



IEEE

South Saskatchewan Section

**IEEE South Saskatchewan Section
Annual Report
2022**

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1. Message from Section Chair

After two years of social distancing and remote participation in activities due to the Covid-19 pandemic, this year we are finally able to come back to some sort of normal and start holding in-person events and activities. With an abundance of caution, we complemented all our initial events with a hybrid option, that is, to allow our members to participate remotely if they choose to.

With the return of in-person participation, our ExCom has been very active and have planned and organized a variety of activities. We organized technical and educational talks from prominent international experts, we run computer programming short courses, we conducted mock interviews to prepare our students for employment, we planned high school STEM outreach activities, and we organized membership upgrading drives, new member recruitment events, as well as team building events for all our existing and potential members.

Our ExCom's tireless efforts in planning and running events resulted in a major achievement – we reversed the declining membership trend that started since 2019. The Covid-19 pandemic hit us in March 2020, and due to the lack of activities required by social distancing, many of our members did not see the value of our membership and hence our membership numbers plunged. With the return to in-person activities, we are now able to reiterate the message to our members that we are here to serve their needs and to help them advance their careers.

Another significant achievement this year is that we managed to get representations in our ExCom from the University of Regina Computer Science Department, as well as the Saskatchewan Polytechnic in Moose Jaw. Through these new ExCom volunteers, we will be able to reach out to a much larger body of students and to help them with their professional needs. With participation from our members in Moose Jaw, we are now truly a South Saskatchewan Section and not just a Regina section!

This year we also celebrated the Trans Canada Microwave milestone, which commemorates the completion of a nationwide network of cell towers that allows communication from coast-to-coast in 1958. This year, we have also started the planning of the Canadian Conference in Electrical and Computer Engineering 2023 (CCECE 2023) which will be held in Regina from 24th to 26th September next year. Please mark this date in your calendar and come to discover the latest technologies in ECE and to talk to the many national and international experts in this area.

Last but not least, I would like to thank all the ExCom members and all our volunteers for making this year a very successful year. Please keep up the hard work and we look forward to doing even more for our members in 2023!



Kin-Choong Yow, *PhD, PEng, SMIEEE, MACM*
Chair, IEEE South Saskatchewan Section

2. Executive Committee Officers



Kin-Choong Yow
Chair



Shahedur Rahman
Vice-Chair



Usman Munawar
Secretary



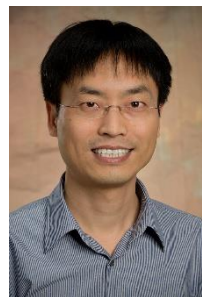
Moeed Shamim
Treasurer



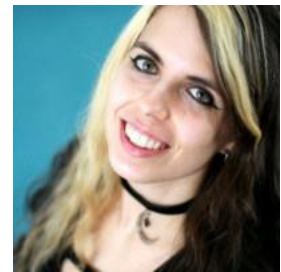
Shahedur Rahman
Membership
Development



Aoun E Muhammad
Membership
Dev. (Co-Chair)



Zhanle Wang
Professional
Activities



Tessa Herzberger
Educational
Activities



Aditya Pathak
Student Activities



Hamid Mousavi
Grad Student Rep



Brennan Rotelick
Student Representative



Soheil Vosta
STEM Coordinator



Adam Tilson
Regina Eng. Soc. Rep



Irfan Al-Anbagi
Immediate Past Chair



Jason Whitelaw
Immediate Past Treasurer



Moeed Shamim
eNotice Coordinator



Moeed Shamim
vTools Coordinator



Adam Tilson
Webmaster



Raman Paranjape
CCECE 2023 Chair



Doug Wagner
Univ of Regina
Student Branch Counselor



Babith Varghese
SaskPoly (Moose Jaw)
Student Branch Counselor

3. Chapters and Affinity Group Officers

South Sask Section Computer Chapter



Adam Tilson
Chair

South Sask Section Power & Energy Society (PES)/Industrial Applications Society (IAS) Joint Chapter



Usman Munawar
Chair

South Sask Section Young Professionals (YP) Affinity Group



Jason Whitelaw
Chair



Mohamed Ahmed
Vice-Chair

South Sask Section Women in Engineering (WIE) Affinity Group



Reagan Ong
Chair



Kaylee Tumack
Vice-Chair

4. Financial Report

4.1 Income and Expenditure Statement

IEEE South Saskatchewan

Prepared by Moeed Shamim (Treasurer) on Nov 22, 2022

Balance

CIBC Local Bank Account Balance	\$ 31,038.36	as of Nov 22, 2022
NextGen Bank Account Balance	\$ 4,538.68	as of Nov 22, 2022

Revenue

IEEE Funds Provided 2022	\$ 4,953.56	IEEE funds in CAD
Computer Chapter	\$ 398.72	Chapter Incentive Program
Registration fees	\$ 1,163.33	Grounding seminar (2017)
Interest Earned	\$ 108.80	as of Nov 22, 2022
PayPal	\$ 58.63	Registration via Paypal

Expenses

Section meetings	\$ 1,389.89	as of Nov 22, 2022 (ExCom meetings including meal)
Professional Activities	\$ 229.00	as of Nov 22, 2022 (MicroGrid and Wireless Evolution)
IEEE South Sask Advertisements/Award/Appreciation	\$ 3,343.97	as of Nov 22, 2022 (Pins and Jackets)
IEEE Plaque	\$ 2,624.23	as of Nov 22, 2022
Student Activities	\$ 410.17	as of Nov 22, 2022 (Shaping your Career)
Educational Activities	\$ 1,132.43	as of Nov 22, 2022 (Mock Interview and Welcome Week Event)
Supplies	\$ 28.31	as of Nov 22, 2022
Networking/Informal Activities	\$ 840.62	as of Nov 22, 2022 (Bowling Night and Escape room)
Travel	\$ 987.66	as of Nov 22, 2022
Board of Director Meetings	\$ 1,000.00	as of Nov 22, 2022
Registration Fees		

Sum \$ 6,683.04 \$ 11,986.28

Net Income \$ (5,303.24) Money used from reserved funds as of Nov 22, 2022

4.2 Balance Sheet

Balance Sheet FY 2022

Assets

Cash \$ 35,837.25

Total Assets \$ 35,837.25

Liabilities and Net Assets

Reserves \$35,000

Reserves used (\$5,000)

Total Liabilities \$30,000

Net Assets

Operating Funds \$ 5,837.25

Total Net Assets \$ 5,837.25

Total Liabilities and Net Assets \$35,837

CIBC Closing Balance Nov 22, 2022	\$ 31,038.36
NextGen Closing Balance Nov 22, 2022	\$ 4,538.68
Cash (Still with Jason W)	\$ 260.21
Total	\$ 35,837.25

5. Reports

5.1. Membership Development

As of December 31st, 2022, we have a total of 126 members in the following grades:

Grade	Number
Affiliate	2
Graduate Student Member	21
Life Member	8
Life Senior Member	3
Member	57
Senior Member	11
Student Member	24
Grand Total	126

New members

Among them, we have 33 new members (grade effective date after 1 Jan 2022 and not previously a member).

Membership upgrades

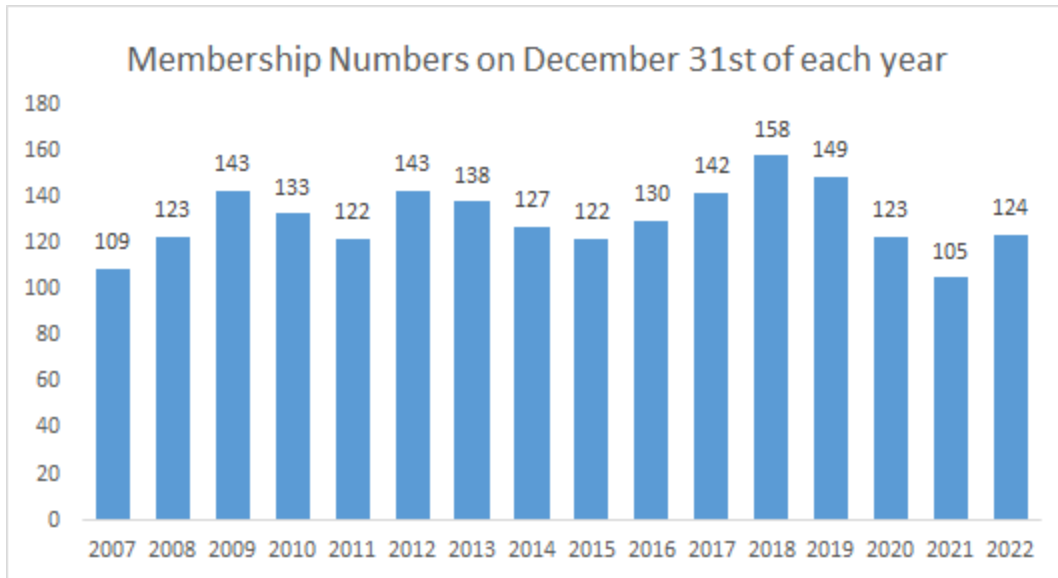
Two Members were upgraded to Senior Membership in 2022. They are Mr. Stephen Williams and Mr. Dean Yager.

- Mr. Stephen Williams
- Mr. Dean Yager

Congratulations to Stephen and Dean!

5.2. Membership Trends

5.2.1 Our membership numbers has been declining since 2019, but this year we managed to turn the membership trend around. The following chart shows the membership numbers from 2007 to the present. These numbers do not include Affiliate Members, which we have two (2) as of December 31st 2022.



5.2.2 The following chart shows the membership numbers for the past 12 months, from January 2022 to December 2022. These numbers do not include Affiliate Members, which we have two (2) as of December 2022.



We can see that, after the service deactivation in February (where 2022 members who did not continue with membership were removed from the system), the membership numbers have steadily increased and overtook the previous year's number in July.

5.2.3 The following two tables show the membership numbers by grades between last year (2021) and this year (2022).

As at December 2021

Grade	Number
Affiliate	2
Graduate Student Member	15
Life Member	9
Life Senior	3
Member	59
Senior Member	9
Student Member	10
Grand Total	107
New members among the above (i.e. grade effective date after 1 Jan 2021 and not previously a member)	24

As at December 2022

Grade	Number
Affiliate	2
Graduate Student Member	21
Life Member	8
Life Senior	3
Member	57
Senior Member	11
Student Member	24
Grand Total	126
New members among the above (i.e. grade effective date after 1 Jan 2022 and not previously a member)	33

We can see that there is an overall increase in membership by 19. Two (2) Members were upgraded to Senior Membership (Mr. Stephen Williams and Mr. Dean Yager).

We can also see from the above tables that the main increase is in Student Members and Graduate Student Members.

5.2.4 The following two tables show the membership numbers by grades between the peak of our membership numbers (2018) and this year (up to November 2022).

As at December 2018

Grade	Number
Affiliate	Not known
Associate Member	1
Graduate Student Member	8
Life Member	5
Life Senior	1
Member	80
Senior Member	7
Student Member	56
Grand Total	158
New members among the above (i.e. grade effective date after 1 Jan 2018 and not previously a member)	Not known

As at December 2022

Grade	Number
Affiliate	2
Associate Member	0
Graduate Student Member	21
Life Member	8
Life Senior	3
Member	57
Senior Member	11
Student Member	24
Grand Total	126
New members among the above (i.e. grade effective date after 1 Jan 2022 and not previously a member)	33

We can see that we have lost a significant number of Members. The difference is 23 but 5 of them have upgraded to Life Member and Life Senior, and 4 of them have upgraded to Senior Member. So we actually lost 14 Members.

We can see that we have also lost a significant number of Student Members. Future efforts will be directed to make our Student Branch more active and to increase our Student Memberships

5.3. Events Organized

5.3.1. Invited Talk on “Establishing a Renewable Micro-Grid for a Residential Scenario: How, Why and Where to Next?”

Date: **17 Jun 2022**

Time: **12:00 PM to 01:30 PM**

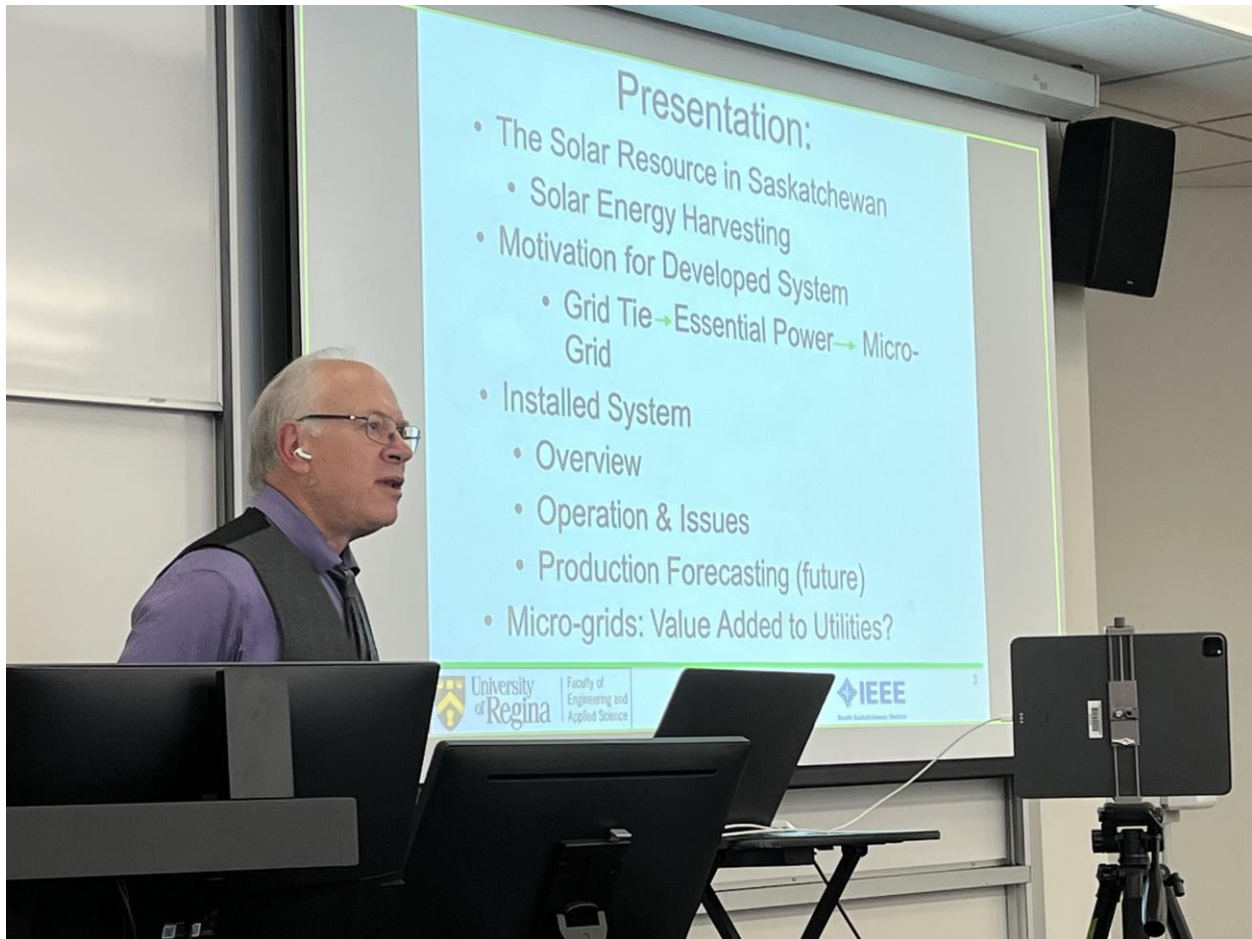
Venue: **ED 616, Education Building, University of Regina**

Abstract:

Residential photovoltaic solar installations have existed in Saskatchewan for a number of years, fostered by dedicated homeowner interest, funding support models and acceptance by the provincial utility operator (SaskPower). As these installations matured, and the nature of distributed generation at both small and medium scale emerged, the concept of micro-grids often arises as a solution for our energy future. Can a true micro-grid exist in a residence? The answer is yes. Is it a simple undertaking? The answer is not as straightforward. Is this of value looking through the various lenses of utilities and homeowners? This question forms one of the elements presented in this presentation. From a technical (system level) and experiential perspective, the development and nascent operation of an eight kW photovoltaic micro-grid with storage and islanding capabilities will be explored in this presentation.



Speaker Profile: Doug Wagner is an Instructor in the Electronics Systems Engineering program at the University of Regina. He holds a Diploma of Technology (SAIT-1980), Bachelor of Applied Science (U of R 1990), and a Masters of Science (USask -2021). Doug is a member of APEGS, and holds Permission to Consult from the engineering association. Doug’s teaching is focused on the Power Systems focus area in the ESE program, along with engineering design, and specifically analog and power electronics design. In addition to his teaching areas, he is also interested in low cost, high-speed transmission line protection augmentation, and the emerging role of distributed generation at the utility level



5.3.2. Invited Talk on “**Evolution of Cellular Wireless Technology: 1G to 5G**”

Date: **17 Jun 2022**

Time: **12:00 PM to 01:30 PM**

Venue: **ED 106.1, Education Building, University of Regina**

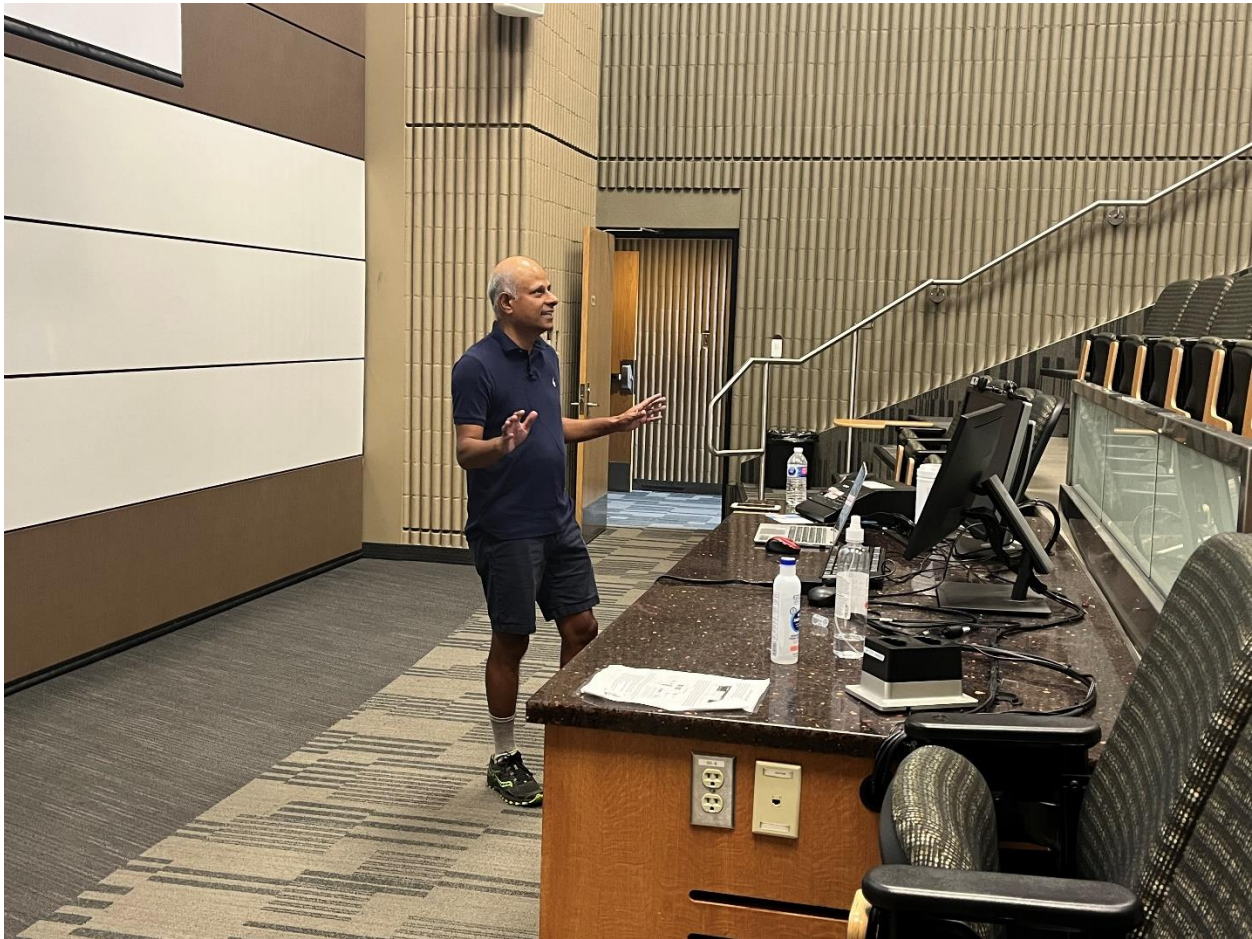
Abstract:

Over the last four decades (1980-2022), cellular wireless technology has revolutionized the communication industry and transformed the lives of people. From its infancy, with the advent of 1G (AMPS), to the pinnacle, with the successful deployment of 5G (mmWave), cellular wireless communication overcame many challenges. Dr. Gudem led the development of multiple generations of cellular transceivers from the dawn of 3G to the dusk of 4G. In this seminar, Dr. Gudem will take the audience through an intimate journey that highlights the many successes and a few missteps over his two-decade career in the cellular wireless industry.



Speaker Profile: Prasad Gudem received a B. Tech degree in Electrical Engineering from the Indian Institute of Technology, Madras, India in 1988 and a Ph.D. degree in Electrical Engineering from the University of Waterloo, Waterloo, Ontario, Canada in 1996. He was Vice President of Engineering at Qualcomm until 2018 and led the development of multiple generations of cellular transceivers that sold over three billion chips and used in top-tier products such as iPhone, Samsung, etc. Dr. Gudem was instrumental in establishing the Qualcomm RFIC group in Bengaluru that developed low-tier transceivers which sold over

one billion parts. He is currently an Adjunct Professor in the Department of Electrical and Computer Engineering, University of California at San Diego, La Jolla, CA, USA. He has 50+ patents and 50+ IEEE publications. He has taught several graduate-level classes and co-advised 15+ Ph.D. students and a recipient of the Graduate Teaching Award.



5.3.3. Programming Workshop on “**Functional Programming in Java**”

Date: **28 Jul 2022 02:00 PM to 29 Jul 2022 05:00 PM**

Venue: **ED 485.1, Education Building, University of Regina**

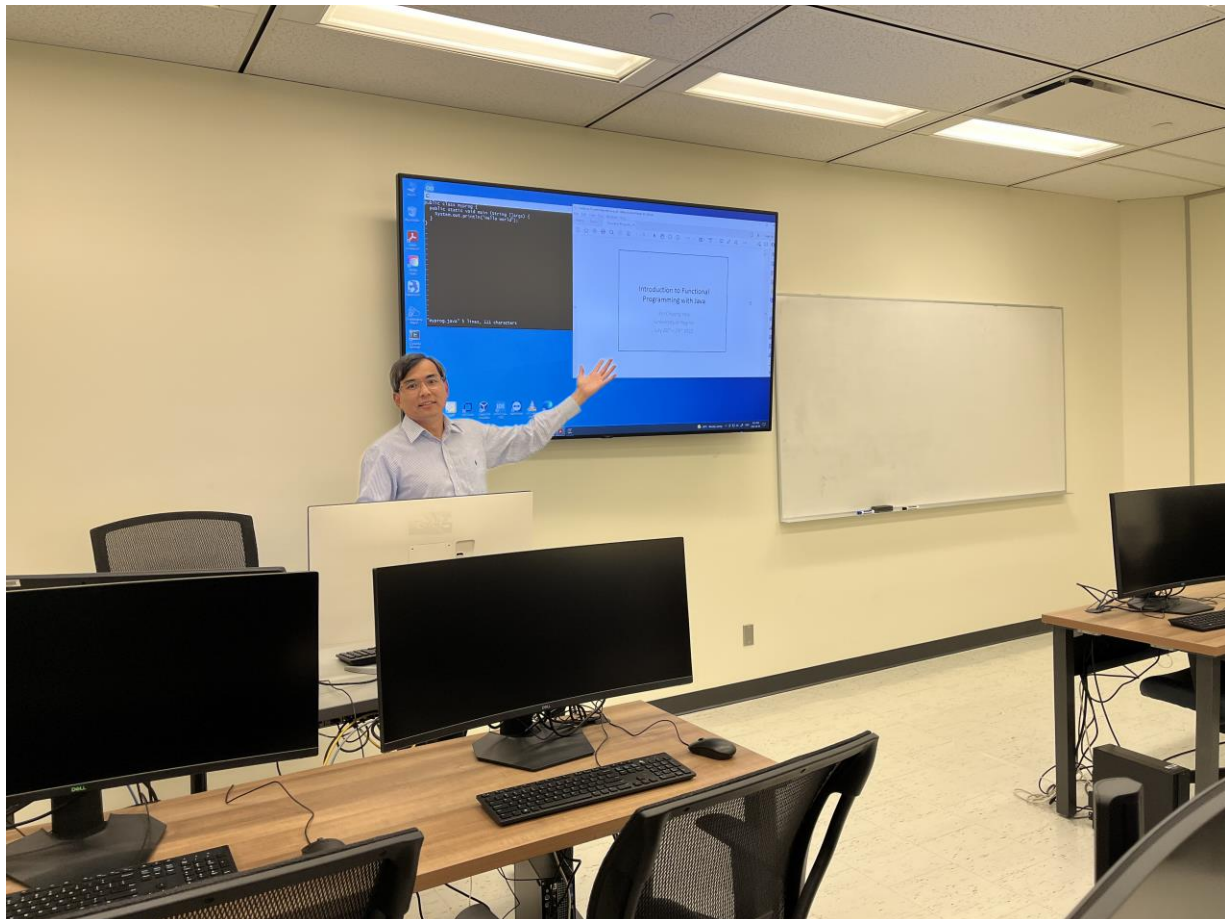
Workshop Overview: This course will cover the following topics:

Day 1:

- What is Functional Programming
- Why use Functional Programming
- A brief review of Imperative Java
- Exercises

Day 2:

- Functional Programming Java 8
 - Introduction to lambda expressions
 - Manipulating Collections
 - Strings and Comparators
 - Lazy Evaluation
 - Tail-call Optimization
 - Functional Composition
- Exercises



5.3.4. Mock Interview

Date: **14 Oct 2022**

Time: **12:00 PM to 05:00 PM**

Venue: **Rm RC163, Center for Experiential and Service Learning (CESL), Riddell Center, University of Regina**

To help prepare students for a real job interview after graduation, the IEEE South Saskatchewan Section organized a **Mock Interview** where we invite Human Resources personnel from SaskTel and SaskPower to post one of their existing positions, conduct an interview, and then give the student feedback on their interview performance.

There are two position available: one at SaskTel and at SaskPower. Only selected applicants were invited to be interviewed for each posting. A student may apply for one or both jobs, but he or she can have only one interview. Each session will consist of a 30 – 35 minutss interview, followed by a 15 – 20 minutes feedback session. Undergraduate and IEEE Student Branch members will have preference.

Interviews for successful applicants took place on **Fri, October 14th, from 12:00pm to 5:00pm**. There was also a professional get together at 5pm that same day, where all the applicants are invited to attend.



5.3.5. Team Building event “Bowling Night”

Date: **14 Sep 2022**

Time: **07:00 PM to 09:00 PM**

Venue: **Glencairn Bolodrome, 1620 9th Ave E, Regina**

IEEE South Saskatchewan hosted its networking and bowling event hosted at Glencairn Bolodrome located at 1620 9 Ave E, Regina, SK S4N 6J9 on Wednesday September 14, 2022.



5.3.6. Team Building trip to “Escape Club”

Date: **14 Sep 2022**

Time: **07:00 PM to 09:00 PM**

Venue: **Escape Club, 2410 Dewdney Ave, Regina**

IEEE South Saskatchewan hosted its networking and escape room event hosted at Escape Club located at 2410 Dewdney Ave, Regina, SK S4R 1H6 on Thursday October 27, 2022.



5.3.7. Panel Discussion on “**Shaping your Career**”

Date: **03 Nov 2022**

Time: **11:30 AM to 01:00 PM**

Venue: **CL434, Classroom Building, University of Regina**

IEEE South Saskatchewan Section in cooperation with University of Regina, Saskatchewan organized a value added Panel Discussion on "**Shaping your career**" which is an outstanding opportunity for students and initial career professionals to learn leadership, time/priority management, communication skills, networking, Entrepreneurship and experiences from diverse Government, Industry and Academic prominent leaders' experiences. This will help the students and initial career professionals to focus to improve the skill sets and be ready for the professional world.



5.3.8. IEEE Trans Canada Microwave Milestone Dedication Ceremony

Date: **14 Nov 2022**

Time: **10:00 AM to 11:00 AM**

Venue: **SaskTel Head Office, 2121 Saskatchewan Drive, Regina**

IEEE South Saskatchewan organized the IEEE Trans Canada Microwave System Milestone dedication ceremony in collaboration with the site owner, SaskTel Corporation at their head office in Regina, SK on Nov 14, 2022.



5.3.9. Annual General Meeting (AGM)

Date: **23 Nov 2022**

Time: **06:00 PM to 08:00 PM**

Venue: **CW 215, College West Building, University of Regina**

The AGM was held on Wednesday November 23rd 2022. The event was graced by Mr. Dan Coode, Treasurer of IEEE Region 7, and Dr. Phillip Choi, Dean of Engineering and Applied Science at the University of Regina. We had 36 members out of 119 (as of November 23rd 2022), i.e. 30.3%, who attended the event.



5.3.10. LinkedIn Workshop on “Turning your LinkedIn Profile into a Job lead magnet and experiences”

Date: **30 Nov 2022**

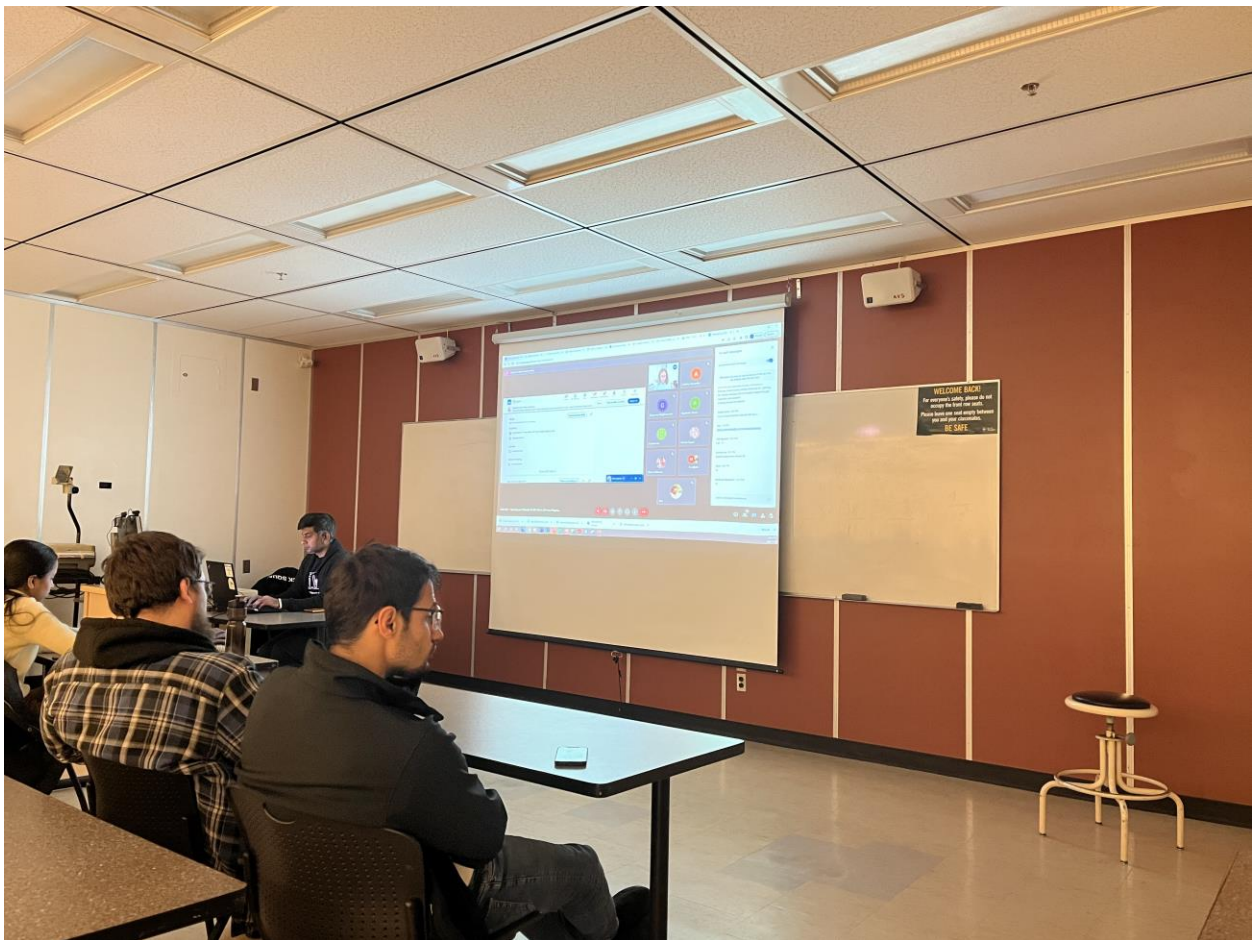
Time: **04:00 PM to 05:30 PM**

Venue: **ED 388, Education Building, University of Regina**

The IEEE Regina Student Branch in cooperation with IEEE South Saskatchewan Section and University of Regina, Saskatchewan organized a value added workshop whose focus is on "Turning your LinkedIn Profile into a Job Lead Magnet and Some Real-Life Success Stories". This helps the students (undergrad and postgrad) as well as young professionals to learn how to leverage LinkedIn as a tool to kickstart their career, attract a vast breadth of opportunities, network, keep up with industry trends and more.



Speaker Profile: Gurpreet Kaur Mann is a Talent Attraction & Retention Expert, LinkedIn Personal Brand Builder, HR Professional, and a Career strategist Coach. She has been working in HR for 14+ years with all sizes of Organizations from Large to Small. Gurpreet also leveraged her HR Expertise and Entrepreneur experience to help clients land their dream job in 30 Days. Her approach to managing people goes much deeper than just policies and procedures. She brings a strategic and holistic focus that aims to bring out the best in your people and align them with your business goals. Gurpreet is a Forward-thinker, a doer and an innovator, and a results-driven HR Superhero who gets Results!



The End