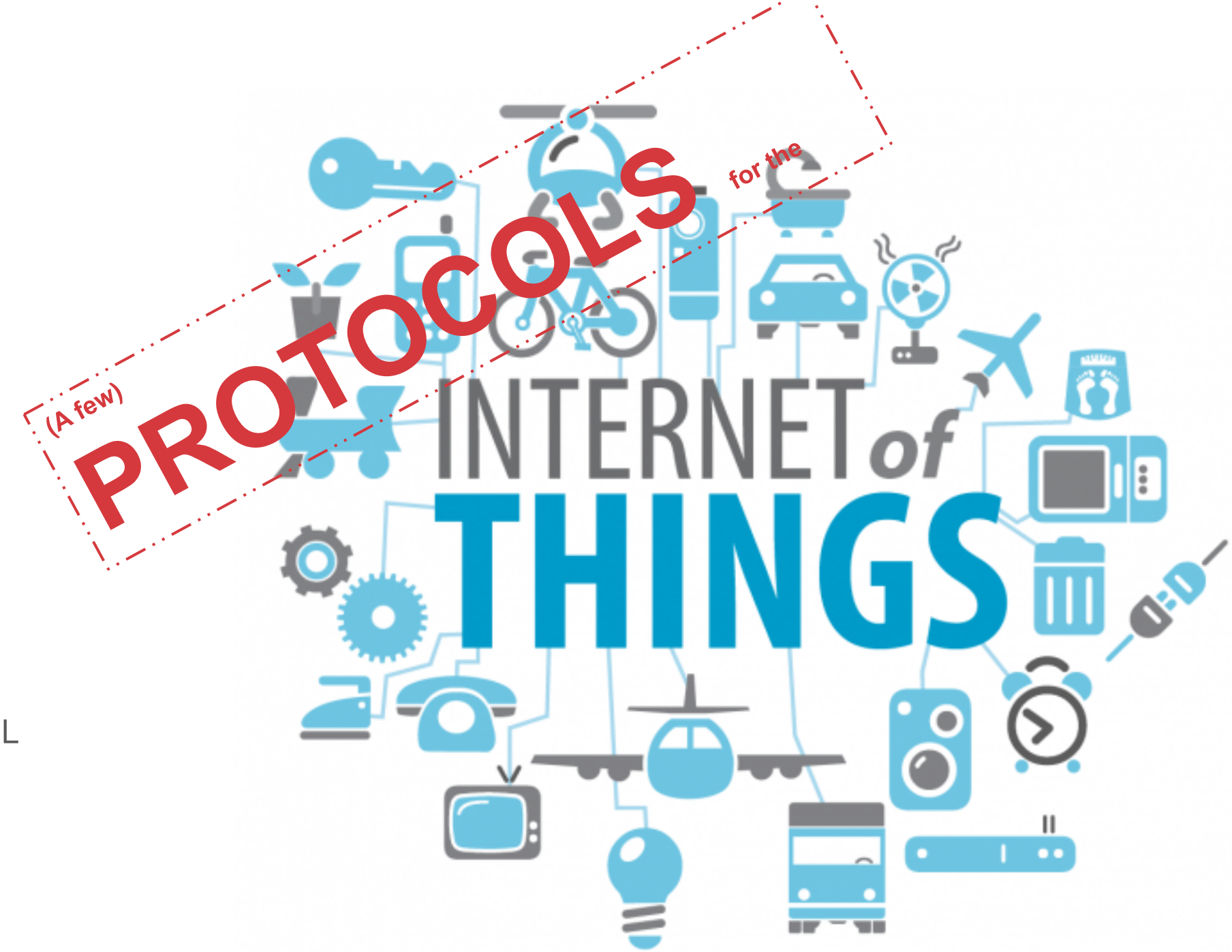


- EIoT2020L

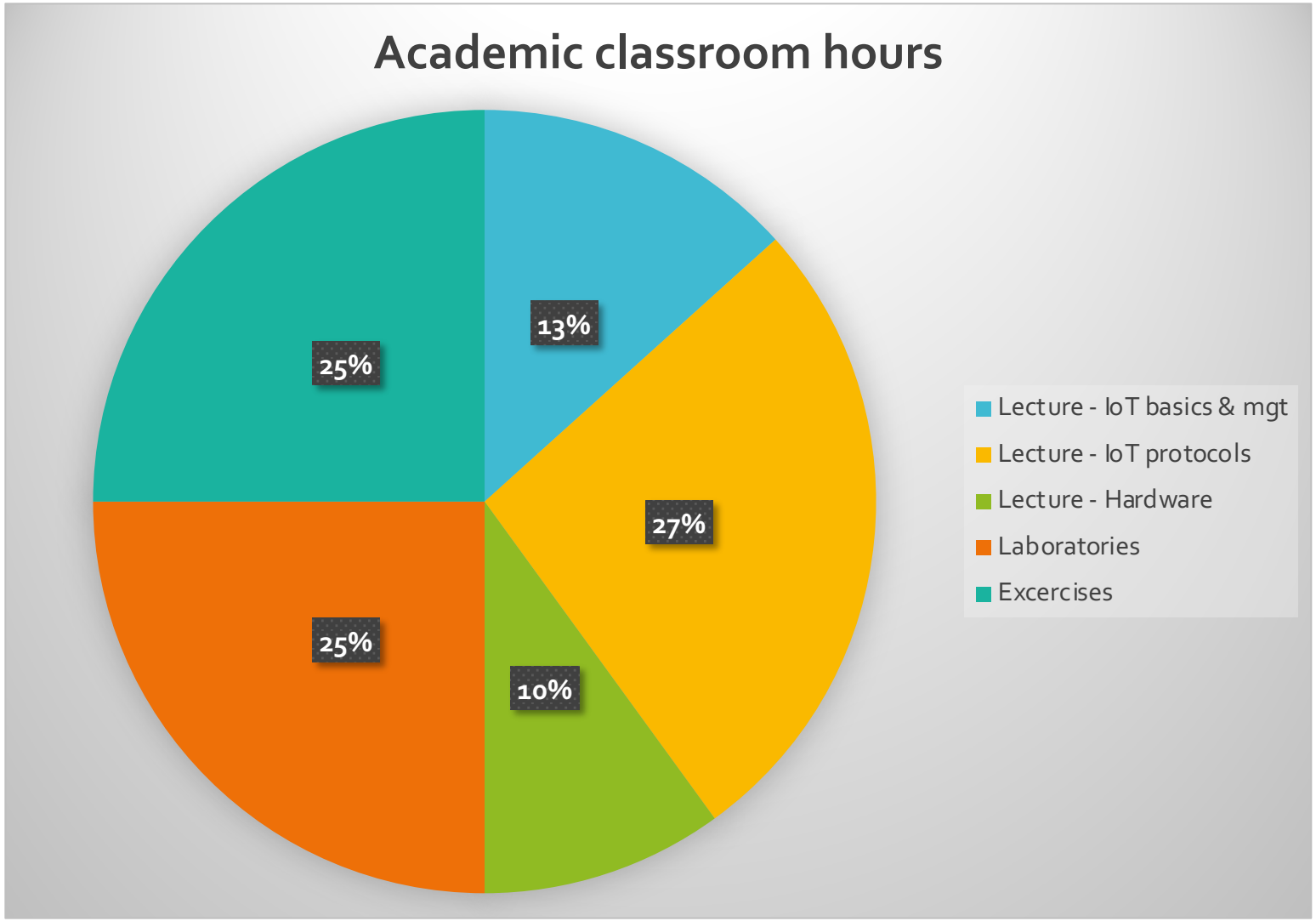
Useful info

- Dr. Fernando Solano
- Room nr 340
- Email:
  - fs@tele.pw.edu.pl
- Student hours:
  - Monday from 8am until 10am (before lectures)
  - Monday from 12m until 2pm (after lectures)

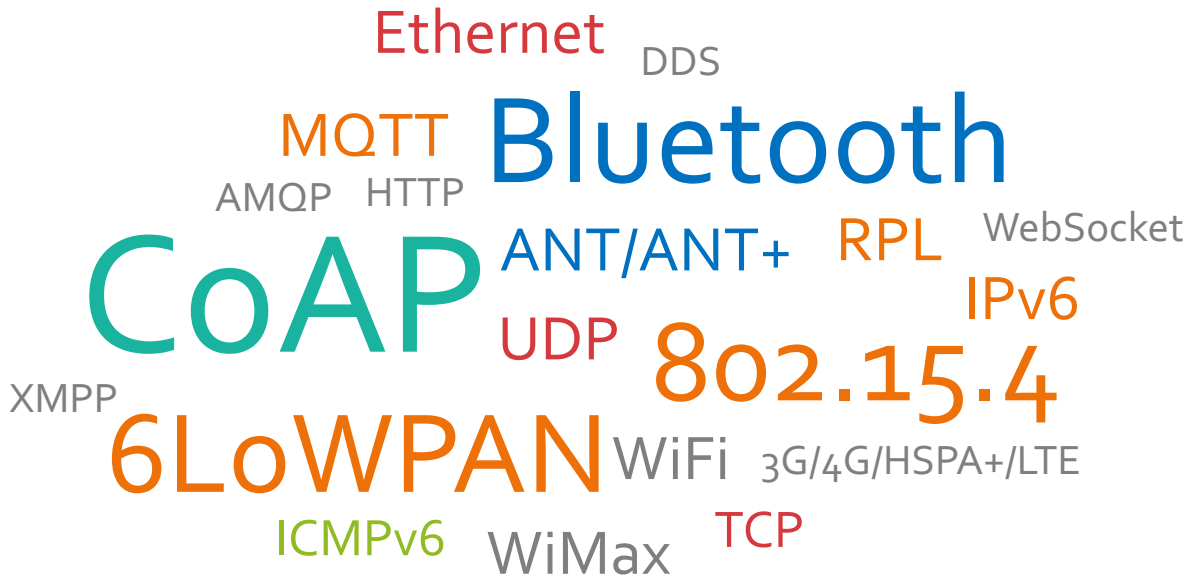
Useful info

- Dr. Jarosław Domaszewicz (CoAP, MQTT and Excercises)
- Mr. Aleksander Pruszkowski (Things and Laboratories)
- Dr. Fernando Solano (802.15.4, 6LoWPAN)

Course composition



Course overview



Place and dates

- Monday 10-12 (s. 121) – Lectures
- Monday (CS304) 14-18 – Laboratories
- ~~Tuesday 18-20 (s. 117)~~ - Excercises
- 2x15 Lectures
- 1x15 Excercises
- 1x15 Laboratory

Plan Detailed

		Lecture (W)	*Laboratorium (L)*	*Excercise (C)*
	Timeslot	*Mo 10-12*	*Mo 14-18*	*Tue 18-20*
	Placeslot	*121*	*CS304*	*117*
1	*24.02.2020*	Course overview		
2	*02.03.2020*	IoT overview	Lab 1 – Group 101	
3	*09.03.2020*	CoAP (1)	Lab 1 – Group 102	Project Intro
4	*16.03.2020*	CoAP (2)	Lab 2 – Group 101	
5	*23.03.2020*	MQTT	Lab 2 – Group 102	
6	*30.03.2020*	UDP and IPv6	Lab 3 – Group 101	
7	*06.04.2020*	802.15.4	Lab 3 – Group 102	
	13.04.2020	(easter)		
8	*20.04.2020*	6LoWPAN		
9	*27.04.2020*	LoRa - LoRaWAN		
10	*04.05.2020*	Sensors and actuators		
11	*11.05.2020*	Energy issues		
12	*18.05.2020*	CPU and memory		
13	*25.05.2020*	IoT OS		
14	*01.06.2020*	Bluetooth (1) + Final Test 1	Presentations 1/2	
15	*08.06.2020*	Bluetooth (2) + Final Test 2	Presentations 2/2	

F. Solano | **J. Domaszewicz** | **~~A. Bąk~~** | **~~D. Bursztynowski~~** | **A. Pruszkowski** | **~~M. Mycek~~**

Your grade

- Quizzes – 25%
  - Two worst grades off
  - Grade of remaining quizzes are averaged
  - Absence counts as zero for the quizz
  - Quizz cannot be retaken
- Excercise – 25%
- Written test – 25%
  - Two attempts, last result counts
- Labs - 25%

Excercise

- Projects will be assigned after the Introductory class for excercises (10th of March 2020 – **Tuesday 18.00-20.00**)
- Groups of 2 people
- your attendance at all exercise classes (listed below) is mandatory. In particular, all of you are requested to be present at both project presentation sessions.
- 13.04 14:15-15:00 Intro to excercises CS3024 (at the lab time slot and at the lab place!!!). All further details will be provided then.
- 1st of June 14:15-18:00 Presentations 1/2 CS304 (at the lab time slot and at the lab place!!!)
- 8th of June 14:15-18:00 Presentations 2/2 CS304 (at the lab time slot and at the lab place!!!)
- No classes on Tuesday.

Your labs

- 3 Labs:
  - Embedded IoT nodes
  - Wireless communication between IoT nodes
  - Communicating with embedded IoT nodes using UDP protocols
- Instructions are given BEFORE each laboratory. Students MUST read the instructions before.
- Students MUST deliver a report answering the questions of the instructions within a maximum of 1 week time max.
- 2 groups: 101 and 102
  - 12-14 people per group
  - 4 teams of 3 people (one of 2 people)

Background

- Some topics of EINTE are pre-requisite:
  - Internet & its structure, protocols and layers
  - Internet application layer
  - Internet transport layer, principles, UDP & TCP protocols
  - Internet network layer, IP addressing and subnetting, DHCP protocol, IPv6, NAT
  - Routing in the Internet, principles
- If you haven't attended these lectures:
  - J. F. Kurose, K. W. Ross, Computer Networking, 5th Ed., Pearson Addison-Wesley.
  - S. Tanenbaum, Computer Networks, 4th Ed., Prentice Hall.

Bibliography

- „Internet of Things: A Hands on Approach". A. Bahga, V. Madisetti
- „Designing the Internet of Things". A. McEwen, H. Cassimally.
- „Low-rate Wireless Personal Area Networks: Enabling Wireless Sensor Networks with IEEE 802.15.4". IEEE Press. Third Edition. J. Gutierrez, L. Winkel, E. Callaway, R. Barrett.
- „6LoWPAN: The Wireless Embedded Internet". Z. Shelby, C. Bormann. Wiley.
- „Getting Started with Bluetoow Low Energy". K. Townsend, C. Cufi, A. Davidson, R. Davidson. O'Reilly.
- Selected documents of IETF, IEEE (standards, RFCs, drafts) and ITU-T.
- Articles selected from IEEE journals.
- Additional sources will be provided at each lecture

Rules

- **"Please do not embarrass yourself and me by begging for extra credit after final grades have been awarded. Final grades are, well, final."**