



IEEE Sweden

Vehicular Technology / Communications / Information Theory

Joint (VT/COM/IT) Chapter

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New Era Has Begun for the Chapter

- Tommy Svensson in IEEE Sweden VT/COM/IT Chapter
 - Chair of 2010-Oct 2021
 - Vice chair 2007-2009
 - Board member 2006-2007
- Michael Lentmaier (Assoc. Prof. Lund U.) takes over the chair role from Oct 21, 2021.
- Thanks for fruitful collaborations with the IEEE Sweden Section and all our Chapters!

Current IEEE Sweden VT/COM/IT Chapter Board

- **Chair:** Michael Lentmaier
- **Treasurer:** Danyo Danev
- **Awards Activities:** Danyo Danev and Mohammad Farsi
- **Membership development:** Michael Lentmaier
- **Interface to IT Society:** Michael Lentmaier
- **Secretary:** Emil Björnson
- **Interface to Comsoc:** Luis Guillermo Martínez Ballesteros
- **Interface to VT Society:** Jingya Li
- **Online and social media communications:** Marija Furdek and Jafar Banar
- **Student activities:** Jafar Banar and Mohammad Farsi
- **Industry activities:** Luis Guillermo Martínez Ballesteros and Jingya Li
- **Interface to IEEE Sweden Section:** Danyo Danev, Tommy Svensson

Core Activities

- Swedish Communication Technologies Workshop (Swe-CTW)
- Wireless Vehicular Communications workshop
- IEEE Sweden VT-COM-IT Joint Chapter Best Student Journal and Conference Paper Award
- IEEE Distinguished Lecturers Tours (DLTs) and invited distinguished "IEEE Technical Seminars" speakers from academia/industry
- Technical Sponsoring of workshops
- Social media
- Award identifications, nominations, member elevations
- Administrative board meetings, MoMs stored on Chalmers document server

Swedish Communication Technologies Workshop (Swe-CTW)

- Initiated by the IEEE Sweden VT/COM/IT Chapter
 - 2011 Stockholm, 2012 Lund, 2013 Gothenburg, 2014 Västerås (co-located with SNCNW 2014), 2015 Karlstad (co-located with SNCNW 2015), 2016 Mid Sweden University, Sundsvall, 2017 Chalmers University of Technology, Gothenburg, 2018 Linköping University, 2019 Lund University, 2020 Online mini-version. <http://sites.ieee.org/swe-ctw/>

- Focus on networking for young researchers (PhD students and post docs) in Sweden (and the nordic countries)

Format of Swe-CTW

- The workshop feature tutorials, poster presentations of submitted abstracts, and invited talks by the top nominated papers for
 - IEEE Sweden VT-COM-IT Joint Chapter Best Student Journal Paper Award
 - IEEE Sweden VT-COM-IT Joint Chapter Best Student Conference Paper Award

In Dec 2020 we held Swe-CTW online with presentations of top nominated papers and concluded with a DLT. We aim for a similar format in Dec 2021.

Virtual Swedish Communication Technologies Workshop (Swe-CTW) 2020, Dec 15, 2020, Online

- <http://sites.ieee.org/sweden-vtcomit/category/swe-ctw/>
- This year we implemented a mini-version of the workshop, with no tutorials and no poster sessions.
- 10 invited talks by the first authors of the IEEE Sweden VT/COM/IT Best Conference/Journal Papers awards nominated papers
- The award was handed out after the vDLT by Professor Vincent Wong
- ~25 participants during the Swe-CTW presentations and 47 participants~ during the vDLT by Professor Vincent Wong

Workshop Wireless Vehicular Communications, Dec 8, 2020, Online

- <https://events.vtools.ieee.org/m/247963>
- Speakers:
 - “Augmented Vehicle Localisation using Wireless Infrastructure”, Paul D. Alexander, Cohda Wireless, Australia
 - “Hybrid Analog-Digital Combiner for V2V Broadcast Communication”, Chouaib Bencheikh Lehocine, Chalmers University of Technology
 - “Full stack C-ITS V2X simulations with 3D realistic physical behavior”, Aleksei Fedorov, Lund University
 - “Vehicle-to-Vehicle Communication for Safe and Fuel-Efficient Platooning”, Galina Sidorenko, Halmstad University
 - “Design and Performance of Congestion-Aware Collective Perception”, Quentin Delooz, Technische Hochschule Ingolstadt, Germany
 - “Teleoperated driving: challenges and opportunities, Arrate Alonso Gómez, Mondragon Unibertsitatea, Spain
 - “Evolution of short-range wireless technologies for automotive applications, annis Sarris, ublox, Greece
- ~30 participants

5 IEEE Technical Seminars 2020

- IEEE Technical Seminar by Professor David Gesbert, EURECOM, France
 - 2020-01-24: “Learning to Team Play”, Linköping University, Linköping
- IEEE Technical Seminar by Professor Mohamad Assaad, CentraleSupélec, France
 - 2020-02-13: “Distributed derivative-free resource allocation in wireless networks”, Linköping University, Linköping
- IEEE Technical Seminar by Professor Sofie Pollin, KU Leuven, Belgium
 - 2020-03-02: “From Massive MIMO to distributed to mmWave Hybrid MIMO on SDR”, Linköping University, Linköping
- IEEE Technical Seminar by Dr. Dinh-Thuy Phan Huy, Orange Labs, France.
 - 2020-06-12: “Energy-Free Communication”, Chalmers, Gothenburg
- IEEE Comsoc Virtual Distinguished Lecture Tour (vDLT) by Professor Vincent Wong, University of British Columbia, Canada
 - 2020-12-15: “Throughput Optimization for Grant-Free Multiple Access with Multiagent Deep Reinforcement Learning”, Joint event organized by Chalmers, Gothenburg, Sweden; Linköping University, Norrköping, Sweden; Hamburg University of Technology, Hamburg, Germany.

Activities During 2021

- Planned/organized IEEE Distinguished Lecturers/Technical seminars so far
 - 2021-09-17: IEEE Technical seminar: "Low-Resolution to the Rescue of All-Digital Massive MIMO" at Chalmers by Prof. Christoph Studer, ETH Zurich, Switzerland
 - 2021-06-22: IEEE Sweden VT/COM/IT vDLT seminar "Physical Layer Security: Latest Trends, Threats, and Countermeasures" by Prof. Huseyin Arslan, University of South Florida, USA
 - 2021-04-09: IEEE Technical seminar: "Foundations of User-Centric Cell-free Massive MIMO" at Chalmers by Prof. Luca Sanguinetti, University of Pisa
 - 2021-03-12: IEEE Technical seminar: "Deep Analog-to-Digital Compression with Applications to Automotive Radar and Massive MIMO" at Chalmers by Prof. Yonina Eldar, Weizmann Institute of Science, Israel
 - Additional Technical online seminars and (v)DLTs from Comsoc/VTS/ITS) are being considered
- Restarting industry seminars program
 - 2021-05-25: 6G Webinar by Patrik Persson, Ericsson Research
 - 6G Panel planned for autumn 2021
- Technical sponsoring of conferences/workshops 2021 – 319 registered participants
 - Swedish 6G Workshop – 6G for Society, Oct 6-7 2021, organized by Tommy Svensson at Chalmers with Ericsson & Qamcom (also financial 1500 USD from Comsoc) <https://www.chalmers.se/en/conference/swedish-6G-workshop/Pages/default.aspx>
- Swe-CTW 2021, planning is ongoing, tentatively online Dec. 14, online, similar format as 2020
- Wireless Vehicular Communications workshop 2021, Online, Nov/Dec(?), 2021
- Catalyze VT/COM/IT Societies Industry awards nominations
- Participation at IEEE Sweden Chapter Chairs meeting Oct 29, 2021
- Participation during Comsoc Membership Value Research Congress (MVRC) Dec 2021
- Award identifications and nominations
- Additional activities to be defined by the new board

Award Promotions and Nominations

- Handed out, in conjunction with Swe-CTW'2020, the 8th
 - IEEE Sweden VT-COM-IT Joint Chapter Best Student Journal Paper Award 2020
 - IEEE Sweden VT-COM-IT Joint Chapter Best Student Conference Paper Award 2020
- All winners are published at <http://sites.ieee.org/sweden-vtcomit/best-student-paper-award/>, so that winners can refer in their CVs.

Dissemination

- Pending: Invited for to write an article for Comsoc Global Communications Newsletter 2021.
- Tommy Svensson participated in the ComSoc EMEA Region Chapter Chairs Congress 2018 Dec 2018 and presented our Chapter activities.
- Article in VT Newsletter Sep 2018, online: <https://vtsociety.org/2018/09/vts-chapter-profile-ieee-vts-sweden-chapter/>
- Article in IT Newsletter Sep 2017, online: <http://www.itsoc.org/publications/newsletters/september-2017-issue/view>
- Brief contribution related to ITS award to IEEE Sweden Newsletter Sep 2017.
- Article in VTS Newsletter May 2016, online: <http://newsmanager.commpartners.com/ieeevts/issues/2016-05-29/1.html>.
- Article in Oct 2015 issue of Comsoc Global Communications Newsletter, online: http://www.comsoc.org/files/Publications/Magazines/gcn/pdf/GCN_2015_10.pdf.
- Michael Mentmaier presented our chapter activities for IT Society during the ISIT June 25-30, 2017.
- Tommy Svensson took part in the IEEE Sweden Section Chapter Chairs meeting in Stockholm, Oct 6, 2016 and presented the IEEE VT/COM/IT Chapter activities.
- Reporting to Comsoc on activities via Comsoc Questionnaire Spring 2017.
- Annual report for 2016 presented during AGM, April 20, 2017.
- Brief contribution related to ITS award to IEEE Sweden Newsletter Sep 2017.

Sponsoring of Conferences/Workshops 2021

- Swedish 6G workshop - 6G for Society
 - Online, free registration
 - Technical and also financial with 1500 USD from Comsoc
 - Co-sponsored also with Wireless World Research Forum (WWRF)
- ...

Online Media

- IEEE Sweden Section
 - <http://sites.ieee.org/sweden/vtcomit-vehicular-technologycommunicationsinformation-technology/>
- Main web site hosted by IEEE:
 - <http://sites.ieee.org/sweden-vtcomit/>
 - NOTE: This link has been replaced at our page on www.ieee.se = <https://r8.ieee.org/sweden/home/> ith <https://r8.ieee.org/sweden-vtcomit/> being a broken link! **Why?**
- LinkedIn group:
 - <http://www.linkedin.com/groups/IEEE-Sweden-VT-COM-IT-5070706>
- Facebook page:
 - <https://www.facebook.com/IEEESwedenVtcomit>

Received 10 Awards over the Past 10 Years

- IEEE Communications Society Chapter Achievement Award 2020
 - 4 chapters awarded in the world
- IEEE Information Theory Society Chapter of the Year Award 2017
- IEEE Vehicular Technology Society Chapter of the Year Award 2016
- IEEE Region 8 Chapter of the Year Award 2015
 - Large chapter category
- IEEE Communications Society Chapter Achievement Award 2015
 - 4 chapters awarded in the world
- IEEE Communications Society Special recognition award 2013
 - "For long-time achievements in chapter activities and ongoing excellence serving its members".
- IEEE Information Theory Society Chapter of the Year Award 2013
- IEEE Communications Society Chapter Achievement Award 2013
 - 4 chapters awarded in the world
- IEEE Communications Society Chapter Achievement Award 2012
 - 4 chapters awarded in the world
- IEEE Communications Society Chapter Achievement Award 2011
 - 4 chapters awarded in the world

Members

- **AGM 2021:** VT/COM/IT memberships: 325 (VT:71, COM:211, IT:43), (unique members: N/A).
- **AGM 2020:** VT/COM/IT memberships: 329 (VT:65, COM:227, IT:37), (unique members: N/A).
- **AGM 2019:** VT/COM/IT memberships: 337 (VT:65, COM:226, IT:46), (unique members: N/A).
- **AGM 2018:** VT/COM/IT memberships: 492 (VT:101, COM:315, IT:76), (unique members: 331).
- **AGM 2017:** VT/COM/IT memberships: 522 (VT:102, COM:346, IT:74), (unique members: 360).
- **AGM 2016:** VT/COM/IT memberships: 587 (VT:104, COM:403, IT:80), (unique members: 419).
- **AGM 2015:** VT/COM/IT memberships: 723 (VT:121, COM:517, IT:85), (unique members: 536).
- **AGM 2014:** VT/COM/IT memberships: 797 (VT:117, COM:583, IT:97), (unique members: 599).
- **AGM 2013:** VT/COM/IT memberships: 675 (VT:111, COM:474, IT:90), (unique members: 491).
- **AGM 2012:** VT/COM/IT memberships: 848 (VT:127, COM:616, IT:105), (unique members: 630).
- **AGM 2011:** VT/COM memberships: 611 (VT:115, COM:496), (unique members: 506).

Comment 1: There is a drop in members.

Comment 2: There seems to be less members when the AGM is held in the spring (compared to the autumn)

Ambitions for the Coming Years (1/2)

- Evolve our core activities towards our members
 - SweCTW <-> Swedish National Computer Networking Workshop (SNCNW) <-> ...
 - Maintain interest in the workshop (keep fully online?)
 - Involve VINNOVA?
 - Wireless Vehicular Communications Workshop (WVCW) (keep fully online?)
 - Distinguished lectures and mini-workshops from academia
 - Evolve industry seminars program
 - IEEE Sweden VT-COM-IT Joint Chapter Best Student Journal/Conference Paper Award
 - Ambition to split to four awards(?): PHY/MAC (conf., journal) and Networking (conf., journal)
 - Increase values for members
 - Continue enabling remote participation to our technical seminars
 - Catalyze IEEE Societies Industry award nominations(?)
 - Organize MSc thesis award?
 - Work for alternative membership formats
 - Evolve/maintain high level of our on-line media (awards page parts done, Swe-CTW permanent workshop web page: done, WVCW remains)
 - Launch our own Industry award?
- Catalyze higher layer convergence in communications
 - SweCTW - Swedish National Computer Networking Workshop (SNCNW)
- Report our IEEE Sweden VT/COM/IT Chapter activities
 - VT/COM/IT Society Newsletters
 - IEEE Sweden Section Newsletter

Ambitions for the Coming Years (2/2)

- Seek to organize - WCNC, ISIT, (ITW: done 2019), ICC, VTC, EuCNC (pending), ...
 - Our VT/COM/IT Board has been positive
 - E.g. Göteborg & Co is actively promoting a top conference in the IEEE VT/COM/IT area to be organized in Gothenburg
- **General Data Protection Regulation (GDPR)**
 - Web sites updated
 - Migration to eNotice completed: enables active filtering of our emails for active consent based on IEEE member database flag (no support for email attachments, but we use links logos at our web site)
- Joint IEEE Sweden/Cross-chapter/Student chapter activities
 - Involve north of Sweden (Luleå)
 - Catalyze Senior and Fellow elevations
 - **Increase interest in Engineering in Sweden, address the grand societal challenges**