



CWC Status Update

8 May 2020



Key Figures of the University of Oulu

- Established in 1958
- Total funding 240 M€
- 8 faculties
- 14 000 students
- 2 900 employees
- ~220 professors
- ~1600 researchers/teaching
- ~ 25 study programmes
- 18 international M.Sc. programs

Faculties

- Oulu Business School
- Biochemistry and Molecular Medicine
- Humanities
- Education
- Science
- Medicine
- Technology
- **Information Technology and Electrical Engineering (ITEE):**
 - 12 Research Units



CWC's Research Groups



Radio Access Techniques (RAT)

Matti Latva-aho, N. Rajatheva, Hirley Alves



Wireless Systems (WS)

Ari Pouttu, Marcos Katz, Jussi Haapola



Intelligent Connectivity & Networks (ICON)

Mehdi Bennis



Critical Communications Systems (CCS)

Harri Posti, Harri Saarnisaari



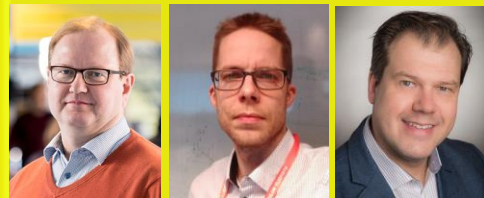
Communications Signal Processing (CSP)

Markku Juntti, Antti Tölli, Janne Lehtomäki



Networking (NET) & Network Security and Softarization (NSOFT)

Mika Ylianttila, Tarik Taleb



RF Engineering (RFE)

Aarno Pärssinen, Markus Berg, Marko Leinonen



Wireless Medical Communications (WiMeC)

Jari Linatti, Matti Hämäläinen

CWC-RT

CWC-NS



Some Reflections Back to Year 2019

6G Flagship operated the first full year

6G Summit held very successfully in March

ISWCS held in Oulu in August

CWC measured result improved

New Business Finland and EU funding gained

AoF funding is decreasing (6G Flagship not counted)

More personnel in the same premises



Research Indicators of CWC

		tohtorintutkinnot	muu tutkimusrahoitus 1000	Julkaisut (JUFO/TST)	kv tutkimusrahoitus, 1000 €	ulkoalaalainen henkilöstö
CWC-RT	2016	7,5	4 039 789	262,7	273 071	38,6
	2017	7	3 613 593	276,6	383 886	37,9
	2018	11,1	3 567 960	274,6	551 189	45,0
CWC-NS	2016	4	1 544 088	87,2	394 985	16,1
	2017	7	1 261 824	76,8	397 128	17,3
	2018	5,6	1 890 272	92,6	230 250	19,4

CWC-RT	6,1	60 618	105,71	106 417	10,33
	122%	2%	55%	24%	30%
CWC-NS	3	408 757	41,37	- 179 206	6
	87%	28%	56%	-44%	46%

← Change 2015->2018

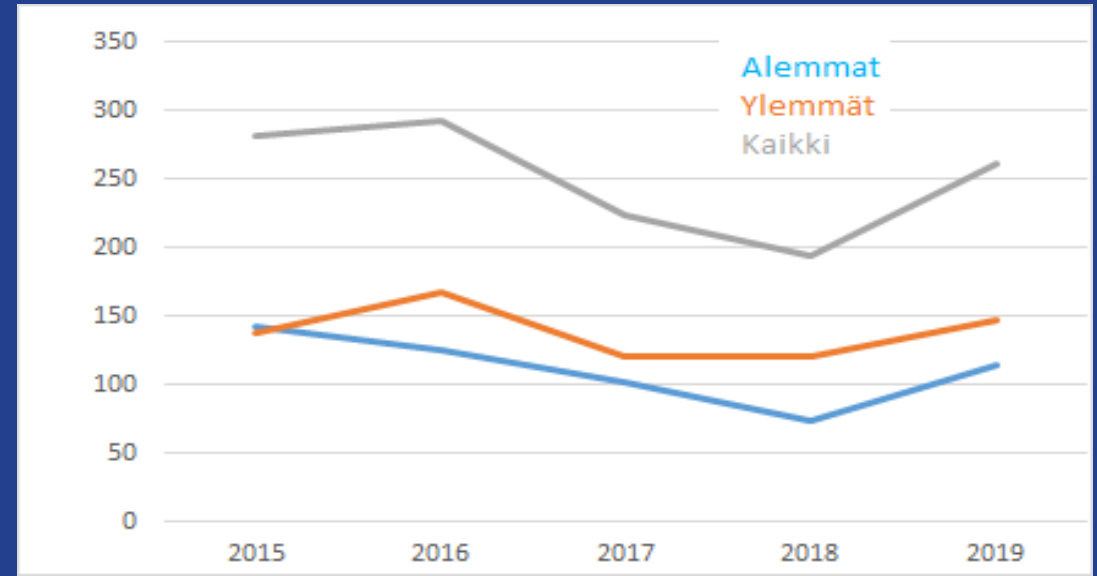


ITEE Graduates

Faculty of ITEE

Graduates 2018:
74 BSc, 120 MSc

Graduates 2019:
114 BSc, 147 MSc



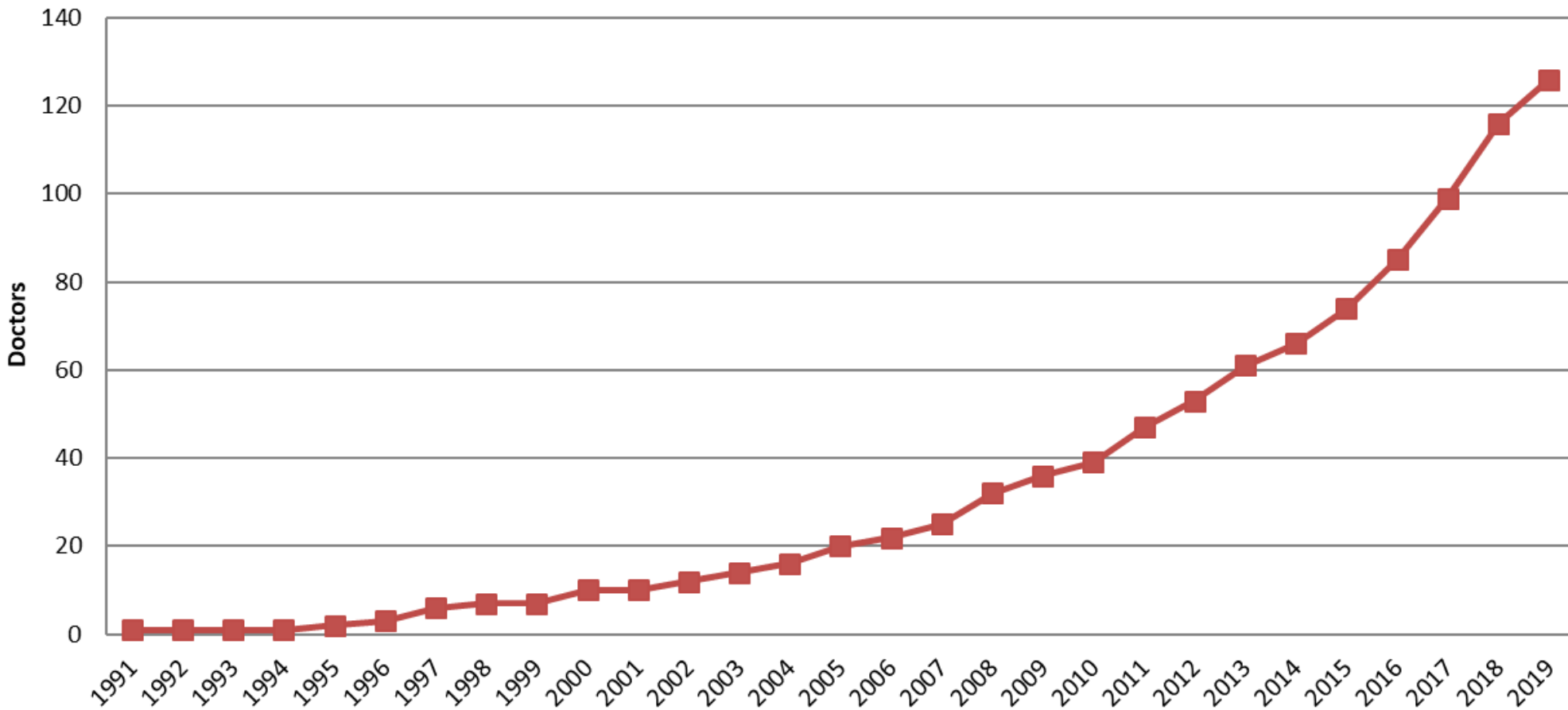
Doctors 32
(2018 36)

Doctors CWC 10
(2018 17)



CWC Doctors

Dr. Sc. (Tech.) Output from Communications Engineering





6. Professor and Tenure-track Plan

1. Radio Frequency Engineering, Antenna Design – in progress
2. Wireless Communications Engineering with Focus on Signal Processing and Optimization– call in spring 2021
3. Machine-Learning for Wireless Systems – 6G Flagship position, in preparation
4. Wireless Communications Engineering with Focus on Sustainable Wireless Systems – 6G Flagship position, in preparation
5. Wireless System Level Architecture for future digital healthcare – Profi5 position, applicants in the evaluation