



Annual General Assembly 2020 of IEEE Switzerland

Dr. Maria-Alexandra PAUN

Telecommunications Engineer, OFCOM
Chair of IEEE Switzerland

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IEEE Switzerland GA 2020 online on WebEx platform, 22.06.2020
Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



AGENDA (14:00-16:30)

=====

1. Opening of the meeting and welcoming attendees (Maria-Alexandra Paun)
2. Approval of the Agenda (Maria-Alexandra Paun, All)
3. Approval of GA 2019 Minutes (Maria-Alexandra Paun/Ben Bowler, All)
 - online at [ieee.ch https://events.vtools.ieee.org/m/233527](https://events.vtools.ieee.org/m/233527)
 - sent by eNotice to IEEE Switzerland members on 18th of June 2020
4. Chair's Report (Maria-Alexandra Paun)
5. Financial Report and Budget (Danilo Zanatta)
6. Approval of Financial Report and Budget (All)
7. Contributions from IEEE Swiss ExCom (ExCom members)
8. Any Other Business (All)
9. End of the meeting (All)

Warm welcome to our very first online Annual General Assembly via WebEx platform!

IEEE Switzerland General Assembly

Monday, June 22, 2020

14:00 pm | Europe Summer Time (Paris, GMT+02:00) | 2:30 hrs

<https://ieeemeetings.webex.com/ieeemeetings/j.php?MTID=mc2c529b5af3022814986ea1c3d82fbe2>

Meeting number: 595 214 684

Meeting password: 5NuHEvB36kp

1. Opening of the meeting and welcoming attendees (Maria-Alexandra Paun)
2. Approval of the Agenda (Maria-Alexandra Paun, All)
3. Approval of GA 2019 Minutes (Maria-Alexandra Paun/Ben Bowler, All)

4. Chair's Report (Maria-Alexandra Paun)

Table of contents

- IEEE Switzerland 2020 statistics
- IEEE Switzerland events (past & upcoming)
- Highlight on 1 section event in 2019
- IEEE Switzerland fellows in 2020
- Technical co-sponsorship to IEEE conferences

4. Chair's Report (Maria-Alexandra Paun)

We welcome our long standing and new members.

- IEEE in Switzerland comprises:
 - ✓ Approximately 2'600 members (June 2020)
 - ✓ IEEE executive committee
 - ✓ 16 chapters, 3 affinity groups + 2 working group
 - ✓ 2 student branches: ETHZ, EPFL
- NEW Swiss Council on Electronic Design Automation Chapter (Chair: Andreas Burg)
- NEW Swiss SLIGHT Group (Chair: Nina Wang)
- IEEE Switzerland website: www.ieee.ch

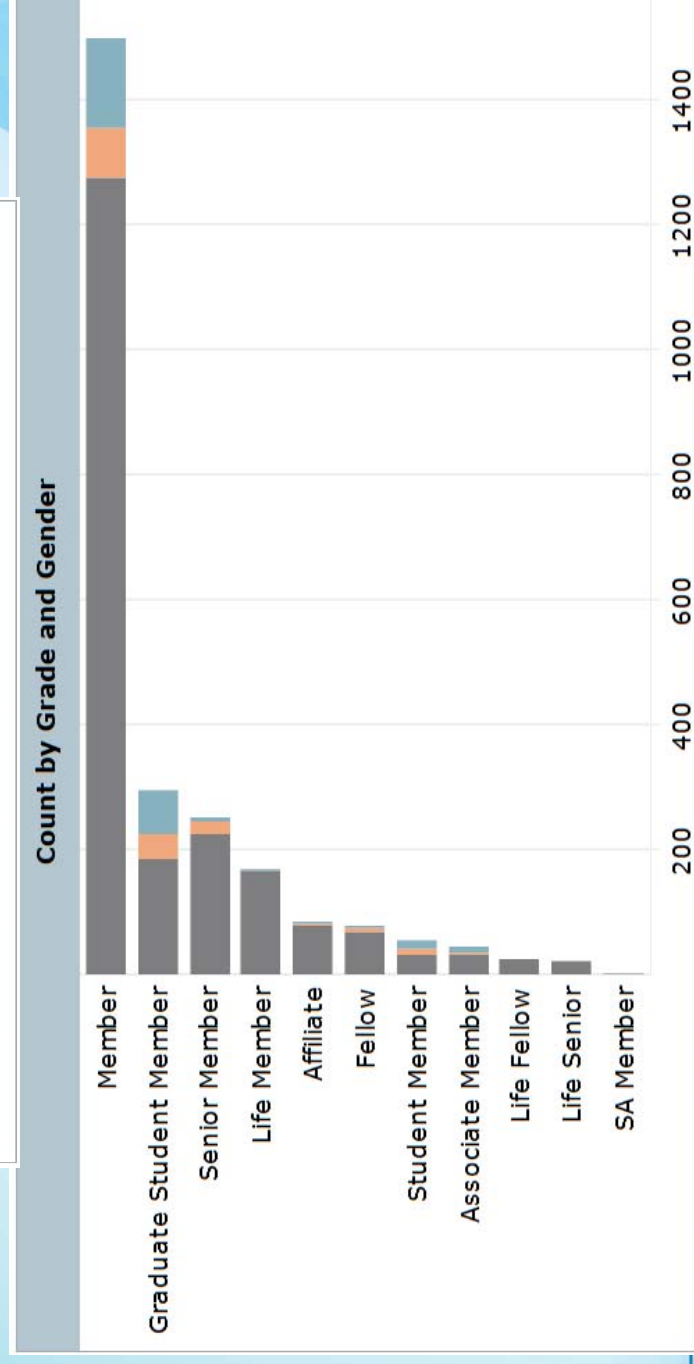
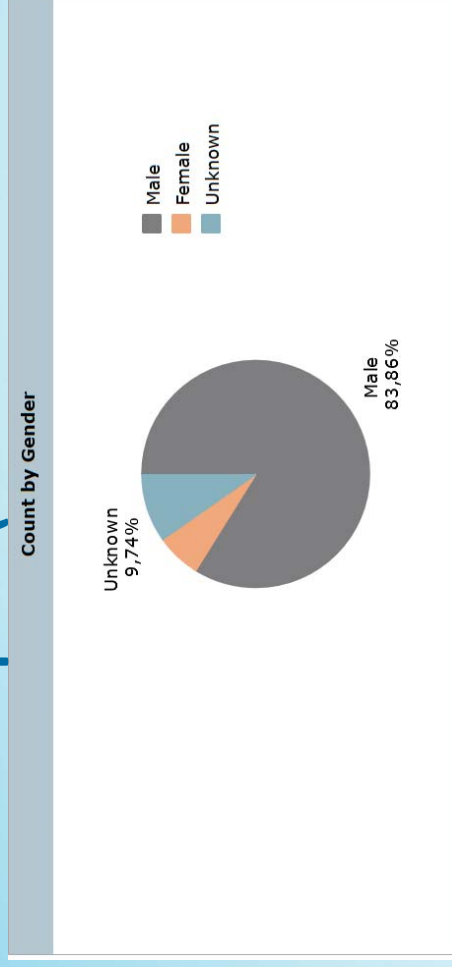
4. Chair's Report (Maria-Alexandra Paun)

IEEE Switzerland membership

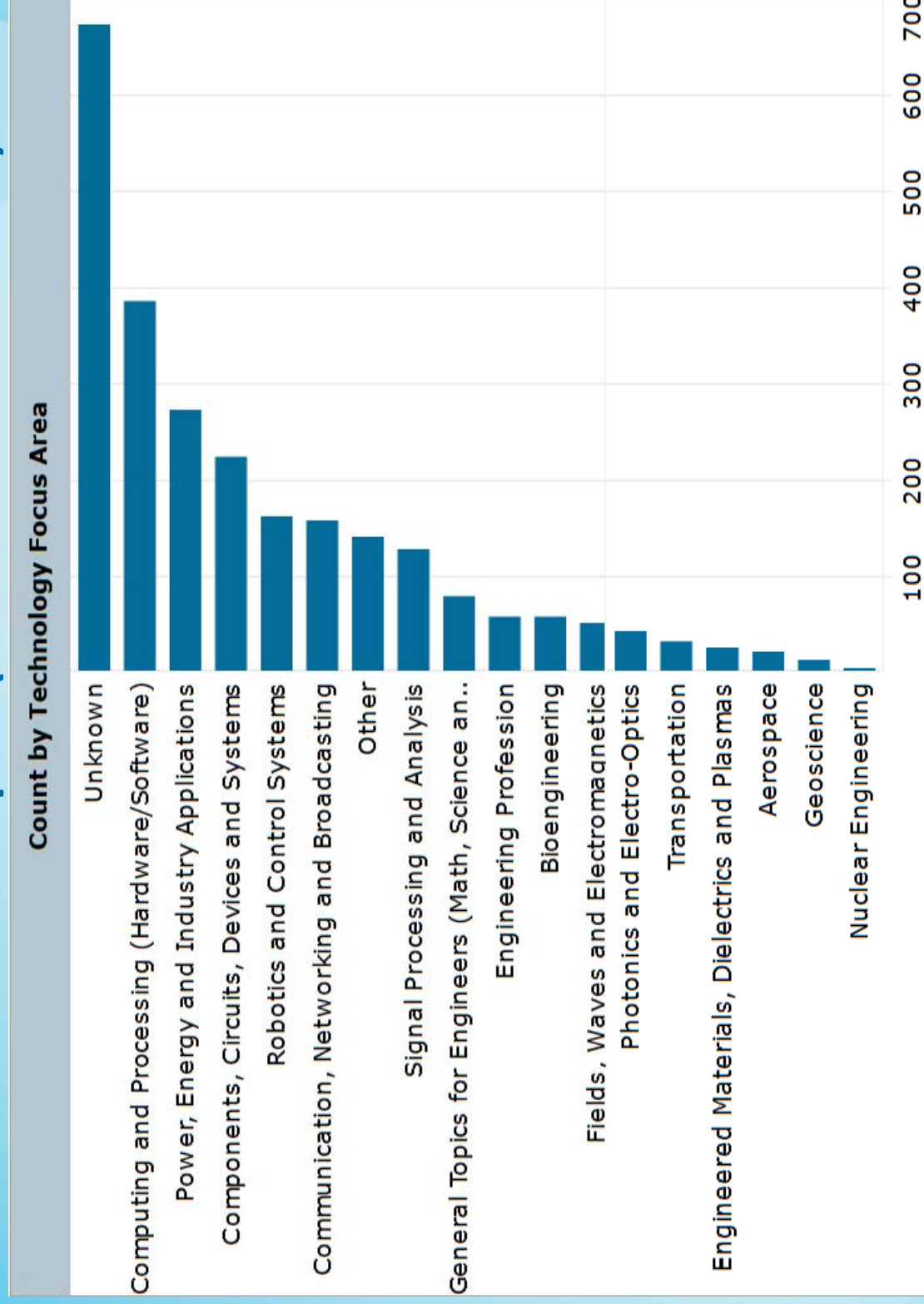
Total number of **2'547** members at 22.06.2019

Switzerland Section	IEEE Grades	Associate Member	48
	Fellow		78
	Graduate Student Member		299
	Life Fellow		29
	Life Member		169
	Life Senior		26
	Member		1.500
	Senior Member		253
	Student Member		57
Other Grades	Affiliate		86
	SA Member		2
Total			2.547

4. Chair's Report (Maria-Alexandra Paun)



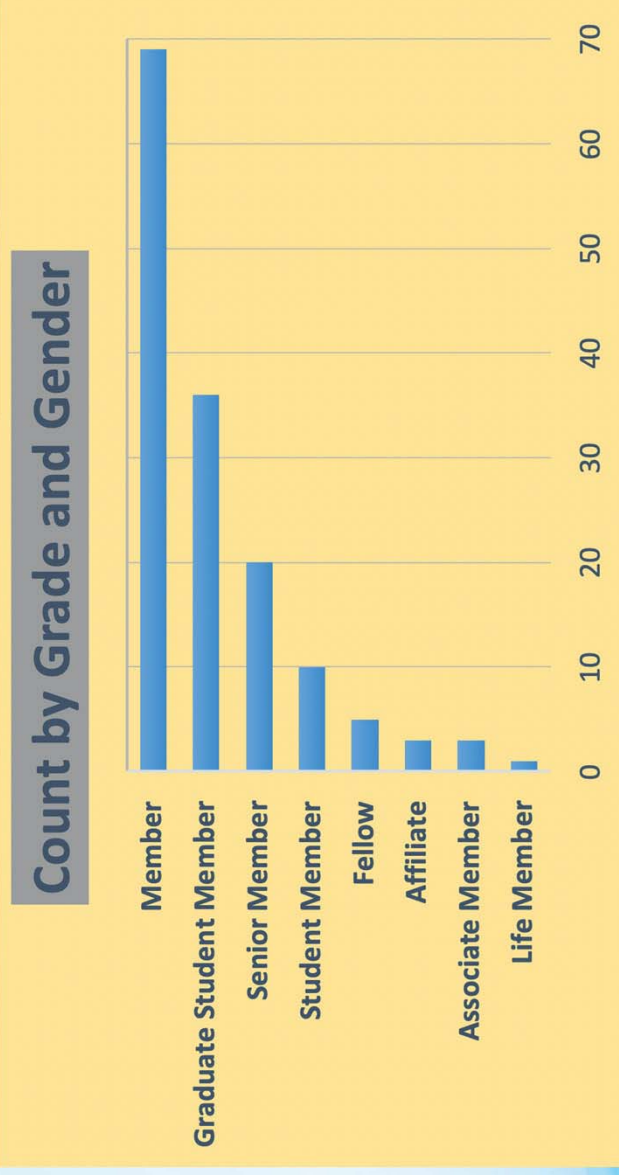
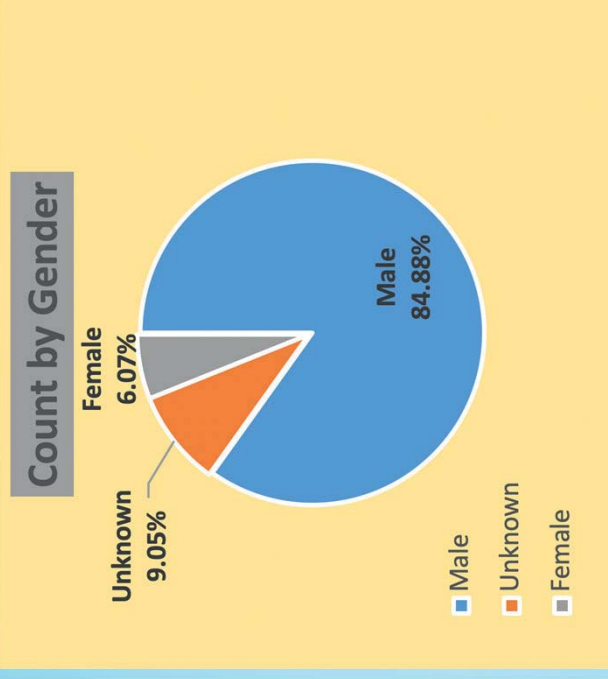
4. Chair's Report (Maria-Alexandra Paun)



4. Chair's Report (Maria-Alexandra Paun)

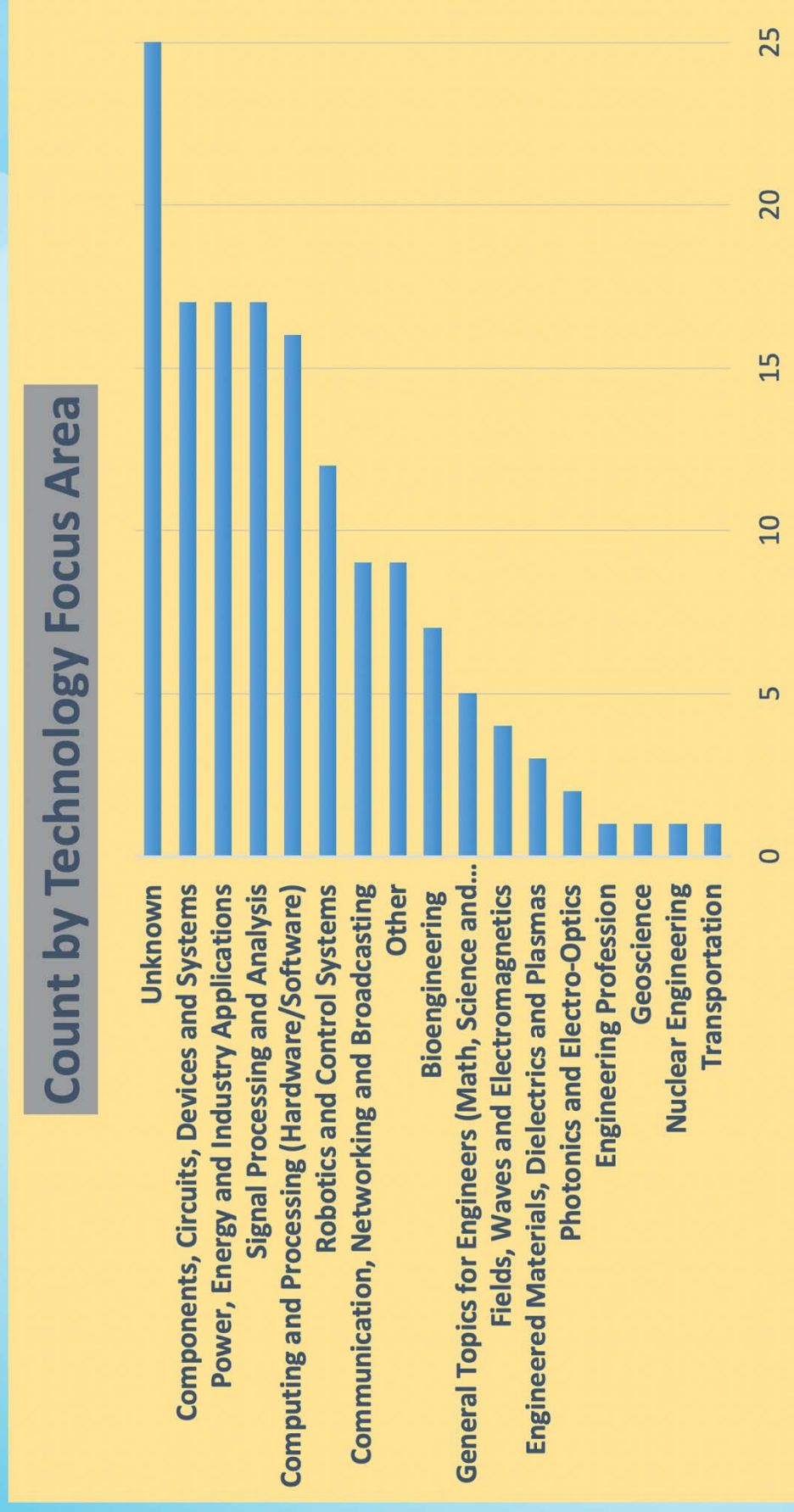
Survey of female representation in IEEE Switzerland (1)

- A March IEEE OU analytics survey revealed that among our 2'420 members, only 147 are female, which is about 6%.
- 3 Associate Members, 5 Fellows, 36 Graduate Student Members, 1 Life Member, 69 Members, 20 Senior Members, 10 Student Members, and 3 Affiliates.



4. Chair's Report (Maria-Alexandra Paun)

Survey of female representation in IEEE Switzerland (2)



4. Chair's Report (Maria-Alexandra Paun)

Upcoming Events in Switzerland

- Annual General Assembly 2020 of IEEE Switzerland - Switzerland Section on 22-June-2020
- IEEE Swiss SSC Talks (Webinar) : Evolution of cellular RFICs (2G to 5G) - Switzerland Section Chapter,SSC37 on 25-June-2020
- [CoronaVirus Rescheduling] IEEE Switzerland seminar: The Role of 5G in Industry 4.0 - Switzerland Section on 30-July-2020

Upcoming Events

EVENTS FROM
2020-06-21

SEARCH

Keyword

FIND EVENTS

« PREVIOUS EVENTS

June 2020

Annual General Assembly 2020 of IEEE Switzerland

June 22 @ 2:00 PM - 4:30 PM
City: Bern

IEEE Swiss SSC Talks (Webinar) : Evolution of cellular RFICs (2G to 5G)

June 25 @ 5:30 PM - 6:30 PM
City: Online

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4. Chair's Report (Maria-Alexandra Paun)

Past Events in Switzerland Section

- SSC Switzerland - Vertical integration for mmWave systems: Building a bridge between antennas and AI
- Stamm @ EPFL Evolution of Digital TV Technology
- Sustainable Development Games
- IEEE Switzerland Stamm @ EPFL: Future Directions Committee update
- Nano-Satellites – a GNSS Payload for Orbit Determination and Timing
- Cube Satellite Activities at HSLU
- Circuit Breaker Technologies for Direct Current Power systems
- Autonomous Traction Options for Railways
- Extracting the Full Potential of Wide-Bandgap Power Semiconductors
- You can't have your planet and eat it!

2019

November

YOU CAN'T HAVE YOUR PLANET AND EAT IT!

RAPID DECARBONISATION AND ITS IMPACT ON SOCIETY

October

IEEE DAY 2019

September

IEEE CAREERS ROUNDTABLE: DIGITALIZATION & ENERGY

May

DECARBONISATION OF ENERGY SYSTEMS IN SWISS URBAN AREAS

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4. Chair's Report (Maria-Alexandra Paun)

Events of IEEE Switzerland in 2019

- A total of **58** events were organized and reported in vTools by the Section, its Chapters and Affinity Groups.
- Highlight on one Section event: «Italo-Swiss joint IEEE Day Celebration» at Alessandro Volta Foundation, Como, Italy, 01.10.2019.

4. Chair's Report (Maria-Alexandra Paun)



Day commemorating the first time IEEE members gathered to share their technical ideas in 1884.

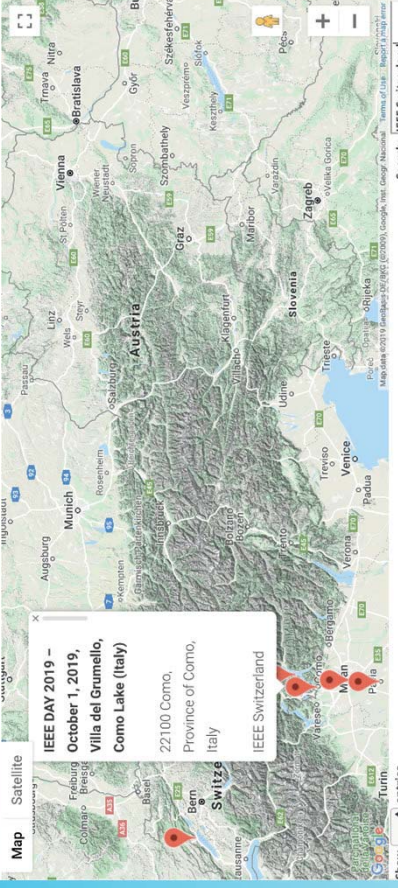
Joint Italo-Swiss celebration of IEEE Day was held on 01.10.2019 at Alessandro Volta Fondazione in Como, Italy. Focused on strengthening the relations between the two sections.

✓ 27 IEEE members from Italy and Switzerland, 4 guests from Fondazione Alessandro Volta The event is celebrating the 10th anniversary of IEEE Day, the 20th anniversary of the Volta's battery IEEE Milestone and the 60th anniversary of the Italy Section.

✓ Strong emphasis devoted on panel discussion and exchanges of Young Professionals and Students with participants from both countries.

✓ Our 60 sec miniclip "Volta is waking up in the Internet and Smartphone era" won the third place internationally (see <https://ieeeday.org/milestone-contest-winners/>)

4. Chair's Report (Maria-Alexandra Paun)



IEEE DAY 2019 – October 1, 2019, Villa del Grumello, Como Lake (Italy)
22100 Como, Province of Como, Italy

IEEE Switzerland

Title	Category	Address	Link	Region
IEEE DAY 2019 – October 1, 2019, Villa del Grumello, Como Lake (Italy)	Professional, Educational	22100 Como, Province of Como, Italy	More details	8



4. Chair's Report (Maria-Alexandra Paun)

IEEE Fellows 2020.

6 IEEE members of the Switzerland Section were made fellows in 2020 We congratulate them for their achievements:

1. Markus PUSCHEL (ETHZ)
2. Auke IJSPEERT (EPFL)
3. Dimitri VAN DE VILLE (Campus Biotech, Geneva)
4. Aude BILLARD (EPFL)
5. Jerome FAIST (ETHZ)
6. Touradj EBRAHIMI (EPFL)

4. Chair's Report (Maria-Alexandra Paun)

Technical co-sponsorship to IEEE conference

IEEE Section has successfully provided technical co-sponsorship to conferences in Switzerland and Italy. Whenever possible, we have delivered talks and set up informative stands about IEEE Switzerland.

- Crypto Valley Blockchain conference 2019, Zug, Switzerland, 24-26.06.2019: <https://www.cryptovalleyconference.com/>
- The 6th Swiss Conference on Data Science SDS 2019, Bern, Switzerland, 14.06.2019: <https://sds2019.data-service-alliance.ch/>
- The 5th Forum on Research and Technologies for Society and Industry RTSI 2019: Firenze, Italy, 09-12.09.2019: <http://rtsi2019.ieeesezioneitalia.it/>

4. Chair's Report (Maria-Alexandra Paun)



Dr. Maria-Alexandra Paun with her IEEE Switzerland booth at the Crypto Valley Association on Blockchain Technology Conference in Zug, Switzerland on 25 June 2019.

5. Financial Report and Budget (Danilo Zanatta)

6. Approval of Financial Report and Budget

Treasurer's Report - Summary

1. IEEE Switzerland Section received highest possible Rebate in 2019

2. Many events sponsored in 2019

3. Budget 2020

1 6/21/2020



Danilo Zanatta (Treasurer Report)

Budget/Realized 2019

Position	Budget 2019	Realized 2019
Sales		
3.10 - Rebate from IEEE HQ	CHF 14'000.00	CHF 13'472.07
3.34 - IEEE HQ & Societies	CHF 2'000.00	CHF 1'996.00
3.70 - Other Receipts	--	CHF 3'799.23
3.95 - Bank Account Transfer	--	CHF 1'146.80
Total - Sales	CHF 16'000.00	CHF 20'414.10
Gross Profit	CHF 16'000.00	CHF 20'414.10
Overheads		
4.10 - Meetings & Social Events Expense	CHF 17'000.00	CHF 27'906.47
4.20 - Publication Expenses	CHF 1'500.00	CHF 766.30
5.20 - Travel Expense	CHF 3'500.00	CHF 4'998.75
5.60 - Other Management & General Expenses	CHF 550.00	CHF 742.67
Total - Overheads	CHF 23'550.00	CHF 34'414.19
Net Profit/Loss	CHF -6'550.00	CHF -14'000.09



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Danilo Zanatta (Treasurer Report)

Gain/Loss 2018 and 2019

	2018	2019
Sales		
3.10 - Rebate from IEEE HQ	CHF 13'888.99	CHF 13'472.07
3.34 - IEEE HQ & Societies	CHF 4'192.09	CHF 1'996.00
3.70 - Other Receipts	--	CHF 3'799.23
3.95 -- Bank Account Transfer	--	CHF 1'146.80
Total - Sales	CHF 18'081.08	CHF 20'414.10
Gross Profit	CHF 18'081.08	CHF 20'414.10
Overheads		
4.10 - Meetings & Social Events Expense	CHF 22'444.01	CHF 27'906.47
4.20 - Publication Expenses	CHF 1'523.70	CHF 766.30
5.20 - Travel Expense	CHF 976.17	CHF 4'998.75
5.60 - Other Management & General Expenses	CHF 308.35	CHF 742.67
Total - Overheads	CHF 25'252.23	CHF 34'414.19
Net Profit/(Loss)	CHF -7'171.15	CHF -14'000.09

Balance Sheets 2018 and 2019

	2018	2019
Current Assets		
Bank		
74095 - Postfinance Checking	CHF 10'316.96	CHF 1'316.87
74096 - Postfinance Savings	CHF 84'108.60	CHF 79'108.60
Total Current Assets	CHF 94'425.56	CHF 80'425.47
Long Term Liabilities		
74246 - Reserve Allocation Payable	CHF 34'074.22	--
Total Long Term Liabilities	CHF 34'074.22	--
Total Assets Less Total Liabilities	CHF 60'351.34	CHF 80'425.47
Capital and Reserves		
Retained Earnings	CHF 67'522.49	CHF 94'425.56
Net Income	CHF -7'171.15	CHF -14'000.19
Total Capital and Reserves	CHF 60'351.34	CHF 80'425.47

Danilo Zanatta (Treasurer Report)

Budget 2020

Position	2020
Sales	
3.10 - Rebate from IEEE HQ	CHF 13'500.00
Total - Sales	CHF 13'500.00
Gross Profit	CHF 13'500.00
Overheads	
4.10 - Meetings & Social Events Expense	CHF 8'500.00
4.20 - Publication Expenses	CHF 700.00
5.20 - Travel Expense	CHF 3'800.00
5.60 - Other Management & General Expenses	CHF 500.00
Total - Overheads	CHF 13'500.00
Net Profit/(Loss)	CHF 0.00



5 6/21/2020

7. Contributions from IEEE Swiss ExCom

I would like to thank all IEEE Switzerland ExCom for all their great commitment, valuable contributions and very interesting events they have organized throughout the year!

1. Ben Bowler (Chair of PES Chapter)
2. Thomas Mittelholzer (Chair of SP-01 / C-16 / COM-19 / IT-12)
3. Taekwang Jang (Chair of IEEE SSC-37)
4. Rony Jose James (Chair of EP-21)
5. Thomas Hanselmann (Vice Chair)
6. Heinz Mathis (Chair of Industrial Relations)
7. Ning Wang (Chair of Swiss SIGHT)
8. Maria-Alexandra Paun (Chair of Swiss WIE)

Ben Bowler (Chair, Swiss PES) Report

(p1)

IEEE Power and Energy Society (Switzerland)

Annual General Assembly, 22 June 2020



Ben Bowler
www.ieee.org



IEEE Switzerland GA 2020 online on WebEx platform, 22.06.2020
Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



Topics

What will I cover today?

What are our priorities as PES?

And those of our members?

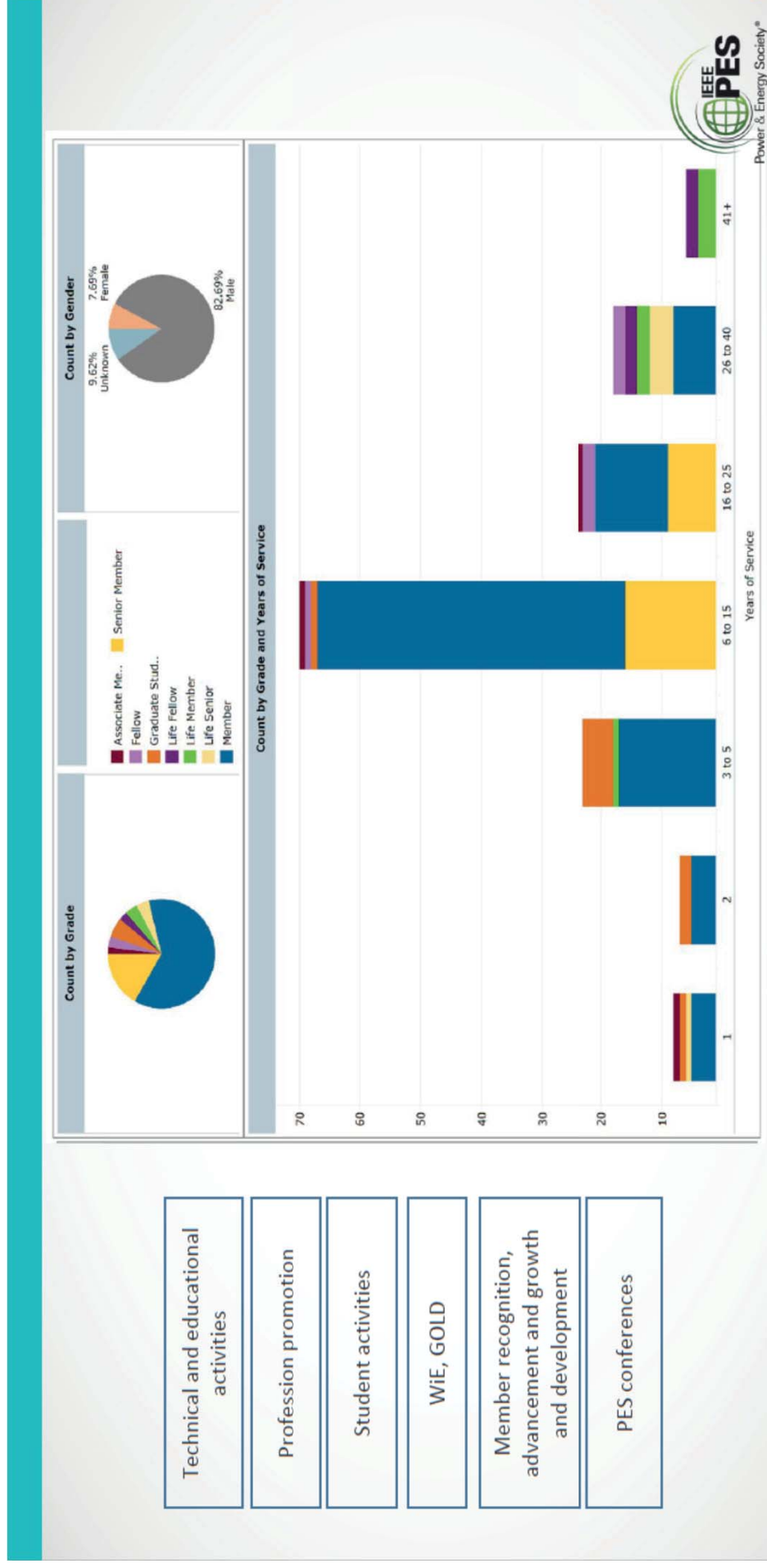
How did we do in 2019?

And how are we doing in 2020?



Ben Bowler (Chair, Swiss PES) Report

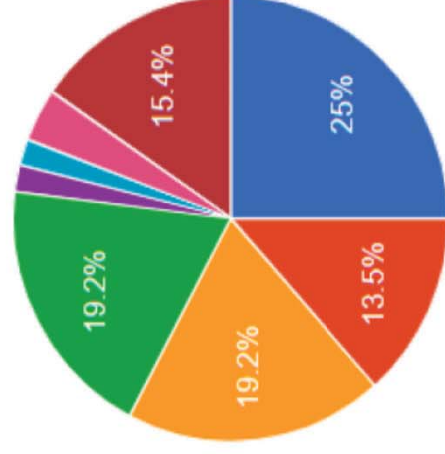
(p3)



Survey results

What is the nature of your organisation?

52 responses



- Research institute or university
- Private / industry (SME)
- Private / industry (large)
- Consultancy
- Not-for-profit / foundation
- Government
- Self employed
- Unemployed
- Retired

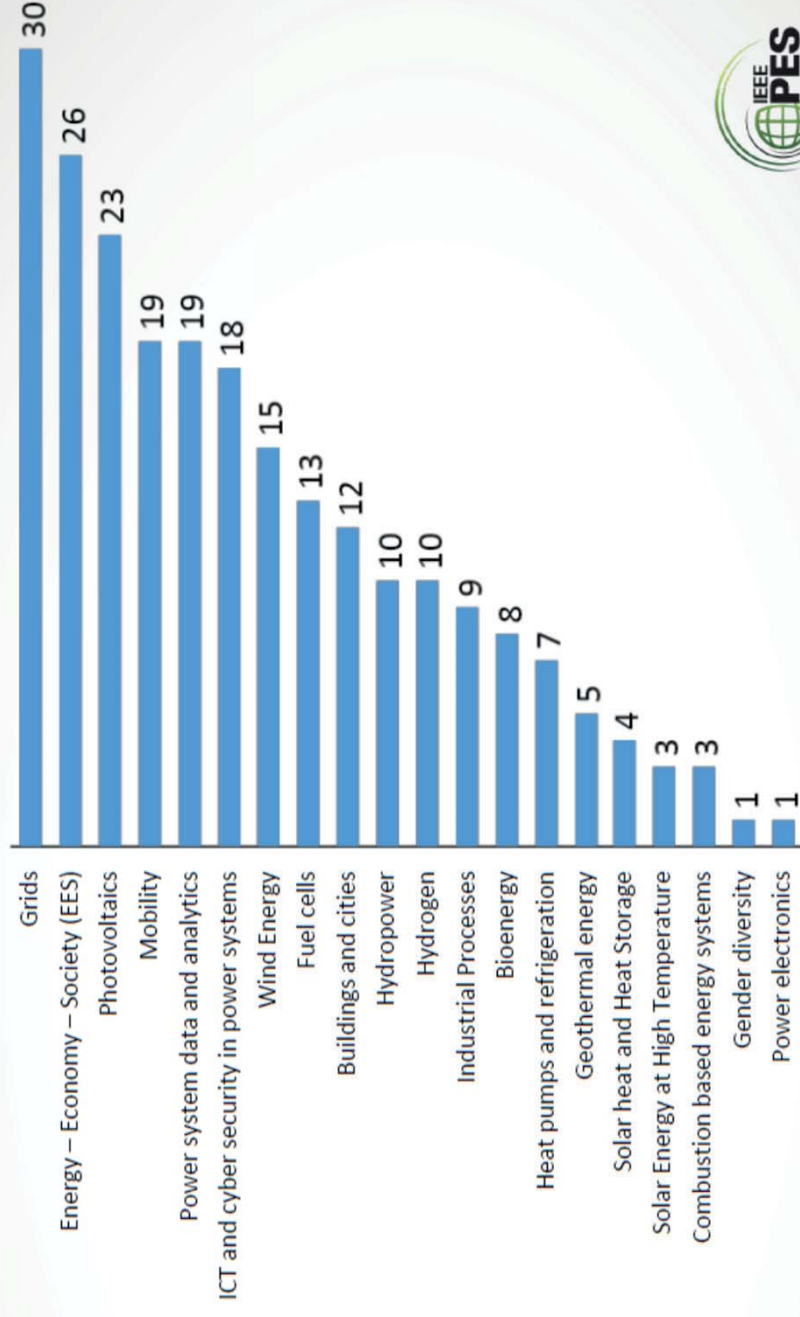


Ben Bowler (Chair, Swiss PES) Report

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Focus for future events

No difference
private sector
/ research in
top 6



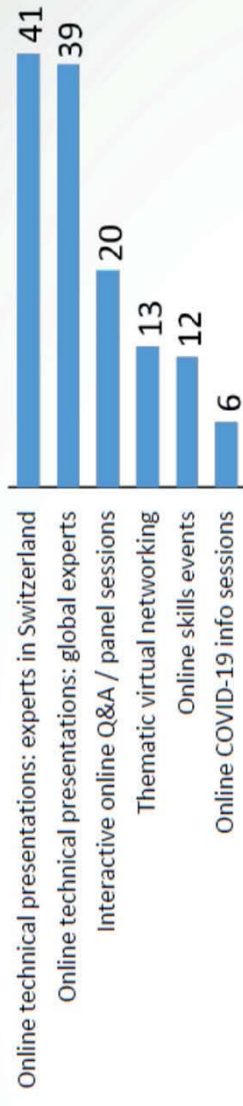
Ben Bowler (Chair, Swiss PES) Report

(p6)

Format

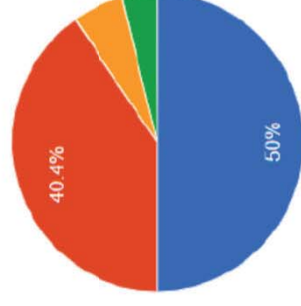
Question focus
was on events
during COVID-19

We will still run
skills events – it is
part of our
mandate (and is
important!)



How long should events last?

52 responses



Up to 1 hour
1-2 hours
Half day
Full day



Events

Ambition - as presented last year

- ▶ 2 x conferences per year:
 - 2019: energy strategy impact in urban environment (9 May)
 - 2019: rapid decarbonisation and its technical impact on society (October)
- ▶ 1 x collaboration event with younger members
- ▶ 1 x skills event - eg. focused on design thinking, LEAN, agile

2020 ambition will be set on successes and failures of 2019, but it would be good to aim for an increase each year!



Events

What we achieved since the last General Assembly

- ▶ 2 x conferences per year:
 - 2019: energy strategy impact in urban environment (May 2019)
 - 2019: rapid decarbonisation and its technical impact on society (November 2019)
- ▶ 1 x collaboration event with younger members
 - 2019: Careers in digital and energy disciplines (October 2019)
- ▶ 1 x skills event - eg. focused on design thinking, LEAN, agile
 - 2020: Sustainable Development Goals Game - with Irish Business Network (January 2020)
 - 2020: Design thinking for online learning (May 2020)



Events - 2020 - a work in progress!

- ▶ 2 x conferences per year:
 - 2020: Emerging markets – grid aspects of peer to peer markets (IEA observatory) (September 2020)
 - 2020: Sector coupling (date TBC)
 - 2020: E-mobility (date TBC - late summer)
- ▶ 1 x collaboration event with younger members
 - 2020 Power system security, data management, privacy, AI, Cyber attacks, energy demand of devices (date TBC)
- ▶ 1 x skills event - eg. focused on design thinking, LEAN, agile
 - 2020: Sustainable Development Goals Game - with Irish Business Network (January 2020)
 - 2020: Design thinking for online learning (May 2020)

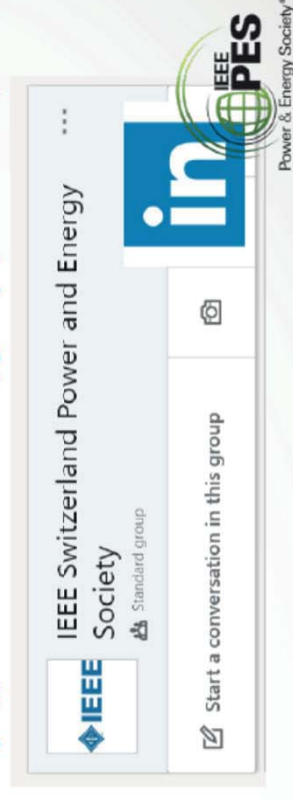


Committee

Ambition - as presented last year

- ▶ Strong support from a number of senior figures in industry and academia in Switzerland
- ▶ Time pressures a challenge - we need more support
- ▶ Build a mix of early professionals, YP and students to complement the existing committee - people wanting to raise their profile and use the IEEE as an opportunity to advance their career
- ▶ As part of this:
 - Build closer ties with YM
 - Build online presence
- ▶ Open to new members:
Benjamin.b.bowler@ieee.org

<https://www.linkedin.com/groups/12222835/>



Ben Bowler (Chair, Swiss PES) Report

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Committee



Ben Bowler
(HSLU)



Silvia Bardi
(Tiko)



Matthias Bucher
(Speedgoat)



Antonios
Papaemmanouil
(HSLU)



Henrik Nordborg
(HSR)



Mario
Paolone
(EPFL)



Klaus-Peter
Brand
(it4power)



Gabriela Hug
(ETH)

Chair

Vice Chair

Industrial
Relations

Treasurer

Secretary /
Webmaster

Student
activities

Past Chair

Past Chair



Michael Tavernier
(ABB)
Online engagement



Paula Rios-Rodriguez
(ABB)
WiE



“Women in Power”

- ▶ New programme being established by Paula Rioz-Rodriguez
- ▶ In collaboration with Section WiE
- ▶ Mentoring programme – basis will be Collaboratec
- ▶ Events promoting excellence in Swiss engineering and science among women
- ▶ Starting small, aim to grow, learn as we go



IEEE Switzerland PES Chapter

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Q | IEEE

Q



Skills Event – Design thinking for virtual teams

A special online training event by IEEE Switzerland Power and Energy Society

Design Thinking training for engineers and scientists

Do you want to learn Design Thinking skills and put them into practice at the same time? This is your opportunity!

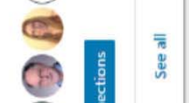
In a world where working online is suddenly very important, IEEE PES Switzerland has organized a workshop to help you improve the way you use virtual collaboration.

The workshop will cover the **basics of design thinking**, show **how it can be used by virtual teams**, then apply the methodology to the thematic area of **education and professional development for engineering disciplines** during innovative virtual break-out sessions.

Participants will learn by doing in an adapted design thinking workshop. During this



- Date: 28 May 2020
- Time: 10h – 12h CET
- Cost: Free
- Language: English




IEEE Switzerland Power and Energy Society

 Listed group






Set your group up for success

 Start a conversation in this group





Georg Schett • 2nd
 Chair of Schett Electro-Simulation, Lecturer at Lucerne University of Applied S...
 1d



Here is a tutorial about the basics of power electronics inverter technologies.

Power system 4 Q inverters for storage applications



Public access

52 members
 Including Wolfram Willuhn and 26 other connections






+23

[Invite connections](#)

[See all](#)

About this group

LinkedIn page for the IEEE Switzerland Power and Energy Society Chapter. We organise events on power and energy topics throughout the year. We are looking for new committee members; please get in touch if you are interested in building your career b...

[See all](#)

Group admins



Ben Bowler You Owner
 Senior Research Associate - Intelligent Energy Systems | Chair - IEEE Switzerland Power and Energy Society

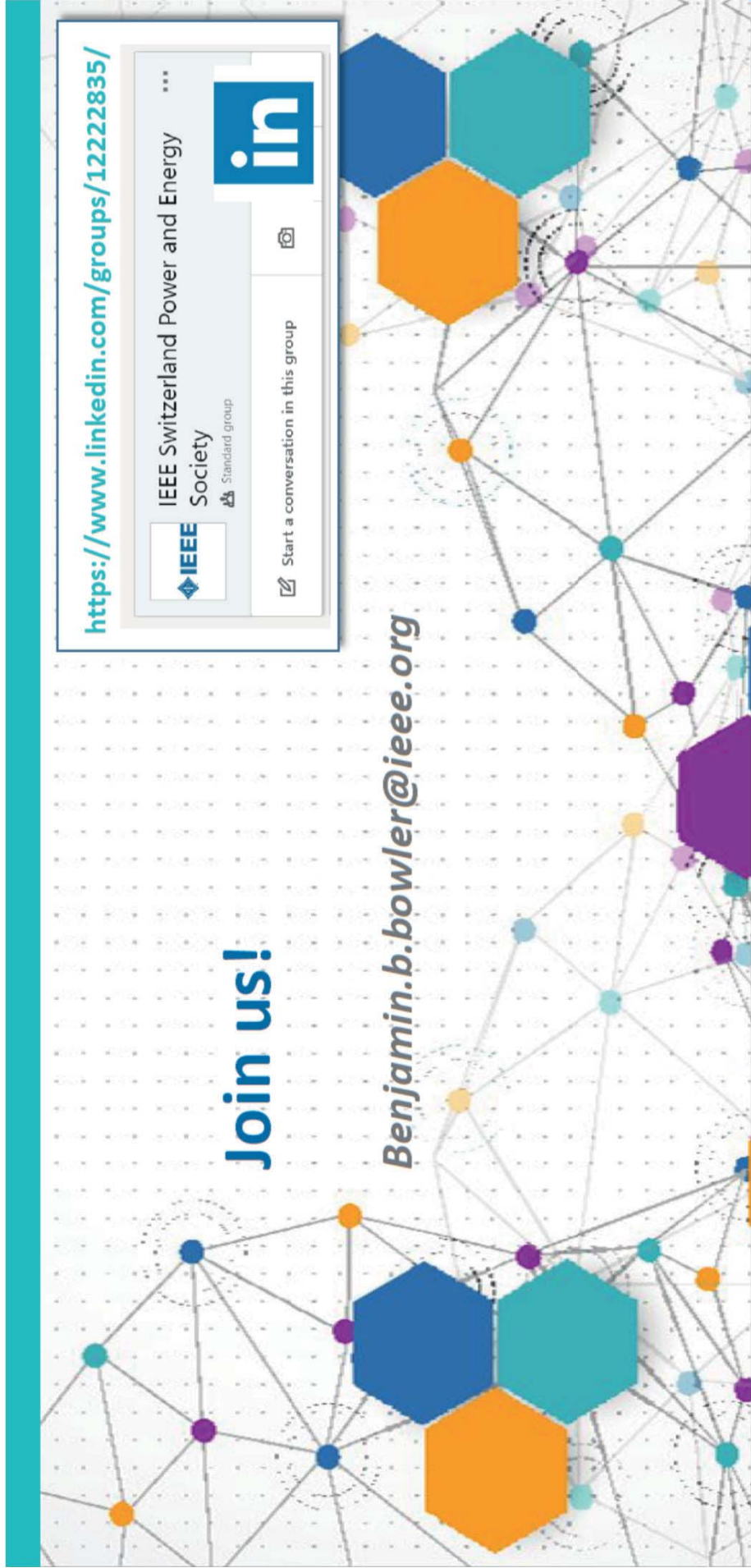


Michael Tavernier 2nd Manager
 Global Engineering Coordinator for Grid Automation at IEEE PES ABQ



Ben Bowler (Chair, Swiss PES) Report

(p14)



Join us!

Benjamin.b.bowler@ieee.org

<https://www.linkedin.com/groups/12222835/>

IEEE Switzerland Power and Energy Society
Standard group

Start a conversation in this group



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www.ieee.org

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Advancing Technology
for Humanity

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Switzerland

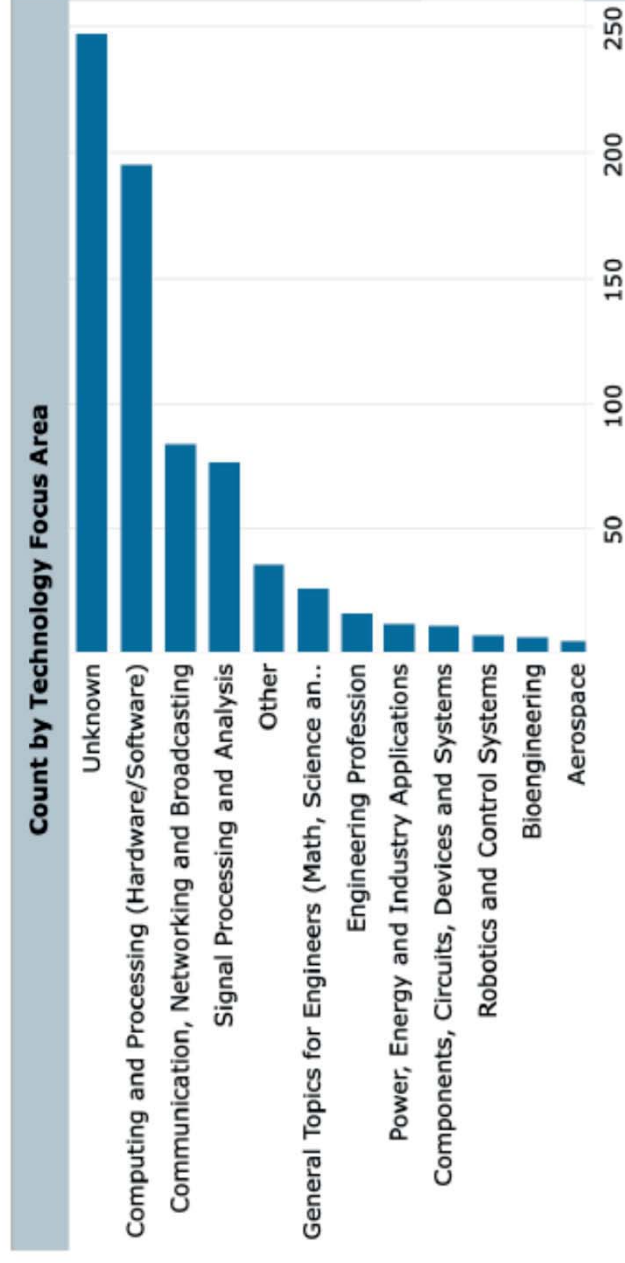
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 **IEEE**

IEEE Switzerland Chapter on Digital Communication Systems

Joint Chapter of the Signal Processing/Computer/Communications/Information Theory Societies

- **Homepage**
www.isiweb.ee.ethz.ch/ieee/
- **743 Members**
- **Chapter chair**
Dr. Thomas Mittelholzer
IBM Research (retired)
- **Secretary**
Prof. Stefan Moser
ETH-Zurich / NCTU, Taiwan
- **Member at large**
Prof. Ruediger Urbanke
EPFL



IEEE Switzerland Chapter on Digital Communication Systems

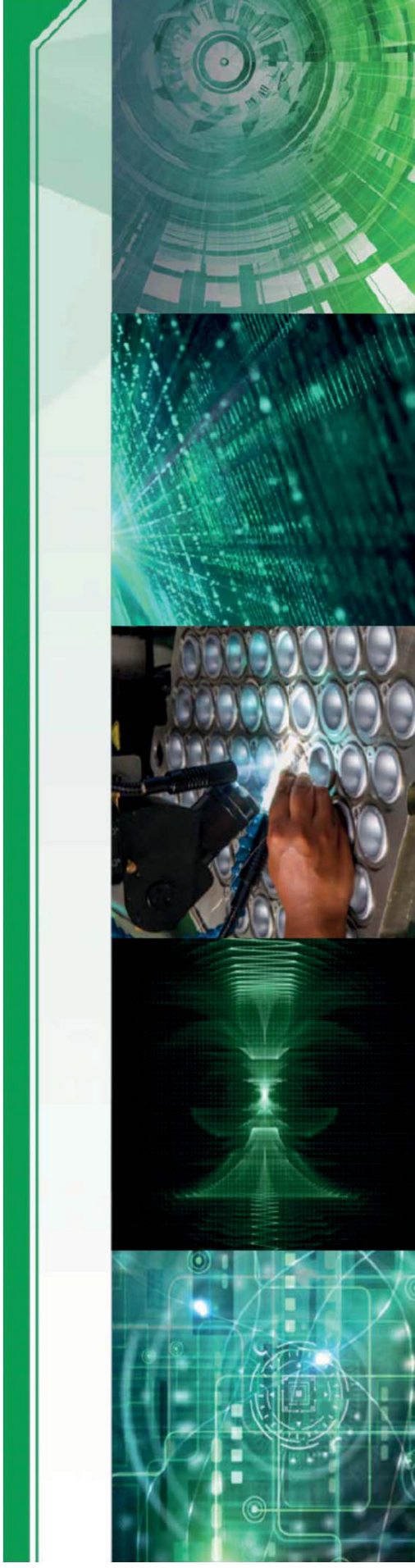
Chapter Activities in 2019

- **2019 Crypto Valley Conference on Blockchain Technology** www.cryptovalleyconference.com
 - The only IEEE certified conference that combines academic research and the global blockchain industry
 - June 24–26, 2019, Zug
 - Conference was organized in 3 tracks:
 - Technology, Economics & Finance, Regulatory & Legal
 - 1200+ attendees, 100+ speakers, 20+ academic papers, 6 satellite events
- **6th Swiss Conference on Data Science (SDS 2019)**, <https://sds2019.ch>
 - 14 June, 2019; Kursaal, Bern
 - Conference was organized in an academic and an industry track
 - 100+ attendees, 27 accepted papers published in IEEEExplore

Chapter Activities 2020

- **International Zurich Seminar 2020**
 - February 26–28, 2020, Zurich
 - Financial Support by ZuSem Foundation
 - 80+ participants: 40 papers & 10 posters
 - 3 keynote lectures:
 - Antonia Tulino, Univ. Napoli/NYU: A Network Evolution Story: From Communication to Content Distribution, to Real-Time Computation
 - Alfred Bruckstein, Technion: Erratic Extremists Induce Dynamic Consensus
 - Andrew Barron, Yale Univ.: Deep Network Approximation
 - **Proceedings, slides and videos are publicly available:** <https://www.izs.ethz.ch>
- **7th Swiss Conference on Data Science (SDS 2020)** <https://sds2020.ch>
 - 26 June, 2020; KKL in Lucern (online event with live-stream presentations)
 - The 7th Swiss Conference on Data Science brings together researchers, developers, influencers, decision makers, and innovators with expertise in data science. The goal of SDS2020 is to foster the exchange of novel ideas for data products, digital health and robust and trustworthy machine learning.





IEEE Switzerland SSC Chapter

Switzerland General Assembly 22nd June 2020



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IEEE Switzerland GA 2020 online on WebEx platform, 22.06.2020
Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



Outline

1. *Members*
2. *Web*
3. *Events*
4. *COVID-19*
5. *Finances*



Solid State Circuit Switzerland Chapter – Membership

Numbers taken in June 2020



171 Members



66 %

55 %



45 %



34 %



22 %

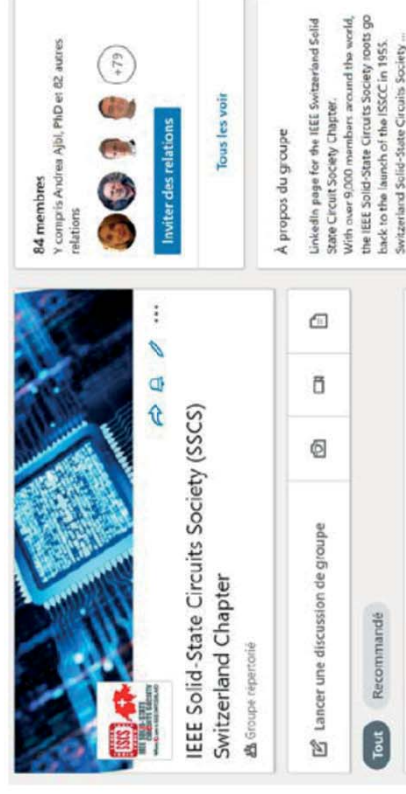


88 %

Key Message :

1. *Steady membership*
2. *Well Balanced repartition across the country (Majority in Swiss German part)*
3. *2/3 of Are Industry Members*
4. *1/3 of the Membership are in Academic position (Pre-Doc, Doc, Post-Doc, Scientist, Prof)*
5. *22% are High Grade members (Life/Senior/Fellow)*

Solid State Circuit Switzerland Chapter – Web



Key Message :

1. *Website under migration*
2. *Creation of a professional group on Linked'in initiated in Q1 2020.*
 1. *Mostly non member joined.*
 2. *Generated few members compensating non renewal.*

Solid State Circuit Switzerland Chapter – Events

Vertical integration for mmWave systems: Building a bridge between antennas and AI

Video conference ([Online format](#)) offered 10th February 2020



Dr. Alberto Valdes Garcia

Manager, RF Circuits and Systems

IBM Thomas J. Watson Research Center

- ▶ Si-based millimeter-wave transceivers and associated antenna-in-package integration techniques have recently reached a high level of complexity and maturity. These advances have enabled the commercial deployment of millimeter-wave systems in mobile communication networks and automotive radar systems.
- ▶ The complexity and reconfigurability enabled by the co-integration of digital and millimeter-wave circuits has also resulted in a practically infinite configurability space, especially in the context of beamforming systems. Current millimeter-wave beamforming systems employing hand-crafted configuration algorithms can access <1% of this space. At IBM Research, we envision a future where the application space of millimeter-wave systems enters new domains as the capabilities of such systems are fully realized by AI-driven adaptation and data interpretation. Effective mmWave hardware-to-software vertical integration is a key step towards the realization of this vision by closing the gap between antennas and AI.
- ▶ This talk presents two examples of such vertically integrated systems. First, a Software Defined Phased Array Radio (SDPAR) is discussed. The SDPAR consists of a highly configurable 64-element dual polarized phased array operating at 28 GHz, a Software Defined Radio (SDR), and a software stack enabling access to both radio and spatial beamforming functions from a single API. The second example is a multi-spectral imaging platform consisting of a 60-GHz imaging radar, an IR camera, a visible domain camera, and software for the joint visualization of information from these three distinct spectral domains. Experimental results obtained with these platforms will be presented along with an outlook of their evolution towards the development of AI technology tailored to adaptive communication systems and portable imaging devices.

Report to be published in SSC Summer 2020 Magazine

Solid State Circuit Switzerland Chapter – Events

Evolution of cellular RFICs (2G to 5G)

Video conference ([Online format](#)) offered 10th February 2020



**Dr. Venumadhav
Bhagavatula**

**Senior Staff Engineer
Samsung Semiconductors
San Jose, CA**

- ▶ Cellular technology has witnessed five generations of evolution - the mobile UE-era ushered in by 2G (GSM/EDGE), to the future smart-phones that will be powered by the enhanced spectral efficiency of 5G. Each 'G' improved the user experience while introducing new hardware design challenges. I compare 2/3/4/5G system requirements, derive key TX/RX/LO circuit specifications, and highlight the differences in circuit topologies suited for these contrasting specifications. Using this framework, circuit techniques to handle a diverse range of problems such as low phase-noise oscillators, improved blocker tolerance, single-RB linearity will be introduced.

- ▶ **Venumadhav Bhagavatula** received the B.E. degree in electronics and communication from the University of Delhi, New Delhi, India, the M.Tech. degree in electronic design technology from the Indian Institute of Science, Bangalore, India, and the Ph.D. degree in electrical engineering from the University of Washington, Seattle, WA, USA, in 2005, 2007, and 2013. Since 2014 he has been with the Advanced Circuit Design group at Samsung Semiconductors Inc., San Jose, CA, USA. His research interests include RF/mm-wave and low-power mixed signal circuits. He currently serves as a technical program committee member for the ISSCC.

COVID – 19

- Despite COVID-19 we plan
 - a few more webinar

Speaker	Schedule	Program	Talk Title
Giorgio Cristiano	July/August	VLSI 2020 CH Ph.D Student Update	8.7ppm/°C, 694nW, One-Point Calibrated RC Oscillator Using a Nonlinearity-Aware Dual Phase-Locked Loop and DSM-Controlled Frequency-Locked Loops.
Bernhard Wicht	September	IEEE SSCs DL	Tiny and Efficient – Power Management as a Key Function in Microelectronic Systems
Stefan Nedelcu	October	ISCAS 2020 CH Ph.D Student Update	A 160nW, 56Db SFDR, 109dBOhm, Bidirectional 4uA Max. Input - Differential Output Amplifier with Nested Noise Reduction.

- To re-schedule the 2 talks planned in Q1 2020

Key Message :

1. *Despite COVID-19 some more seminar will take place online.*
2. *If you would like to see other topic of your interest, or speaker contact-us.*

Solid State Circuit Switzerland Chapter – Finances

Key Message :

1. *Thanks a lot for Section commitment to our Event in 2019 & 2020*
2. *Solid State Society Switzerland Chapter asset in Section concentration account are 2 283 CHF*

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IEEE- Electronic packaging society

- ▶ Events in 2019
 - Seminar at EMPA in collaboration with Swissphotonics packaging group on 24th October 2019
 - Distinguished Lecture from Karlheinz Bock
 - Electro-optical 3D Hetero-integration of multifunctional systems
- ▶ Events planned in 2020
 - Workshop and production facility visit at **ABB, Lenzburg**
 - Replanned to **October 2020** (restricted to 20 people)
 - Distinguished lecture being discussed for December 2020, (Might be postponed to 2021 due to the situation)



Rony Jose James (Chair, Swiss EPS) Report

(p2)

Electronic Packaging Society



- ▶ Possibility of hosting ESTC 2024 conference in Switzerland
 - EPS flag ship conference in Europe
 - Usually around 450 to 500 attendees
 - Discussions not concluded



▶ Webinars

- On top of the webinars organized by EPS, Local webinars are being planned to be organized by local chapter starting 2020



IEEE Switzerland GA 2020 online on WebEx platform, 22.06.2020
Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



Thomas Hanselmann (Vice Chair) Report

(p1)

Summary 2019-2020

Recruiting two great IEEE volunteer members:

- **Rafael Novotny** as IEEE Switzerland webmaster (<https://ieee.ch/>). He took over a deregistered web-site which he converted to a website using the IEEE vtools. Unfortunately, Swiss Army duties kept him locked up in the military – a first introduction at an Excom meeting fell apart as he did not get leave and a second attempt with official IEEE letters to his superiors failed due to the covid pandemic. Unfortunately, Rafael seems to like his career in the army and thus has decided to step-down as web-master for IEEE Switzerland. I know that Rafael has spent many days and hours to reorganize the web site and would like to thank him very fondly.

At the same time this gives the **opportunity for new volunteers** – maybe a small webmaster team of IT affine people to allow for a robust webmaster approach.

Thomas Hanselmann (Vice Chair) Report

(p2)

Summary 2019-2020

- **Steven (Chi-Ching) HSU** as new IEEE Student Branch Chair of ETHZ. Steven has shown great initiative and has recruited more members to help him revive the SB of ETHZ.
 - Check out the new website: <https://edu.ieee.org/ch-ethz/>
 - Steven looked for collaboration with other student branches EESTEC (<https://eestec.ch>) and Telejob (<https://telejob.ch>) to organize:
 - company visits: Sensirion, Siemens
 - Hackathons
 - Workshops
 - Lab visits
 - Exchange with IEEE SB of Aristotle University of Thessaloniki (AUTH)

All got cancelled due to covid pandemic.

For both, Rafael and Steven, I would like to thank deeply for their great work and initiative!

In particularly, for both of them, it was difficult to take over a completely dysfunctional role and they have excelled and put many hours of work into their roles – and first good results have been achieved!

Thomas Hanselmann (Vice Chair) Report

(p3)

Summary 2019-2020

Represented IEEE Switzerland at ETBA (European-Taiwan Biotech Association)-Event in Basel, Nov 22, 2019

The event was co-sponsored by IEEE Switzerland and it was a great opportunity to listen to exciting talks, podium discussion and to network.

Even the members of IEEE Taiwan attended the event!



- Greatly helped with the 2 NSA MOUs with Electrosuisse and Swiss Engineering which were ready. Thank you!
- However, HQ had changed the MOU format and we had to redo them again so Heinz had to take care of this once more.

“The activity of Industrial Relations are the following two:

- I have sent MoU letters to both Swiss Engineering and Electrosuisse, so far to no avail.
- FAEL/IEEE event in November for which I attach a flyer (see next slide). Whether we can hold the event in person or as a video-event, we don't know yet.”

- In the meantime, the MOUs with Electrosuisse was received on 18th of June. Maria to forward to HQ and wait for the MOU with Swiss Engineering.

Heinz Mathis (Chair, Swiss Industrial Relations) Report

(p2)



FAEL-Seminar

«Blockchain»

4. November 2020, 17.30–19.30 Uhr, PH Zürich, Raum LAA-J002C (Lagerstrasse 2)

Blockchain sind vor allem durch Kryptowährungen, allen voran Bitcoin bekannt geworden. Sie sind aber viel mehr: Was die Grundlagen der dezentralisierten Sicherheit und des verteilten Vertrauens genau bestimmen und welche typischen Anwendungen neben elektronischen Währungen auch noch möglich sind, wird an diesem Abend erläutert.

Programm

17:30 Uhr Begrüssung
Prof. Dr. Heinz Mathis, FAEL

17:35 Uhr Die Grundlagen einer Blockchain
Prof. Dr. Roger Vetterli, ETHZ



18:00 Uhr MODSaaS - Tracking und Monitoring mit Blockchain
Dr. Thomas Bock, Metlan

18:15 Uhr LivingPackets und THE BOX - IoT und Blockchain in einer smarten, wiederverwendbaren Verpackungsbasis für die Zukunft des Versands
Nicola Leck, LivingPackets

18:40 Uhr Applik., gesponsert durch FAEL und IEEE

Kosten: CHF 30.–/CHF 20.– für Mitglieder Swiss Engineering, Elektrobas, IEEE, SATW, SSSE, SwissTae, TGZ
Anmeldeschluss: 2. November 2020

Anmeldung zum FAEL-Seminar «Blockchain»
Online unter www.fael.ch/veranstaltungen2020, per e-mail an info@fael.ch
oder per Post an Swiss Engineering, Volkergstrasse 41, 8003 Zürich

Name, Vorname		Organisation	
Staat		PLZ/ORT	
Telefon		E-Mail	
Mitgliedschaft			

Unter Mithilfe von:



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Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



Ning Wang (Chair, Swiss SIGHT Group) Report

(p1)

CREATED ON 23.04!



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Dr. Maria-Alexandra PAUN, Chair of IEEE Switzerland



Ning Wang (Chair, Swiss SIGHT Group) Report

(p2)



IEEE SIGHT

Special Interest
Humanitarian

IEEE SIGHT Sw
Region



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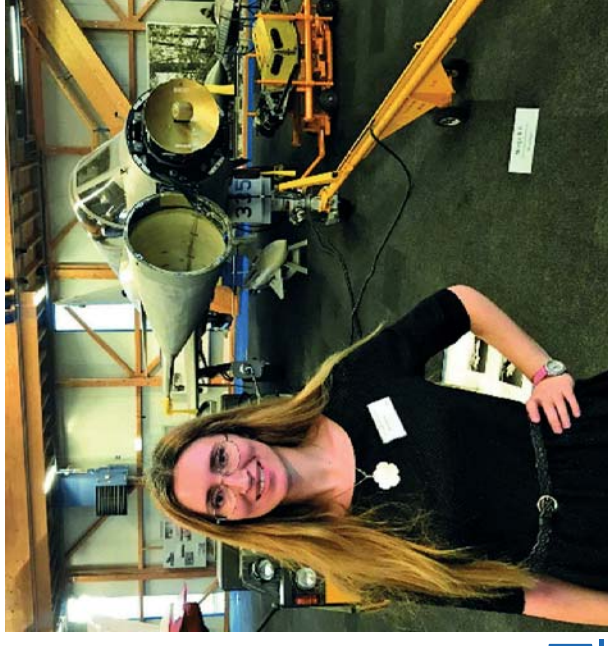


Ning Wang (Chair, Swiss SIGHT Group) Report

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- Article published in “IEEE Antennas and Propagation Magazine”, 62(3):112-115 · June 2020, titled **“A Few Words From Dr. Maria-Alexandra Paun, Chair of the IEEE Switzerland Section”**. Online: [https://www.researchgate.net/publication/341840883 A Few Words From Dr Maria-Alexandra Paun Chair of the IEEE Switzerland and Section Women in Engineering](https://www.researchgate.net/publication/341840883_A_Few_Words_From_Dr_Maria-Alexandra_Paun_Chair_of_the_IEEE_Switzerland_and_Section_Women_in_Engineering)



- Discussion on WIE programs with Swiss PES (Ben, Silvia, Paula) on May 5th 2020. Details of WIE mentorship program communicated.

Useful contact details

- Check <https://www.ieee.ch>
- Check <https://www.ieee.org>
- Get in touch with us if you have ideas of events that you would like to organize.

Contact me at the address:
maria_paun2003@yahoo.com

Concluding remarks

- IEEE Switzerland was very happy to report on the different events which we organized in 2019.
- We welcome any suggestions and event proposals.
- Do not hesitate to write us, we are here for you!

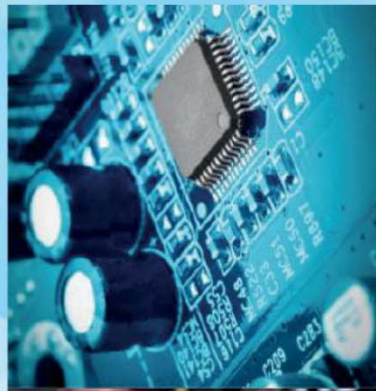
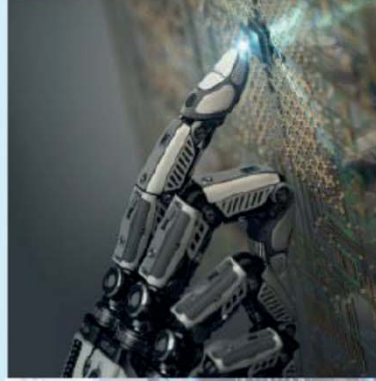
Acknowledgements:

I would like to thank very much IEEE Switzerland ExCom for their great work in 2019!

8. Any other business

Andreas Burg (Chair, Swiss WIE Group) Report

(p1)



CEDA Local Chapter – Switzerland

Swiss Local Chapter of Council on Design Automation (CEDA)

NEW since 2020!

1

8. Any other business

Andreas Burg (Chair, Swiss WIE Group) Report

(p2)

Council on Design Automation (CEDA)

Support for overlapping activities of CASS, SSCS, EDS, EPS, CS, MTT-S, AP-S

- ▢ **Mission:** “CEDA focuses on the theory, implementation, and use of EDA/CAD tools to design integrated circuits and embedded systems”
- ▢ **Sponsors and organizes:** conferences, workshops, and volunteer activities
- ▢ **JOIN CEDA FREE OF CHARGE**
 - When renewing your IEEE membership or any time after on “councils subscription page” when you login to your IEEE account
- ▢ **CONTRIBUTE** to build the chapter and to our activities as
 - **ExCOM member**
 - **Event organizer:** looking for sponsors for your event

Contact: andreas.burg@epfl.ch



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8. Any other business

Andreas Doring (Chair, Membership Development) Report

- We are looking for volunteers to join our ExCom (we have a open position for secretary starting immediately after the GA 2020).
- We always have a place in our committee for motivated volunteers.
- Get in touch with us if you want to get involved.

8. Any other business

Hugo Wyss (Chair, Swiss LMAG) Report

- LMAG held together with EPFL SB two IEEE Stamm @EPFL meetings in January and February 2020. We shall resume hopefully presence Stamm meetings in October and propose to plan the next presence ExCom meeting for celebrating 2020 IEEE Day, in conjunction with our Section 60th anniversary.

9. END OF THE MEETING

**Thank you very much for your
attendance and kind attention!**

