

# IEEE European Public Policy Webinar 5

## EU cybersecurity policy

17 December 2019  
11.00 am CET



*The material contained in this presentation may reflect the opinions of its authors and not necessarily those of IEEE.*

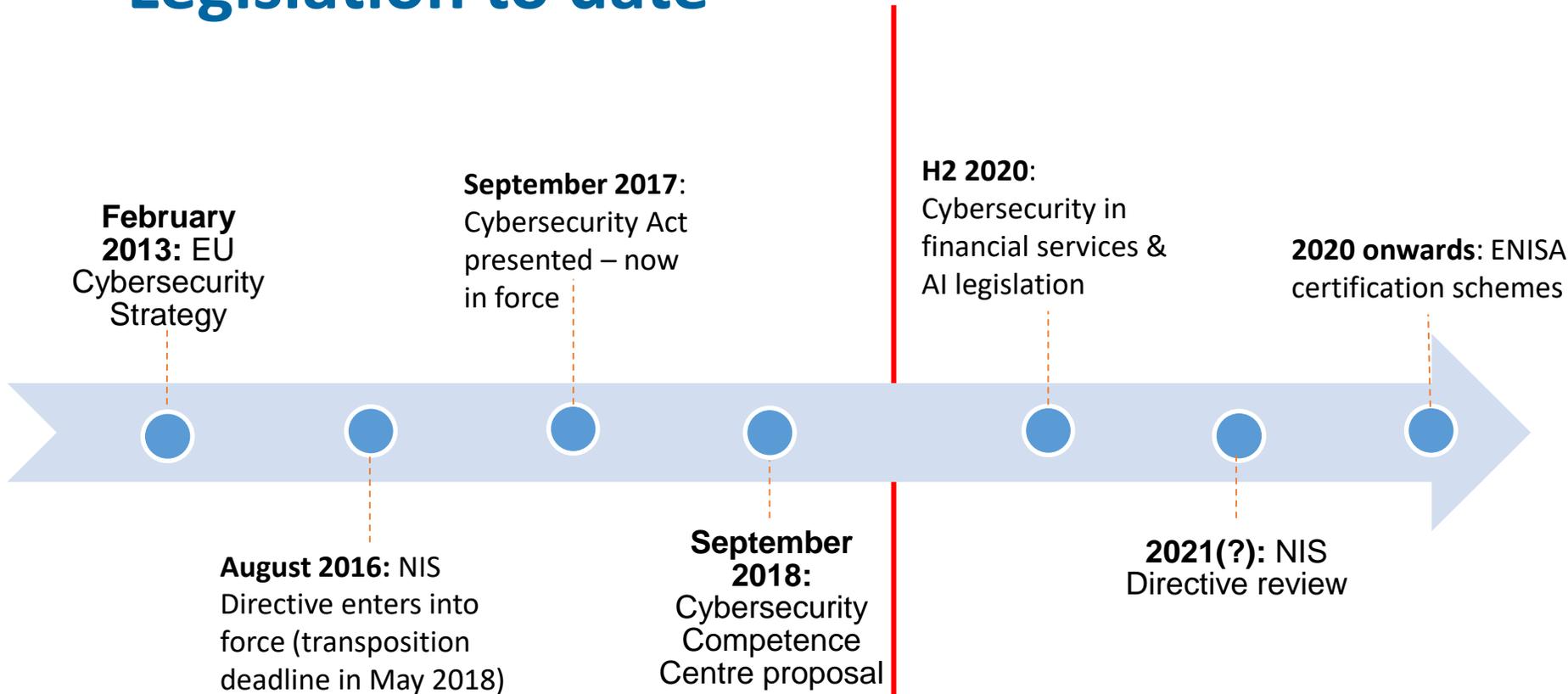
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# Objective and context of the webinar

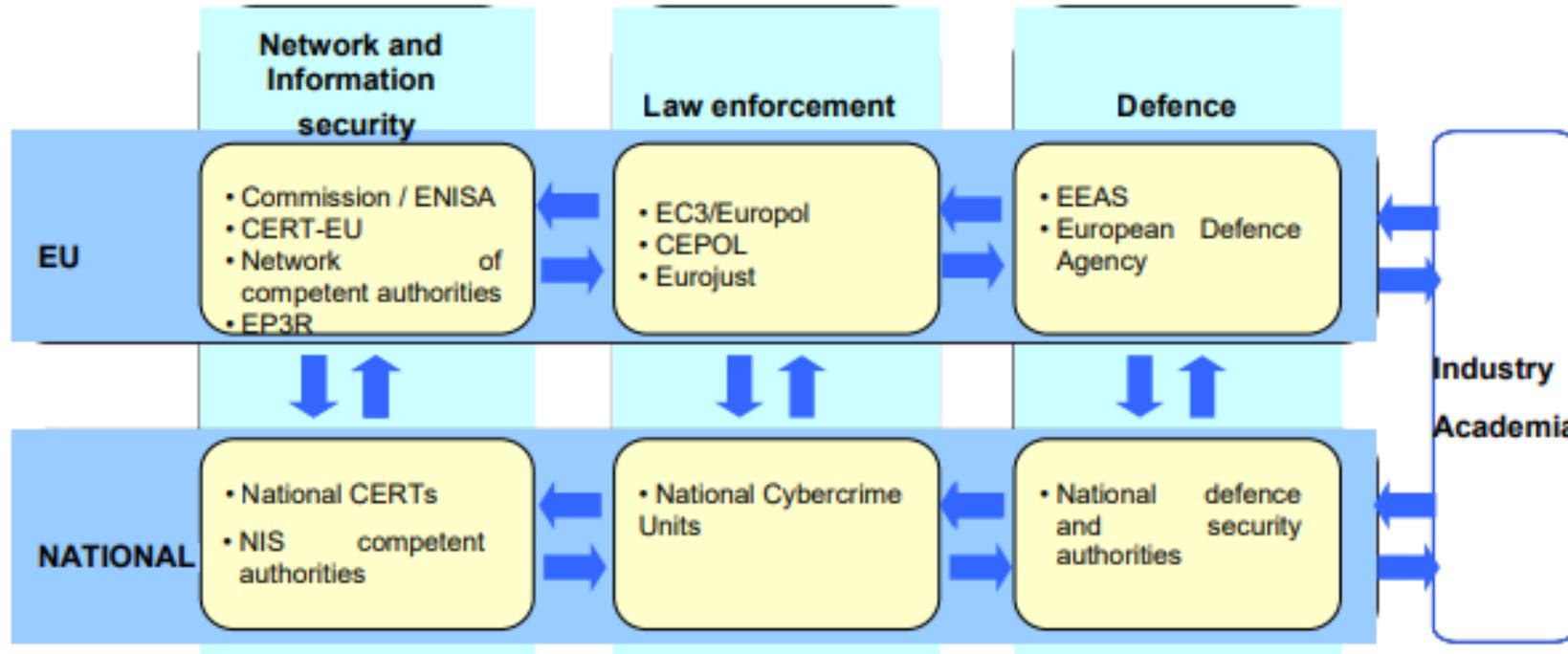
- The objective of the webinar is to give IEEE members insights into the latest developments and future actions of the EU in the field of cybersecurity.
- After a quick overview of past developments, we will focus on the legislative plans of the new European Commission.
- Members will also be informed about the key agencies and bodies dealing with cybersecurity at the EU level.
- Participants will also find out more about IEEE's cybersecurity work.

# Legislation to date



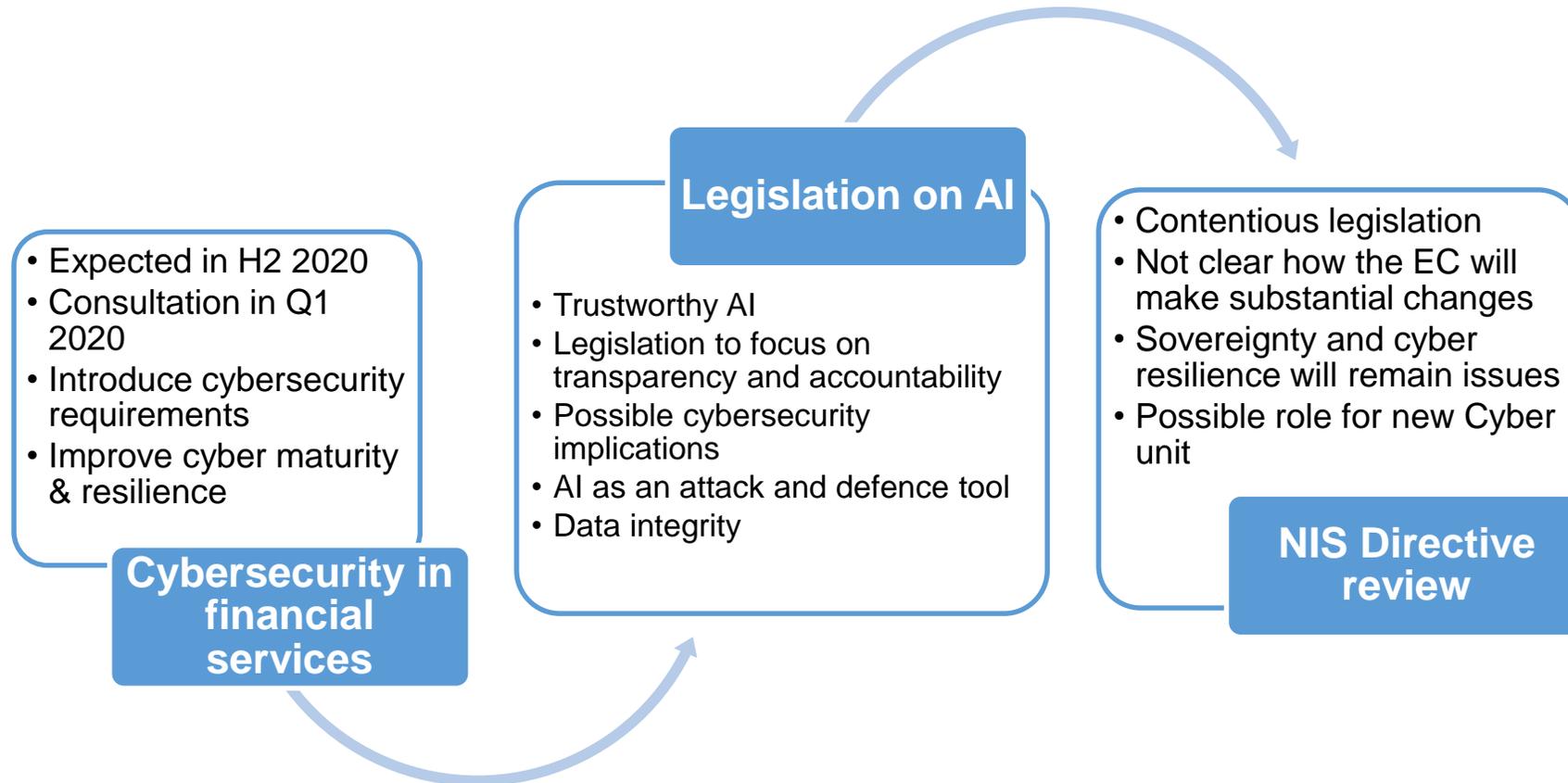
- Cybersecurity primarily considered a national competence
- Delicate balancing act
- EU plays a coordinating role (minimum standards, information exchange etc).
- Funding instruments
- New EU Cyber unit

# Key EU cybersecurity actors



- EU plans a new department on Security and Defence, which will probably encompass cybersecurity

# What's in the pipeline





# IEEE's Cybersecurity work



# Publications

- Journals
  - IEEE T. on Dependable and Secure Computing (2004-)
  - IEEE T. on Information Forensics and Security (2006-)
  - IEEE Security & Privacy magazine (2003-)

Full Journal Title	Total Cites	Journal Impact Factor	Cited Half-Life	Article Influence Score
IEEE Transactions on Dependable and Secure Computing	2,439	6.404	4.1	1.145
IEEE Transactions on Information Forensics and Security	9,811	6.211	4.3	1.495

Highest IF in the field by far!



# Conferences

- IEEE hosts ~200 security-related conferences

## IEEE Conference Search Results

The screenshot shows the IEEE Conference Search interface. At the top, a search bar contains the word "security" with a magnifying glass icon on the right and "(247 characters left)" below it. Below the search bar is a navigation bar with "Refine Search" (with a dropdown arrow), "Show >", and "Sort by:" followed by buttons for "Relevance", "Conference Title", "Conference Dates", and "Location". To the right of these are icons for email, download, and chat. Below the navigation bar, it says "Displaying results 1 - 10 of 197 for security" with "1 - 10" circled in blue. To the right is a "Results on Map" link with a location pin icon. The first result is "2020 IEEE Systems Security Symposium (SSS)" with a calendar and share icon. Below the title is the date "6 - 9 April 2020" and location "Arlington, Virginia, USA". The sponsors are "IEEE Aerospace and Electronic Systems Society; IEEE Systems Council". The field of interest is "Aerospace; Communication, Networking and Broadcast Technologies; Computing and Processing; General Topics for Engineers; Nuclear Engineering; Photonics and Electrooptics; Power, Energy and Industry Applications; Robotics and Control Systems; Signal Processing and Analysis; Transportation". The second result is "2020 IEEE Conference on Communications and Network Security (CNS)".



# Conferences

- In particular we host the top conference: **IEEE Symposium on Security and Privacy** (generally known as "Oakland")

## 40th IEEE Symposium on Security and Privacy

Sponsored by the **IEEE Computer Society Technical Committee on Security and Privacy** in cooperation with the **International Association for Cryptologic Research**

Since 1980, the IEEE Symposium on Security and Privacy has been the premier forum for presenting developments in computer security and electronic privacy, and for bringing together researchers and practitioners in the field. The 2019 Symposium will mark the 40<sup>th</sup> annual meeting of this flagship conference.



## Example: automotive security

- Do you remember the “hack” on the FCA Jeep in 2015?



# Example: automotive security

- It was actually based on a 2010 IEEE paper!
- Research happens within IEEE first!

The screenshot shows the IEEE Xplore Digital Library interface. At the top, it displays the IEEE Xplore logo and 'Digital Library' text. There are navigation links for 'Browse', 'My Settings', and 'Get Help'. A search bar is present with the text 'Enter keywords or phrases (Note: Searches metadata only by default. A search for 'smart grid' = 'smart AND grid')'. Below the search bar, the breadcrumb trail reads 'Conferences > 2010 IEEE Symposium on Security and Privacy'. The main title of the paper is 'Experimental Security Analysis of a Modern Automobile', published by IEEE. It lists 11 authors: Karl Koscher, Alexei Czeskis, Franziska Roesner, Shwetak Patel, Tadayoshi Kohno, and Stephen Checkov. Statistics show 463 Paper Citations, 16 Patent Citations, and 7594 Full Text Views. The abstract text is visible, starting with 'Modern automobiles are no longer mere mechanical devices; they are pervasively monitored and controlled by dozens of digital computers coordinated via internal vehicular networks. While this transformation has driven major advancements in efficiency and safety, it has also introduced a range of new potential risks. In this paper we experimentally evaluate these issues on a modern automobile and demonstrate the fragility of the underlying system structure. We demonstrate that an attacker who is able to infiltrate virtually any Electronic Control Unit (ECU) can leverage this ability to completely circumvent a broad array of safety-critical systems. Over a range of experiments, both in the lab and in road tests, we demonstrate the ability to adversarially control a wide range of automotive functions and completely ignore driver input/dash including disabling the brakes, selectively braking individual wheels on demand, stopping the engine, and so on. We find that it is possible to bypass rudimentary network security protections within the car, such as maliciously bridging between our car's two internal subnets. We also present composite attacks that leverage individual weaknesses, including an attack that embeds malicious code in a car's telematics unit and that will completely erase any evidence of its presence after a crash. Looking forward, we discuss the complex challenges in addressing these vulnerabilities while considering the existing automotive ecosystem.' The 'Published in' section is circled in blue, showing 'Published in: 2010 IEEE Symposium on Security and Privacy'. A blue arrow points from the text 'Research happens within IEEE first!' to this circled area.



## Open access

- The IEEE security conferences (S&P, SecDev) have been the first to go open access
- Journals are “hybrid” OA, and we are launching full OA journals as we speak
- Will adhere to Plan S recommendations

# IEEE Standards Association

**About ~100 standards related to security in different ways**

## IEEE-SA - ICSG: Industry Connections Security Group

Promoting collaboration and information sharing across the IT security industry

< Industry Connections

Industry Connections Security Group

Anti-Malware Support Service

Malware Working Group

MMDEF Working Group

ETI Working Group



### ABOUT THE IEEE INDUSTRY CONNECTIONS SECURITY GROUP

ICSG is a global group of computer security entities that have come together to pool experience and resources in combating the systematic and rapid rise in computer security threats. In the past few years, attackers have shifted away from mass distribution of a small number of threats to micro distribution of millions of distinct threats.

ICSG was established, under the umbrella of the IEEE-SA Industry Connections program, out of the desire by many in the security industry to more efficiently address these growing threats in a coordinated fashion.



# IEEE Cybersecurity Initiative



HOME INTERVIEWS DESIGN TRY READ ATTEND INVITE ABOUT LEADERSHIP PRESS

RECENTLY PUBLISHED OCTOBER 1, 2018 | SAVE THE DATE FOR SECDEV 2019

## WHAT'S NEW



### IEEE Cybersecurity Award Winners

IEEE SecDev is pleased to again recognize great work from the community with the IEEE Cybersecurity Award for Practice and the IEEE Cybersecurity Award for...

[READ MORE](#)

## FEATURED ARTICLES



### Save the Date for SecDev 2019

IEEE Secure Development (SecDev) 2019 will be in Tyson's Corner, McLean Virginia the 25th through 27th of September, 2019. SecDev is a venue for presenting...

[READ MORE](#)



Conference highlights: #IEEESecDev



## @IEEECYBSI ON TWITTER

Tweets by @ieeecybsi

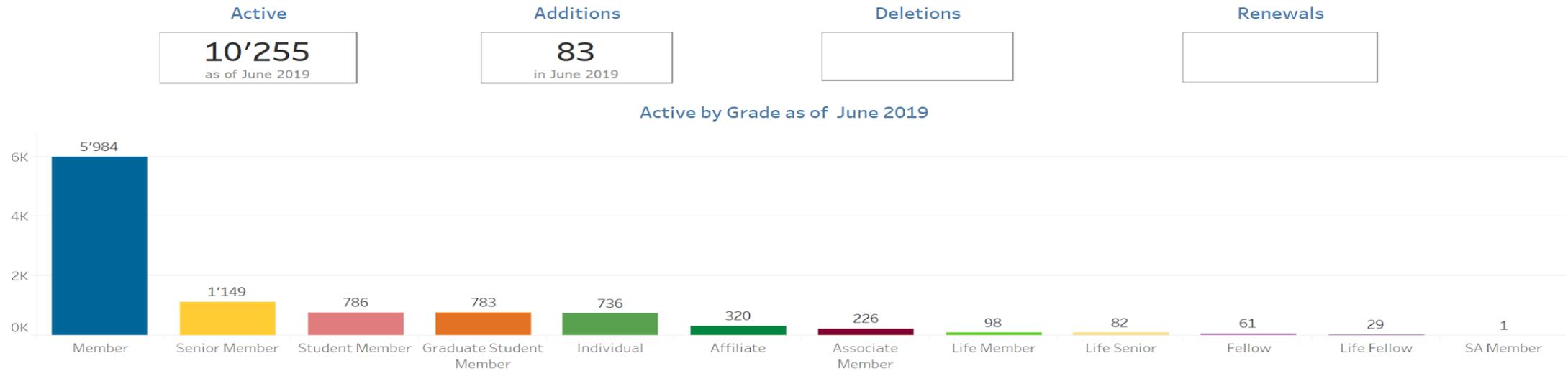
- IEEE Cybersecurity** @ieeecybsi  
There's still time to left to submit papers and tutorials to #IEEESecDev!  
Apr 9, 2019
- IEEE Cybersecurity** @ieeecybsi  
Submit to #IEEESecDev by April 8!



# IEEE European Public Policy Committee and its WG on ICT

- The IEEE EPPC has recently launched a Call for Engagement to involve the wider IEEE community in the development of a policy document on cybersecurity.
- The main deliverable of this process will be a short and concise policy document.
- The adoption of the EPPC position statements is expected by December 2020.
- To be actively involved in this collaborative effort you need to respond to the Call by Wednesday, 8 January 2020 - <https://connect.ieee.org/FfOP300jb0G043bQ000HaUo>
- A concept note outlining the scope, compass and expectations has already been produced - [https://drive.google.com/file/d/1nGDvBTll4hugN\\_g2tlG5zTcX7t-Qjf8t/view](https://drive.google.com/file/d/1nGDvBTll4hugN_g2tlG5zTcX7t-Qjf8t/view)
- The expected time commitment is a few hours per week throughout 2020.

# Thousands of members are engaged



Number of members active in the cybersecurity-related communities of IEEE

**Of these about 2400 are in Region 8 (EMEA+Russia)**



# Get involved!

- IEEE European Public Policy Committee (EPPC) and its Working Group on ICT  
<https://www.ieee.org/about/ieee-europe/index.html>
- IEEE European Public Policy Committee (EPPC) Position on Cybersecurity  
<https://connect.ieee.org/FfOP300jb0G043bQ000HaUo>
- IEEE Cybersecurity initiative  
<https://cybersecurity.ieee.org/>
- IEEE Computer Society TC on Security and Privacy  
<https://www.computer.org/communities/technical-committees/tcsp>
- IEEE Computer Society STC on Cybersecurity  
<https://stc.computer.org/cybersecurity/>
- IEEE-SA standard development, for instance on Personal Health Devices:  
<https://standards.ieee.org/industry-connections/personal-health-device-cybersecurity-whitepaper.html>



