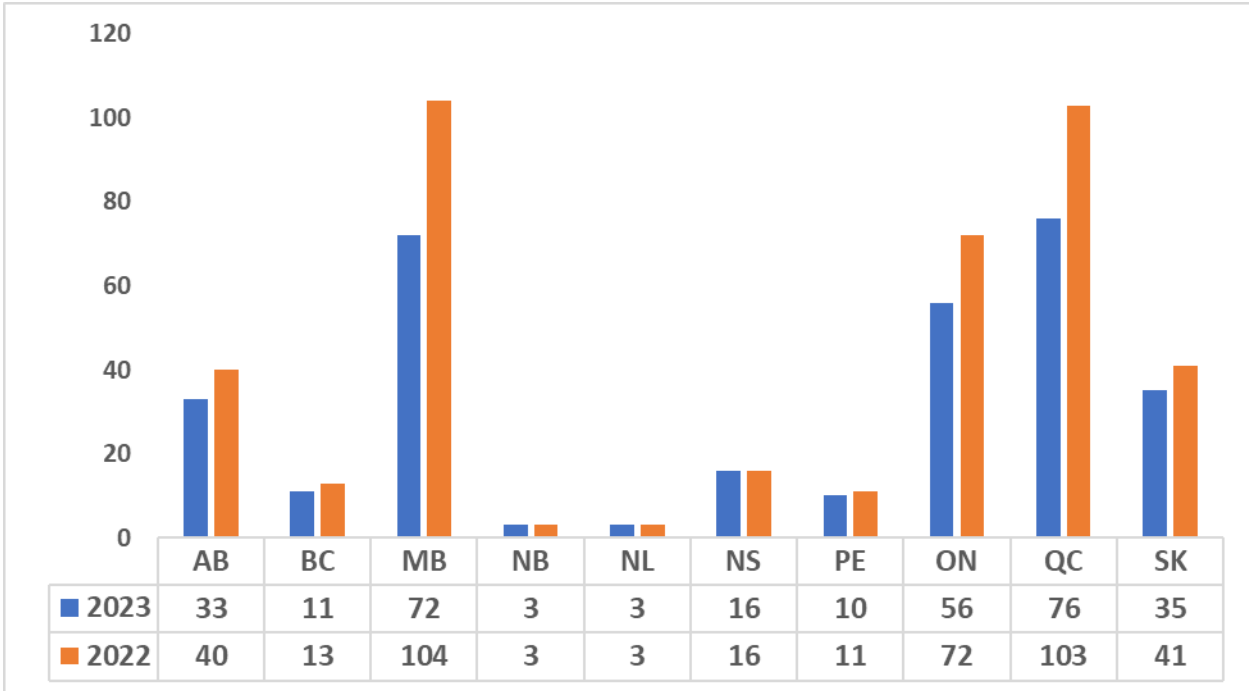
I began my role as Vice President (Regional) following the CSBE AGM in July 2022. Within this role, I have participated in CSBE council meetings over the past year to help move our society forward. In addition to helping receive reports and updates from the Regional Directors and reporting to Council, I have also helped to build student interest in our society. I organized an in-person Networking Virtual Golf Mixer on Tuesday June 27<sup>th</sup>, 2023 at the Truro Golf Club. This event was well attended by undergraduate and graduate students in the Atlantic Region. I provided a presentation highlighting the history of CSBE, the society's mission, and potential career opportunities along with the benefits of becoming a student member. I also highlighted excitement around this year's annual conference being held in Lethbridge Alberta. Dalhousie Faculty of Agriculture also featured the event in their campus news bulletin. Overall, the event helped to spark interest in the CSBE and will help momentum for society conferences and events moving forward.



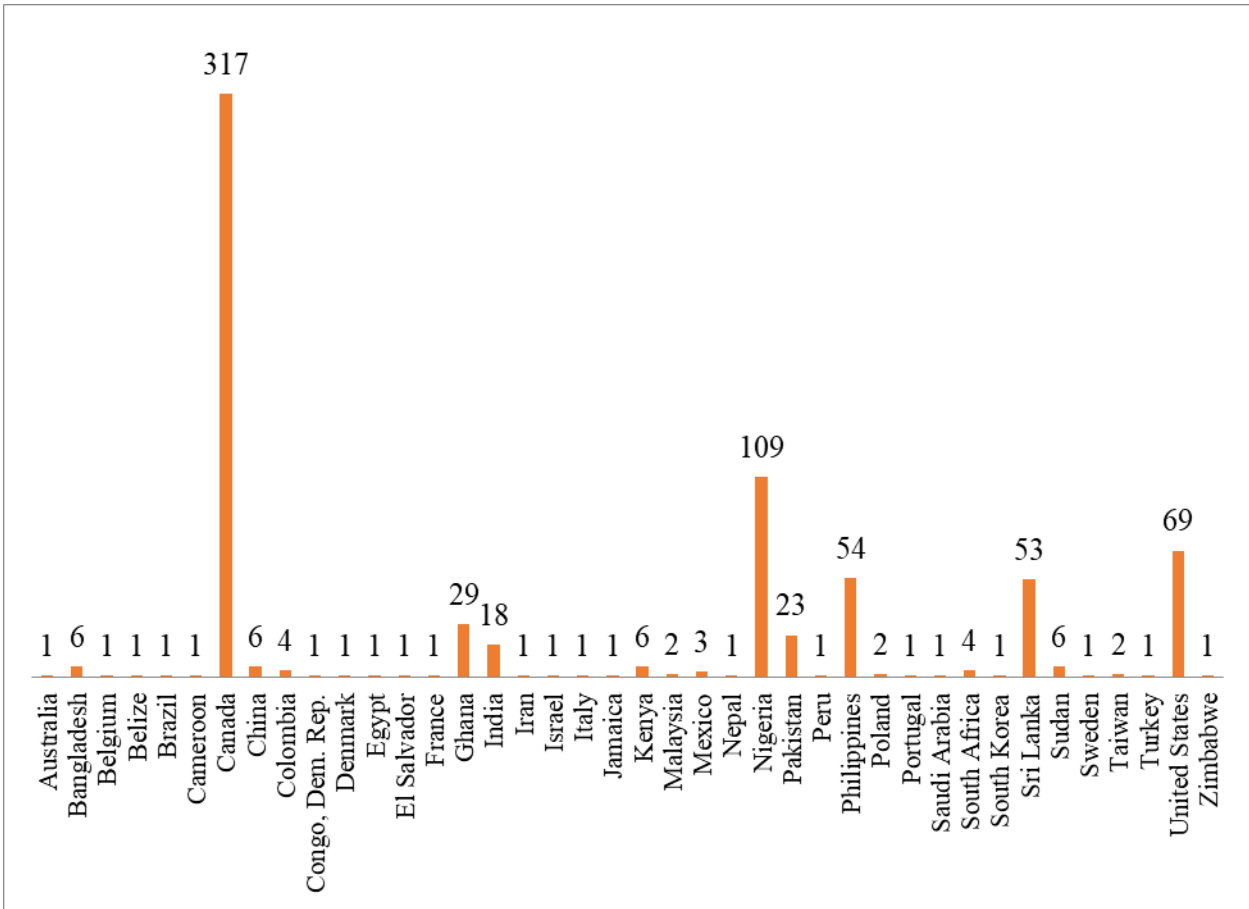
## **Chelladurai Vellaichamy – VP Membership**

Our society has totally 735 members as on June 12, 2023, and the membership count is pretty much same as last year. Same like last years, international member count (418) is more than our Canadian members (317). We have 69 members from United States, and the Asian and African countries contribute a major share on our international membership. Statistics of CSBE members at various provinces and countries are shown in next figures.

From Nigeria, we have totally 109 CSBE members, and Philippines and Sri Lanka also give major share of international members. There is an increasing trend in CSBE membership count in last two years and we expect to reach pre-Covid numbers soon. Regional directors are organizing networking events with the support of the society to attract all the potential members and students to become member of our society.



Membership count by Province



Membership count by Country

## Venkatesh Meda – Regional Director Saskatchewan

### CSBE Academia-Industry Mixer Event

The fall 2022-23 CSBE Information day and an industry-academia panel discussion held in the Chemical Engineering Wing of the Engineering Building at the University of Saskatchewan (U of S) on September 28, 2022. The main goal of having the event was to promote CSBE/ASABE to new and existing graduate students in Chemical, Mechanical, Biological, Biomedical and Environmental Engineering disciplines as well as to have pleasant networking with invited panelists from Industry (Dr. R. Green, VP, Scientific Development, Canopy Growth; Dr. M. Sivakumar, Sr. Food Process Engineer, SK Food Development Center; Mr. J. Tratch, Cep, Proteus Waters, SK) and academia (Dr. L. Tabil, Professor, Chemical & Biol. Eng, Dr. V. Meda, Professor, Chemical & Biol. Eng, USask). Graduate students, faculty and staff in Chemical & Biological Engineering at USask were invited and more than 45 people showed up in the event. The theme of the panel discussion was “*Bioprocessing*” – road to *Sustainability*.

The SK regional director, Dr. Venkatesh Meda gave a presentation about CSBE/ASABE/CIGR. The presentation focused on the benefits of being a CSBE member and the multi-disciplinary scope of CSBE and career opportunities in the field of agriculture, food, bio-systems, chemical, and environmental engineering. This fun filled event was also a time for induction of new executive members of the CSBE SK Chapter.





Photos: Round Table Panel Discussion, Fall 2022-23 Event at USask Campus

### **New executive team members of CSBE-SK Students' Chapter**

The CSBE-SK Students' Chapter launched officially last year. This year, new team members joined in the executive team of the students' chapter: Divyapratim Das (President), Tahereh Najib (Vice-President), Tolen Moirangthem (Secretary), Dr. M. Heydari (Advisor), and Adedayo Oke (Membership and Public relations). All the executive members were introduced during the Information day event as well. The students' chapter will interact with CSBE SK professional members and will organize academic and social events for student members.

4 Ph.D. and 5 M.Sc. students completed their graduate studies in Biological Engineering Program during the last academic year. At UG level, the new '*Bioprocessing*' stream is now officially offered for all the students in Chemical Engineering Program.

21 new membership (first time) applications were endorsed by the SK regional director and CSBE Manager.

Dr. V. Meda was recognized as a **Fellow-2023** of the "Engineering Institute of Canada" at an Awards gala in Ottawa held this Spring.

### **Fuji Jian – Regional Director Manitoba**

I began my role as the regional director of Manitoba in July 2022. This is my second time servicing the CSBE as a regional director of Manitoba (I was the regional director from 2019 to 2020). Considering the decrease of CSBE members during the past pandemic period, I mainly focus on encouraging old members to resume their membership and introducing CSBE to our current undergraduate and graduate students because current students will be our future members. I mainly did the following works: 1) sent

emails to old members and potential members and reminded them the annual registration; 2) organized two in-person events to discuss the CSBE such as societies mission, potential career opportunities, and other activities such as the newsletter, student awards, technical meetings, and society journals; 3) conducted two presentations to introduce CSBE on the meetings of student association; and 4) joined local committee of CSBE Annual meeting 2024 and mainly worked on the conference site selection and event organizing.

## **Pradeep Goel – Regional Director Ontario**

The past year signifies the commitment and dedication of our members. The Covid-19 pandemic has continued to impact life. However, remarkable progress has been made by our members during the year.

One of the major highlights of the year was the first Guelph Food Engineering Conference on April 2023 at the School of Engineering (Guelph). Kudos to Dr. Manickavasagan Annamalai, an Associate Professor at University of Guelph, and his team for successfully organizing the conference. The conference was attended by more than 100 undergraduate students and graduate students and professionals. As a Regional Director, Dr. Pradeep Goel, attended the conference, and he spoke about the benefits of being a member of the CSBE/SCGAB. During the conference, a special campaign was carried-out to promote the CSBE/SCGAB society and get new student-members.

Another highlight was development of climate change model by Professor Ramesh Rudra, and his research group at University of Guelph. The group has developed a model to link climate change with the number of frost-free-days each winter. This work has been featured on the University of Guelph website (<https://news.uoguelph.ca/2022/11/u-of-g-developed-climate-model-to-help-adapt-to-cold-heat-extremes/>) and has gained significant interest in research and development community.

Dr. Prasad Daggupati, Associate Professor, University of Guelph, and his group is preparing to welcome all agricultural and biological engineers for 2023 NABEC conference at Guelph, Ontario. The conference will be held at Delta Hotel and Conference Center, Guelph from July 30 to August 2, 2023.

Mr. Hugh Fraser has been elected President of Ontario Barn Preservation for 2023-2024. This not-for-profit organization, founded in 2019, is dedicated to preserving, documenting and promoting Ontario barns. Check out for more details at <https://www.ontariobarnpreservation.com/>

Members of research community continued to work closely with industry and provincial/federal agencies on diverse projects ranging from food engineering to water/environmental management.

Finally, I would like to thank all the members for their continued dedication and support during the year.

## **Anthony Lau - Awards Committee**

The Awards Committee members received the nominations and cast their votes for the following 2023 CSBE/SCGAB Awards: Young Engineer of the Year Award - 2 nominees: Winner: Sébastien Fournel; Jim Beamish Award - 1 nominee: Winner: Jan Adamowski; John Ogilvie Award- 1 nominee: Winners: Digvir Jayas and Fuji Jian. There were no nominations (and no carry-forward from the past two years) for the following: Maple Leaf Award, John Turnbull Award, Glenn Downing Award, John Clark Award and Industrial Award.





Photos: First Guelph Food Engineering Conference on April 2023 at the School of Engineering (Guelph)

## 2023 Student Awards

### **ASABE ¼ Scale Tractor Student Design Competition – \$500**

*Design and construction of a four-wheel-drive tractor taking into consideration the rules specified by the American Society of Agricultural and Biological Engineers (ASABE).*

**McGill University, Mutrac** – C. Laboisie, S. Cole, I. A. Tovar, N. Pratte, M. Ma, M.-A. Dessureault, L. Parnell & I. Boumenna

**Université Laval, Équipe ULtrac** – A. Trottier, A. Lamarche, S. Dallaire, A. Pellerin, A. Gauthier-Pépin, J. Fradette, L. Lampron, M. Deschênes, R. Leclerc & G. Bélanger

### **CSBE/SCGAB Foundation Undergraduate Scholarship – \$300**

*Recognizes academic excellence among student members of the Society. The Scholarship is awarded each year to the student member of the Society with the highest GPA in the preceding semester.*

**Université Laval, Génie agroenvironnemental** – *A. Desroches*

**Université Laval, Génie alimentaire** – *R. Guay*

**Dalhousie University** – *J. A. Davidson*

### **Undergraduate Awards – \$100**

**University of Manitoba - Undergraduate Design Project** – *M. Dewar-Norosky, N. Duguay, C. McRae, M. Pries & J. Wyllie-Runner* for a project “Design of a compostable menstrual pad: fluid acquisition layer and absorbent core” (Advisor: N. Jacobson).

**Université Laval, Génie agroenvironnemental - Undergraduate Design Project** – *A. Bouchard, P.-P. Durand & R. Leclerc* for a project “Conception d’un pulvérisateur d’abrasifs pour le contrôle des mauvaises herbes au champ / Design of an abrasive sprayer to control weeds in the field” (Advisor: M. Khelifi).

**Université Laval, Génie alimentaire - Undergraduate Design Project** – *R. Guay & S. Nicolescu* for a project “Valorisation du tourteau de caméline pour la production de concentré de protéines en poudre / Valorization of camelina meal for the production of powdered protein concentrate” (Advisor: M. Aider).

**Dalhousie University, Faculty of Agriculture - Undergraduate Design Project** – *C. M. Nemis, J. B. Thornhill, E. L. Trenholm & J. W. Cameron* for a project “Enhanced process design for wooden strawberry box assembly” (Advisor: T. Esau).

**University of Manitoba – Undergrad Thesis** - *S. S. Reimer* for a thesis entitled “Biomechanics of mental illness” (Advisor: N. Jacobson).

**McGill University, Department of Bioresource Engineering – Undergrad Thesis** – *A. Choiniere, E. Lafond, J. Liang & K. Geddes* for a thesis entitled “Drop of Power: Root monitoring of valley heart lettuce in hydroponics systems” (Advisors: M. Lefsrud & C. A. Madramootoo).

**University of Prince Edward Island, School of Climate Change and Adaptation - Undergraduate Thesis – K. Henry** for a thesis entitled “Crop row detection in agricultural fields using genetic algorithms” (Advisor: A. Farooque).

### **Graduate Thesis Award (MSc) – \$200**

**University of Manitoba – M. Rahman** for a thesis entitled “Design and evaluation of a plant-controlled atmometer for measuring crop evapotranspiration” (Advisor: R. Sri Ranjan).

**University of Guelph – A. Kaur** for a thesis “Impact of channel geometry parameters and reservoirs on streamflow and water quality modeling” (Advisors: P. Daggupati & R. Rudra).

**McGill University, Department of Bioresource Engineering – N. Bélanger** for a thesis entitled “Assessment of corn and starch-based biochar as reinforcing fillers in the rubber composite industry” (Advisors: M. J. Dumont and S. Prasher).

**Dalhousie University, Faculty of Agriculture – U. Ali** for a thesis entitled “Application of satellite-based indices for precise agricultural land management and estimation of evapotranspiration” (Advisor: T. Esau).

**University of Prince Edward Island, School of Climate Change and Adaptation – R. Khan** for a thesis entitled “Soil carbon, cover crops and sustainability: implications for improved management of potato production in Prince Edward Island” (Advisors: A. Farooque & C. P. Brown).

### **Graduate Thesis Award (PhD) – \$200**

**University of Saskatchewan – O. O. Olughu** – for a thesis entitled “Ultrasonic and fungal pretreatment of switchgrass for biofuel and bioproducts applications” (Advisor: L. Tabil).

**University of Manitoba – A. La** for a thesis entitled “Modelling of infectious animal viral disease transmission by aerosols” (Advisor: Q. Zhang).

**University of Guelph – D. Saha** for a thesis “Evaluation of machine learning techniques for image based quality assessment of chickpea” (Advisor: M. Annamalai).

**McGill University, Department of Bioresource Engineering – P. W. Addo** for a thesis entitled “Optimization of postharvest processing for hops (*Humulus lupulus*) and cannabis (*Cannabis sativa*)” (Advisors: M. Lefsrud & V. Orsat).

**McGill University, Department of Bioresource Engineering – M. Alizadeh** for a thesis entitled “Development of a multi-scenario multi-objective analysis framework to explore optimal, resilient and robust solutions in coupled human-water systems” (Advisor: J. Adamowski).

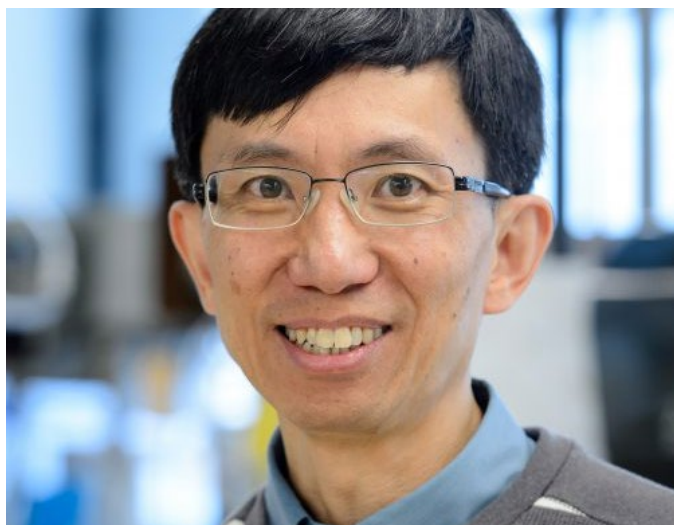
**Université Laval – S. Almady** for a thesis “Conception et évaluation d’un prototype innovateur de contrôle pneumatique du doryphore de la pomme de terre, *Leptinotarsa decemlineata* (Say) / Design and evaluation of an innovative pneumatic prototype machine to control the Colorado potato beetle, *Leptinotarsa decemlineata* (Say)” (Advisor: M. Khelifi).

**University of Prince Edward Island, School of Climate Change and Adaptation – *H. D. M. Wilts* -**  
for a thesis entitled “Cultivating agricultural-riparian shrub willow to improve the sustainability of  
potato production systems in Prince Edward Island, Canada” (Advisors: D. Burton & A. Farooque).

## 2023 Member Awards and Fellows

### CSBE/SCGAB FELLOWS

*The designation of Fellow has honorary status to which members of distinction may be elected, but for which they may not apply. A Fellow shall be a member of outstanding and extraordinary qualifications and experience in the field of agricultural, food or biological engineering. A Fellow shall have been a member of the Society for ten years and have twenty years of active practice in the profession.*



Dr. Anthony Lau is elected to the grade of CSBE/SCGAB fellowship in recognition of his outstanding contributions to the Agricultural Engineering profession through a wide range of research, administration, exceptional teaching ability and service to the Society. Dr. Lau is a Professor of Chemical & Biological Engineering at the University of British Columbia. He is highly regarded as an expert in pollution control in urban and rural areas. He has served as coordinator of the UBC's Environmental Sciences Division and is the principal advisor to the UBC's Master of Engineering Leadership Program. In addition to

advising hundreds of capstone engineering design projects, Dr. Lau has supervised more than 30 MSc and PhD graduates and post-doctoral fellows. Dr. Lau is a frequent contributor to radio, TV, and other social media on the science of composting and recycling wet and dry organic materials. Dr. Lau is a Professional Engineer registered in BC and a Fellow of Engineers Canada. Professor Lau's research interests encompass resource recovery from different types of waste biomass, focusing on biomass feedstock engineering and bioconversion processes. Biomass feedstock engineering activities include the preprocessing and pretreatment of under-utilized lignocellulosic waste biomass that includes forest residues, crop residues, and urban wood waste to produce high quality solid biofuel (fuel pellets) for heat and power generation, as well as the storage, handling, and transport of the biomass in both densified and non-densified forms. Bioconversion processes are primarily focused on aerobic composting and anaerobic digestion of non-woody biomass/organic wastes. Composting constitutes an important component in today's integrated solid waste management approach. Woody residuals that are separated from the finished compost product can also be pretreated to produce high quality fuel pellets. Anaerobic digestion of organic wastes for biogas production and upgrading the biogas to biomethane (renewable natural gas) have environmental benefits in terms of reduced greenhouse gas and odour emissions.



Dr. Goel is a Professional Engineer and a Research Scientist at the Ministry of the Environment, Conservation and Parks, Ontario. He obtained his B.Tech. in Agricultural Engineering(GBPUA&T, Pantnagar, India in 1985). He holds a M.Tech. degree from IIT (Kharagpur, India in 1986). He was on Dean's Honors List for his Ph.D. (from McGill University in 2003). He specializes in hydrology, nutrient management, watershed modeling, and climate change. He has led and participated in various projects and committees to assess the effects of agricultural practices on water quality and quantity. He has also contributed to the development of surface water vulnerability guidelines, nutrient management strategies, and integrated climate change monitoring programs. Dr. Goel has been an active member of CSBE/SCGAB/ASABE for many years. He is currently the Regional Director of Ontario, member-

at-large Nominating Committee, Director of CSBE Foundation, and member of the ASABE NRES-224 committee. He also serves as an Adjunct Professor (>17 years) and an advisory committee member at the University of Guelph, where he mentors and advises PhD and MSc students. He has been recognized with several awards, including the Ontario Ministry of the Environment, Conservation and Parks 2020-21 Recognition Award-Illuminator, CSBE/SCGAB 2019 Jim Beamish Award, Ontario Ministry of the Environment - Emerald Awards (2006), Honourable Mention for Emerald Awards (2005), and the Environmental Commissioner Recognition Award (2004). He has published over 60 peer-reviewed papers, 3 book chapters, and numerous technical reports. He has also presented his work at more than 125 conferences.

## YOUNG ENGINEER OF THE YEAR AWARD

*This award is given to recognize and encourage outstanding work by younger members of the Society. The award is given to members under 40 years of age. It is given for outstanding contributions to agricultural, food and/or biological engineering through design and development, extension and management, or research and teaching.*



Sébastien Fournel obtained his BEng (2010) and MSc (2011) degrees in Agri-Environment and Agri-Food Engineering from Laval University, and a PhD in Chemical Engineering from Sherbrooke University (2015). Since 2018, he is a professor in agricultural engineering focusing on farm infrastructures at Université Laval, where he is the Chairholder of the Chair in Educational Leadership on Sustainable Agricultural Buildings, funded by more than 20 agricultural organizations to promote teaching innovation, research and knowledge transfer in the farm building sector. This chair has allowed the supervision of 15 undergraduate students, 3 interns, 6 MSc students, 3 PhD, 3 postdoctoral fellows and 9 research assistants. Dr Fournel currently leads 7 research projects (value of \$1.6M) and collaborate to 25 others with the Chair's partners. He is also waiting after the approval of 3 research projects on the reduction of GHG at the farm level totalizing \$6M. To this date, he has submitted or published more than 20 papers and 2 book chapters, and participate to more than 70 conferences, including 28 as an invited speaker. Dr. Fournel has been an active member

of CSBE/SCGAB and ASABE since 2006 and has served the society in different roles through the years: 2010 CSBE/CIGR Conference volunteer, 2020-2021 CSBE/CIGR Conference Local Arrangement Committee member, 2021-2022 Quebec Regional Director, and Society Manager since 2022. Between 2012 and 2017, he also served as Vice-President and President of the Quebec's Agri-Food Engineers Association (AIAQ). Sébastien is a creative, dynamic and organized engineer. He practices his profession by emphasizing the development of knowledge, autonomy and critical thinking skills. He ensures the development of the next generation by offering them opportunities to stimulate their interests by solving problems rooted in the reality of the major challenges facing the society. For him, the future of our planet depends on the social and professional commitment open-minded and competent young engineers. Through his engineering efforts, his work in R&D and his involvement with CSBE/SCGAB, Dr. Fournel contributes significantly to a more sustainable agriculture in Canada.

## JIM BEAMISH AWARD

*This award is given annually to the CSBE/SCGAB member who, in the opinion of the Awards Committee, has produced outstanding work in industry, teaching, research, or extension in the area of soil and water, or environmental sciences.*



Jan is a Professor in the Department of Bioresource Engineering at McGill University where he leads a very strong research program that explores critical engineering, social, economic and management problems in the field of water resources. His research addresses complex water resources problems using state-of-the-art artificial intelligence modeling to improve our understanding of and ability to forecast hydrological processes such as floods and droughts. His research on novel participatory social-ecological modeling approaches is leading to a better understanding of how to sustainably manage water resources systems. Jan has a particular focus on inclusively engaging traditionally marginalized communities such as Indigenous Peoples. He has created a unique interdisciplinary research group at McGill focused on complex water problems.

Jan is very committed to teaching and is Director of the Masters program in Integrated Water Resources Management at McGill. He supervises 20 to 30 students annually from countries around the world; over 300 students have so far graduated from this program.

His research group has published over 340 refereed journal papers, and his h-index (68) and citations (17 000) are outstanding. He has been invited to deliver over 45 invited and keynote talks at international conferences and workshops. Jan was elected to the College of New Scholars, Artists and Scientists of the Royal Society of Canada and appointed as one of the very few Adjunct Professors at the United Nations University ‘Think Tank on Water’.

Jan is the President of CSBE and served as Vice President (Technical) from 2019-21.