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## Editorial

Dear IEEE Member,

In this NL, we present the latest activities from IEEE Sweden Section and its affiliated chapters. Among the others, you find an announcement of IEEE Senior Membership campaign, and latest news from Photonics Society chapter, Reliability Society chapter, and Signal Processing chapter. We have started a group on LinkedIn for IEEE Sweden Section <https://www.linkedin.com/groups/9188233/> Please check out.

Dr. Qinghua Wang, Editor  
Rose Mary, Assistant Editor

## A message to IEEE Sweden Section members

Dear IEEE Member,

Hopefully you have enjoyed a well-deserved summer holiday. The IEEE Sweden Section board was active in Q2 and held online meetings in April, May, and June before taking a summer break. Thanks to in-time reporting, our Section received full rebate with a bonus from the central IEEE. To promote IEEE Sweden, the board and affinity chairs will be now wearing "IEEE Sweden" logo shirts on special occasions.

A major event was Region 8 meeting in Warsaw in April. Some important announcements, e.g., related to R8 split into two geographical parts were made. A humanitarian support initiative was created. Despite the political turmoil, IEEE remains a neutral organization committed to creating long-term benefit for humanity. The next face-to-face R8 meeting is planned in Cairo in October 2022.

It is soon time to start preparing for the next year including a Chapter Chairs workshop. Also please take note of ongoing Senior Membership promotion campaign.

Best wishes,

Prof. Andrei Gurtov, IEEE Sweden Section Chair



## Senior Membership Campaign

In this year, we continuously run the senior membership campaign. If you believe you have fulfilled the requirements for senior membership, you can send your letter of interest and CV to IEEE Sweden Section. We will evaluate it and provide you good references if approved. Basic requirements are that you shall practice in one of the fields of IEEE, have at least 10 years of professional experience, and shall have shown significant performance over a period of at least five of those years. More details can be found at [IEEE - Requirements for IEEE Senior Member Grade](#)

Dr. Ming Xiao, Membership Officer – IEEE Sweden Section  
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## IEEE Photonics Society (PS) Sweden Chapter

- On 17-Feb-2022 IEEE-PS Sweden Chapter organized a webinar with the invited IEEE-PS Distinguished Lecturer [Prof. Salah Obayya](#) (Zewail City of Science and Technology, Egypt) giving a talk on “**Computational Nanophotonics: Basics, Challenges and Future Perspectives**”.
- Nanophotonics modelling for 21<sup>st</sup> century applications are becoming vital. The computational modeling provides a fundamental understanding of the relying physics behind the operation of photonic devices. However, computational modeling is still a challenge as some of the existing modeling techniques fail to capture the correct behavior of nano-photonic devices. In this regard, this talk will introduce an overview of the existing computational modeling tools for analyzing photonic devices, in general, and highlighting their salient features and shortcomings. [\[link to more info\]](#)



- The **Optics and Photonics in Sweden** (OPS-2022) conference is organized by PhotonicSweden and Umeå University on 5-6 Oct-2022. The general chair is [Prof. Ove Axner](#), Department of Physics, Umeå University.
- Since 2016 the IEEE-PS Sweden Chapter has sponsored the **Best Poster Awards** at OPS. This year it will be three (3) Awards: 1x Best Poster Award (3 000 SEK) and 2x Best Poster Distinctions (1 000 SEK each). The Chair of the Awards Committee is [Prof. László Veisz](#), Umeå University [\[contact info\]](#).

- The IEEE-PS Sweden Chapter's **2021 IEEE Best PhD Thesis Award** in Optics/Photonics was closed for nominations on 30-Nov-2021. Eight (8) nominations were received (3 from Chalmers University of Technology, 2 from Royal Institute of Technology (KTH), 2 from Linköping University, and 1 from Gothenburg University).
- The Award has been granted to **Dr. Shangzhi Chen** (Department of Science and Technology (ITN), Laboratory of Organic Electronics (LOE), Linköping University) for his thesis entitled "**Optics of Conducting Polymer Thin Films and Nanostructures**" [[link to PhD thesis](#)]. The 2021 Award amounts 10,000 SEK and a certificate. The Award was funded through the IEEE Photonics Society 2021 Annual Chapter Grant.



- The IEEE PS-Sweden **2022 Best PhD Thesis Award** is now open for nominations. The award is open to all relevant PhD students whose PhD was awarded by a Swedish university between 1-Sept-2021 and 31-Aug-2022. This requires that the nominee has successfully defended his/her thesis during this period and has fulfilled all requirements to obtain the PhD degree.
- The 2022 Award consists of 10,000 SEK and a certificate. The Award is funded through the IEEE Photonics Society 2022 Annual Chapter Grant.
- Nominations must be received by the chair of the PhD Thesis Award Committee **Prof. Philippe Tassin**, Chalmers, by 30-Nov-2022. [[contact info](#)]

- To enhance the technical programs of the Chapters the IEEE Photonics Society **Distinguished Lecturer** (DL) Program provides excellent speakers who have made technical, industrial, or entrepreneurial contributions to the field of photonics [[Link to more info](#)].
- If you are planning a seminar with a DL as an invited guest speaker you may consider contacting the IEEE-PS Sweden Chapter for sponsoring the cost for refreshments [*see below for more info*]
- It might also be possible to create an event using an on-line tool (e.g., Skype, Zoom, etc.).

- On 29-April-2022 **Pawel Maniewski** (Laser Physics, Applied Physics, KTH) defended his PhD thesis on "*Additive manufacturing of fused silica glass*" [[link to thesis](#)]. The faculty opponent was Prof. Daniel Milanese (University of Parma, Italy) and the supervisors were Assoc. Prof. Michael Fokine and Prof. Fredrik Laurell (both at Laser Physics, Applied Physics, KTH). Pawel Maniewski was one of the winners of the **Best Poster Award** sponsored by IEEE-PS-Sweden at OPS-2019.
- On 10-June-2022 **Max Widarsson** (Laser Physics, Applied Physics, KTH) defended his PhD thesis on "*Pulse Generation and Detection through Intra-Cavity Up-Conversion*" [[link to thesis](#)]. The faculty opponent was Prof. Peter Tidemand-Lichtenberg, TU Denmark and the supervisors were Prof. Fredrik Laurell and Valdas Pasiskevicius, (both Laser Physics, Applied Physics, KTH)

- On 10-June-2022 **Samuel Gyger** (Quantum Nanophotonics, Quantum & Biophotonics, KTH) defended his PhD thesis on “*Integrated Photonics for Quantum Optics*” [[link to thesis](#)]. The faculty opponent was Matthew D. Shaw, Jet Propulsion Laboratory (JPL), Caltech, Pasadena, CA, USA, and the supervisors were Prof. Val Zwiller, Dr. Stephan Steinhauer, Prof. Ali W. Elshaari, and Dr. Marijn A. M. Versteegh (all at Quantum & Biophotonics, KTH)
- On 15-June-2022 **Joao Pereira** (Laser Physics, Applied Physics, KTH) defended his PhD thesis on “*Optically Poled Fibers for Electro-Optic Applications*” [[link to thesis](#)]. The faculty opponent was Prof. Stavros Pissadaki (FORTH Institute of Electronic Structure and Laser, Heraklion, Greece), and the supervisors was Prof. Fredrik Laurell and Prof. Walter Margulis (both at Laser Physics, Applied Physics, KTH).
- On 15-June-2022 **Arne Quellmalz** (Micro and Nanosystems, KTH) defended his PhD thesis on “*Integration of Two-Dimensional Materials for Electronics and Photonics*” [[link to thesis](#)]. The faculty opponent was Dr. Cedric Huyghebaert (Interuniversity Microelectronics Centre (IMEC), Leuven, Belgium) and the supervisors were Prof. Kristinn Gylfason and Prof. Frank Niklaus (both at Micro and Nano System Technology, KTH)
- On 9-June-2022 **Ekaterina Deriushkina** (Photonics, MC2, Chalmers) defended her Licentiate thesis on “*Characterisation of Optical Fibers using Dual-Comb Swept-Wavelength Interferometry*” [[link to thesis](#)]. The opponent was Prof. Chigo Okonkwo, TU Eindhoven, Netherlands, and the supervisors were Prof. Magnus Karlsson and Dr. Jochen Schröder (Photonics, MC2, Chalmers) and co-supervisor was Prof. Erik Agrell (EE Dept, Chalmers).
- On 16-June-2022 **Krishna Sundar Twayana** (Photonics, MC2, Chalmers) defended his Licentiate thesis on “*Comb-based Characterization of Photonic Devices*” [[link to thesis](#)]. The opponent was Timur Shegai (Chalmers) and the supervisors were Prof. Victor Torres-Company and Prof. Magnus Karlsson (both Photonics, MC2, Chalmers).
- On 17-June-2022 **Israel Rebolledo Salgado** (Photonics, MC2, Chalmers) defended his Licentiate thesis on “*Frequency Combs on Chip for Interferometry Applications*” [[link to thesis](#)]. The opponent was Karsten Rottwitt (DTU) and the supervisors were Prof. Victor Torres-Company (Photonics, MC2, Chalmers) and Martin Zelan (RISE).
- On 1-June-2022 **Dr. Xiaodan Pang** (Photonics, Applied Physics, KTH) had a docent lecture on “*Photonics-assisted free-space communication across the THz band*” [[more info](#)].

- **WaveJobs**, a community partner of the IEEE Photonics Society, is a job board dedicated for photonics, optoelectronics, nanotechnology, microelectronics, and electromagnetic engineering ([link to Featured Jobs](#)). WaveJobs is supposed to be a place that aims to facilitate connecting people, who want to invest in their careers with entrepreneurs / universities / institutes that need people with the right skills. More details are available [here](#).
- The WaveJobs job board now has a page, called [Photonic Aid for Ukraine](#), which has begun spotlighting job openings for displaced photonics professionals and refugees in Eastern Europe. The goal is to create a contact center for those who want to continue working in optics and photonics, in areas of engineering, technology and science that use light and its unique properties.



*At the OptoPub event in Stockholm, Sweden, Dr. Rafael Puerta gave an introduction to IEEE and its Photonic Society with assistance by Prof. Qin Wang.*

Dr. Arne Alping, Chapter Chair

## **IEEE Reliability Society, Joint Sweden and Norway Chapter**

In the first part of 2022, we have successfully organized two free lunch Webinars with support of four distinguished speakers with over one hundred participants:

- **Dr. Xinhai Zhang**, from Sigma Technology Consulting AB (currently work with SCANIA), Sweden, with his presentation titled “Critical Scenarios for Automated Driving and How to Identify Them”.
- **Prof. Ajit K. Verma**, from Western Norway University of Applied Sciences, Norway, with his presentation titled “Computational Intelligence Framework for Optimal Maintenance of Large Engineering Systems”.
- **Prof. Sanjay K. Khattri**, from Western Norway University of Applied Sciences, Haugesund, Norway, with his presentation titled “Optimization of tunnel fire emergency systems through computational fluid dynamics”.
- **Dr. Frank (Feng-Bin) Sun**, Technical Lead and Principal Manager of Reliability Engineering at Tesla Inc., with his presentation titled “Introduction to Fractional Failure and Its Application in Reliability Engineering”

We have started our linkedin Webpage, and please try to connect and introduce it to people who may also need the new platform: <https://www.linkedin.com/company/ieee-sweden-and-norway-reliability-society-joint-section-chapter/?viewAsMember=true>

Please help us to introduce this new Chapter to anyone who may be interested (and other IEEE members can add RS when other IEEE members renew their membership). Please forward this link to others. <https://rs.ieee.org/membership.html>

## News and Information for the coming months:

1) Three “Open sessions to all” from all members during July to September.

Would you like to meet our members from industry and academy face-to-face? No matter if you are members or not; no matter if you are from industry or academy; no matter if you would like to discuss reliability topics or just come to show yourself and say Hi; please don't miss the following three activities of our “open sessions to all”; and let us know each other!

- “Open sessions to all” \_No.1: 8th July 2022, Västerås (Sweden), 13:30 pm – 14:30 pm; Chair and Senior Members from ABB, Volvo CE have confirmed to participant. Address: Mälardalens Universitet (MDU), Västerås campus: U2-024.
- “Open sessions to all” \_No.2: 25th August 2022, Trondheim (Norway), 11:00 am – 12:00 am; Vice Chair and Senior Members from NTNU have confirmed to participant. Address: [Norwegian University of Science and Technology \(NTNU\)](#), PUMA 216, Verkstedtek, Richard Birkelands vei, 2B, Trondheim.
- “Open sessions to all” \_No.3: 15<sup>th</sup> September 2022, Stockholm (Sweden), 15:00 pm – 16:00 pm; ADCOM (Administration Committee) team and Senior Members from our Chapter have confirmed to participant. Address: Royal Institute of Technology (KTH), eecs\_epe Teknikringen 33, floor 4 , room 3439, floor 4, Janis Bubenk.

We appreciate our local hosting from Prof. [Markus Bohlin](#) from Mälardalens Universitet (MDU), Prof. [Yiliu Liu](#) from Norwegian University of Science and Technology (NTNU), as well as Prof. [Lina Bertling Tjernberg](#) from Royal Institute of Technology (KTH)!

Registration is not mandatory; however, we appreciate if you would let us know your participating in advance (in case we must rebook a larger meeting room) 😊 See you there!

2) ADCOM meeting in September and call for participants.

Chapter ADCOM meeting will be hold on 15<sup>th</sup> September 2022 at KTH. If you would like to contribute more for our joint chapter with any additional position in ADCOM team (member development, student branch, website, etc.), please let us know!

3) Free eLearning lectures from IEEE RS.

Do you know you could find free eLearning lectures from IEEE Reliability Society at: [iln.ieee.org](http://iln.ieee.org)? You will find various lectures related to the topic of reliability; among them, 4 are provided by IEEE Reliability Society recently (others are provided by different IEEE Chapters, like IEEE PES). most of them are free to IEEE members. Please see attached titles through [iln.ieee.org](http://iln.ieee.org)

Dr. Janet Lin, Chapter Chair

## IEEE Electronics Society (IES)

*2021 IES SYPs Competition:* The competition was organized by IES Student Branch Chapter in 2021. It provided a chance for SYPs members to present exciting research results and demonstrate their outstanding talents. Due to the COVID-19 pandemic, the IES SYPs competition was held online. The competition was divided into two tracks. In Track 1, the individual participants submitted a five-minute recorded video for their research project. In Track 2, a group of members developed a preventative maintenance app based on data analysis. **Nikolai Galkin from Luleå University of Technology**, Sweden won the First Prize in Track 1 for his work 'Design of reconfigurable modelling tool for simulation, validation and debugging of investigated electrical system'. Congratulations to all the winners, who were awarded prizes. Videos are available from the IES Youtube Channel. We hope more SYPs members will join the competition next year. More information can be found at [IEEE Xplore Full-Text PDF:](#)

This information was provided by Prof. Valeriy Vyatkin (LTU), and Dr. Wenbin (William) Dai, IEEE-IES SBC Coordinator

## IEEE Signal Processing Society, Sweden Chapter (SPS)

It is my great pleasure to inform you that the IEEE Signal Processing Society's Sweden Chapter has been awarded Certification! This Certification will be valid for four years, so the Chapter will be certified from 1 January 2023 through 31 December 2026.

IEEE Signal Processing Society's Sweden Chapter has been certified, you will receive the following:

- A certificate of merit for the 2022 Chapter Chair.
- An appreciation certificate for each 2022 Chapter Officer.

Including our chapter are granted Certification will receive the following benefits for the four years the Certification is valid:

- The Chair (or his/her representative) can apply for a travel support grant (up to \$1,000 per Chapter) annually to attend the Chapter Chairs Meeting during the four year certification period.
- Visibility on the SPS webpage.
- Support and visibility via social media (excluding conference related events).
- Visibility in the Chapter News section of the Inside Signal Processing Newsletter.
- Ability for Certified Chapters to apply for limited travel support to send one Student Member from their Chapter to attend ICASSP and/or ICIP to support membership development.
- Membership growth reward: Ability to request \$50 per new member (up to \$500) in additional funding for things such as networking events, poster awards, and food for seminars.
- SpS Sweden receive this grant because we had been participated in encouraged to have more (online) seminars and summer/winter school if possible with good involvement of DL speakers in our activities. We still need to work with local industry involved, and will be our future plan. Our plan in the remaining year is to invite industries for a seminar and to work on the coming planned seasonal school. I believe our plan will be successful with the engagements of all IEEE Signal Processing Society's Sweden Chapter members!

For additional information please view the SPS Chapter Welcome Kit at [https://signalprocessingsociety.org/sites/default/files/uploads/community\\_involvement/docs/Chapter\\_Toolkit.pdf](https://signalprocessingsociety.org/sites/default/files/uploads/community_involvement/docs/Chapter_Toolkit.pdf)

### Summary of IEEE Signal Processing Society's Sweden Chapter :

IEEE Sweden SPS involve different stage of members such as Life Members, Fellow member, Life fellow member, Senior Member, regular Members- and Graduate Student Member. The chapter prepares a professional development event with students and other professionals' participation on academic and industry topics. Some of the chapter office's tasks:

- To support the Society's growing member base, provide membership
- To make sure the visibility of the SPS Membership Development Report each month, which is designed to give the Society's Boards insight into the Society's monthly
- To develop a working knowledge of Chapter operations from manuals, guidelines, and best practices.
- To Maintain a fully functional chapter executive leadership group and develop and promote teamwork.

Dr. Amleset Kelati, Chapter Chair

## Upcoming events

**OPS-2022:** The **Optics and Photonics in Sweden** (OPS-2021) conference is organized by IEEE Photonic-Sweden and Umeå University. The venue is Umeå University with the general chair, Prof. Ove Axner, Department of Physics, Umeå University on 5-October to the 6- 2022. IEEE Photonics Society Sweden Chapter will sponsor the Best Paper and Best Poster Awards.

Since 2016 the IEEE-PS Sweden Chapter has sponsored the **Best Poster Awards** at OPS. This year it will be three (3) Awards: 1x Best Poster Award (3 000 SEK) and 2x Best Poster Distinctions (1 000 SEK each). The Chair of the Awards Committee is Prof. László Veisz, Umeå University

## IEEE Region 8 Meeting, Warsaw and Hybrid, April 2022

The 118<sup>th</sup> IEEE Region 8 Committee Meeting was held in Warsaw and also in hybrid, from Friday 1 April 2022 to Sunday 3 April 2022. The meeting was hosted by IEEE Poland Section. Prof. Andrei Gurtov from IEEE Sweden Section was with the meeting.



#### Sites for Success:

IEEEXplore: <http://ieeexplore.ieee.org>

IEEE ResumeLab [http://www.ieee.org/membership\\_services/membership/resumelab](http://www.ieee.org/membership_services/membership/resumelab)

IEEE Job Site <https://jobs.ieee.org>

IEEE Student scholarships, grants and fellowships:

<https://www.ieee.org/membership/students/scholarships-grants-and-fellowships.html>

IEEE Membership

<https://www.ieee.org/membership/index.html>

IEEE Women in Engineering

<https://www.facebook.com/ieeewomeninengineering>

IEEE University Partnership Program:

<https://www.facebook.com/ieee.upp>

IEEE Member and Geographic Activities Operations Manual

<https://mga.ieee.org/board-committees/operations-manual>