

Master degree in Telecommunication Engineering

Presentation

May 10, 2016



Telecom Engineering means in Padova

cross-disciplinary skills ✓✓✓

high impact topics ✓✓✓

outstanding job opportunities ✓✓✓

I

INNOVAZIONE
IL FUTURO È (GIÀ) ADESSO

**CELLULARE
(E NON SOLO)**



**Dalle auto alla casa
mille esempi
su come legare
il "nostro" mondo**

COSÌ INTERNET FINIRÀ DENTRO OGNI OGGETTO

Quello che era il vecchio cellulare presto strumento per interconnettere tutte le cose che ci servono

di STEFANO BARTOLI

Dall'aumento epocale del traffico dati, basato notoriamente sul successo degli smartphone (gli utenti passati al velocissimo 4G triplicano regolarmente il loro traffico), alla crescita esponenziale delle applicazioni che spaziano in molti aspetti della vita di ogni giorno, compresi auto, casa e tutti i progetti di *Smart city*. Sì, i cosiddetti telefoni intelligenti determinano anche questo, un futuro fatto di nuove idee che vengono raccolte sotto il nome di *Internet of things*, cioè l'*Internet delle cose*, con il passaggio da aspetti di nicchia a *core business* del mercato. Focalizzando l'attenzione sul contesto italiano, come sottolineano ad esempio da



vimenti in tre ambiti applicati-
...le, crescita

verso lo sviluppo di progetti in
ambito *Smart city* in Italia.



«Il gruppo Vodafone - prosegue il manager - crede molto

IL DOMANI IN
80
SOGNI



ANCHE LE IMMAGINI VERE AVRANNO I SOTTOTITOLI

5 - Occhiali che informano sulla realtà

Le lenti di questi occhiali del futuro leggeranno per noi quello che vede in total reality fornendo dati e spiegazioni. Entrando in un ufficio vedremo in trasparenza che cosa bisogna fare, a chi rivolgerci: ci fornirà dell'interlocutore età e studi e ruolo nell'ufficio; delle strade la lunghezza e la destinazione finale. Sarà disattivabile a scelta.



IN TRIPLICE COPIA E IN NASCONDIGLI IMPENETRABILI

6 - Tutti i dati in cloud e inaccessibili

Superata l'idea di conservarli in un singolo precario computer (o in un server per esempio di una società o di un ministero) i dati dell'Umanità saranno conservati tutti, fisicamente inaccessibili a chiunque (terroristi compresi), in triplice copia: in super computer a) in un altro pianeta; b) in cavità terrestri profondissime; c) sotto gli oceani.

NOMI DA CAPIRE



I
INNOVAZIONE
IL FUTURO È (GIÀ) ADESSO
L'ITALIA
CONNESSA
(MALE)



IL WEB VELOCE QUI È ANCORA ROBA PER POCHI

La connessione base di fatto raggiunge tutti ma la vera differenza si gioca sulla qualità

DALLA PRIMA DELL'INSERTO
di MARIANNA BRUSCHI

... vedere un film dal pc

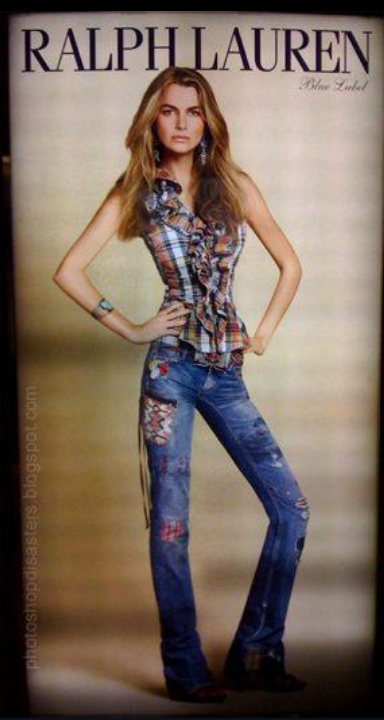


COPERTURA
BANDA LARGA NEL 2014

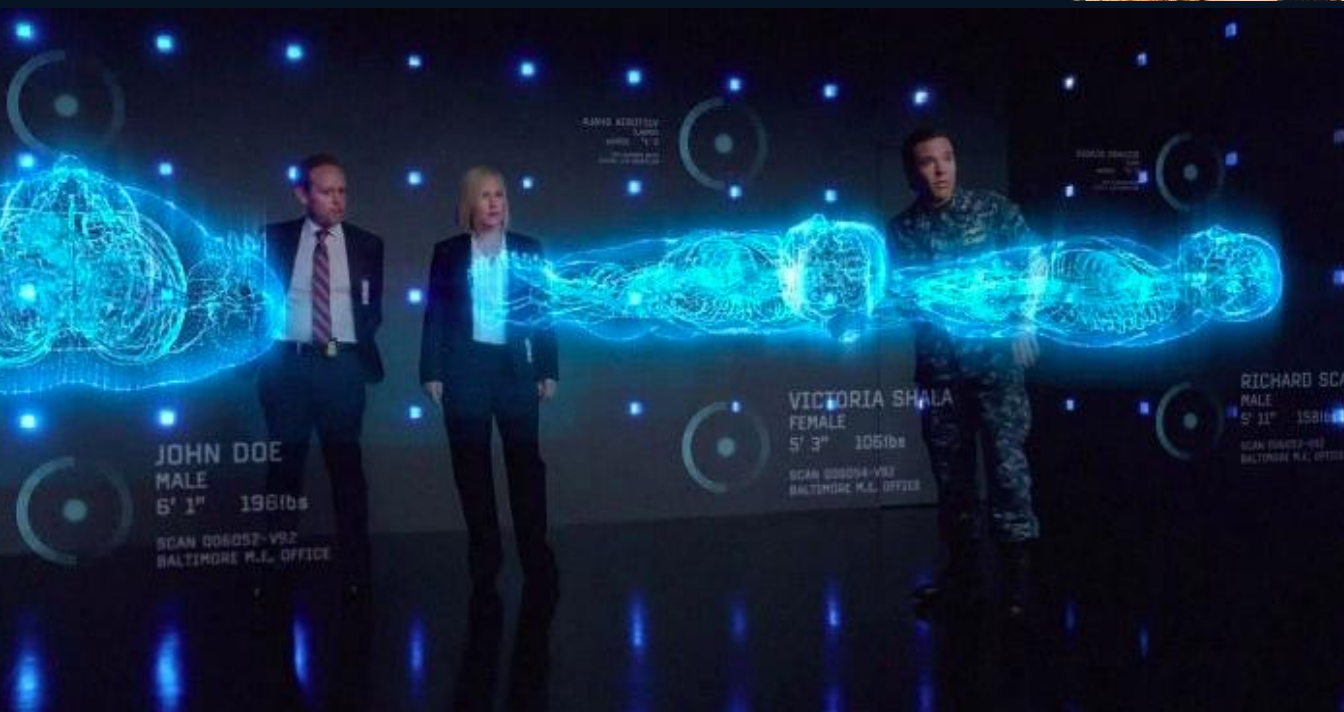


COPERTURA BANDA
ULTRALARGA NEL 2014





Digital forensics



Quantum communications



Real-time translator



What do you do for fun?
Qué haces para divertirte



Voy a las playas de Méjico
I go to the beaches of Mexico

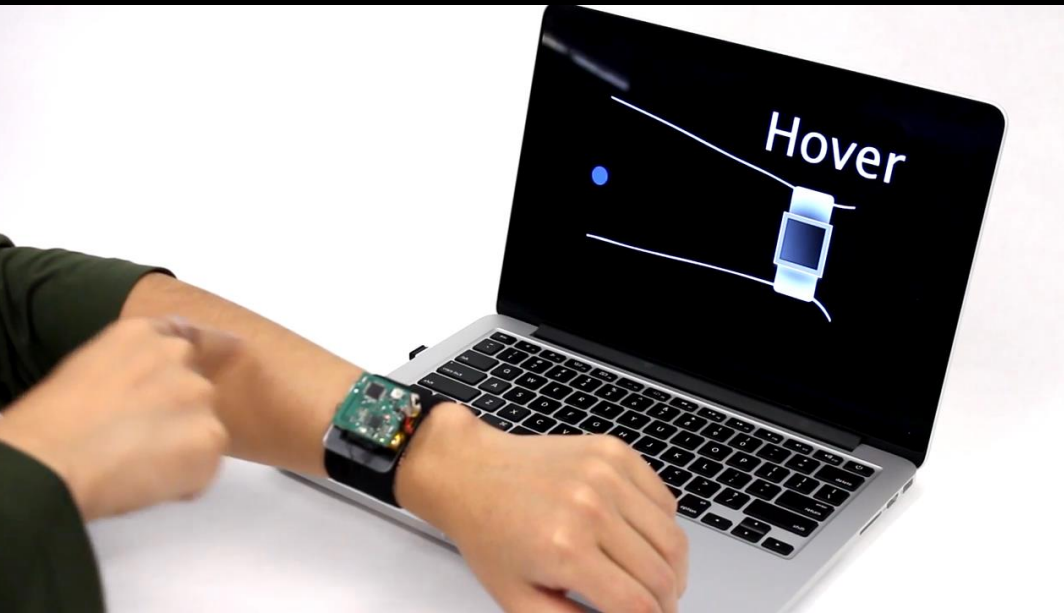


Can I invite you on my ship?
laH SoH vltlhobqa' jIH Duj?



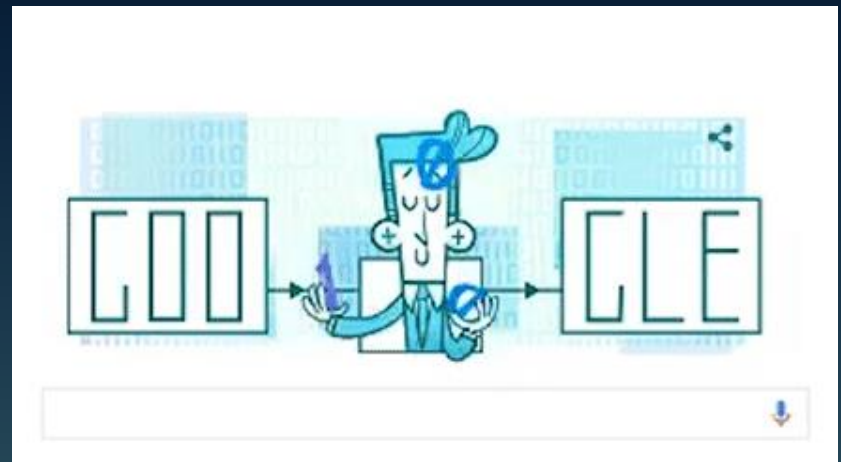
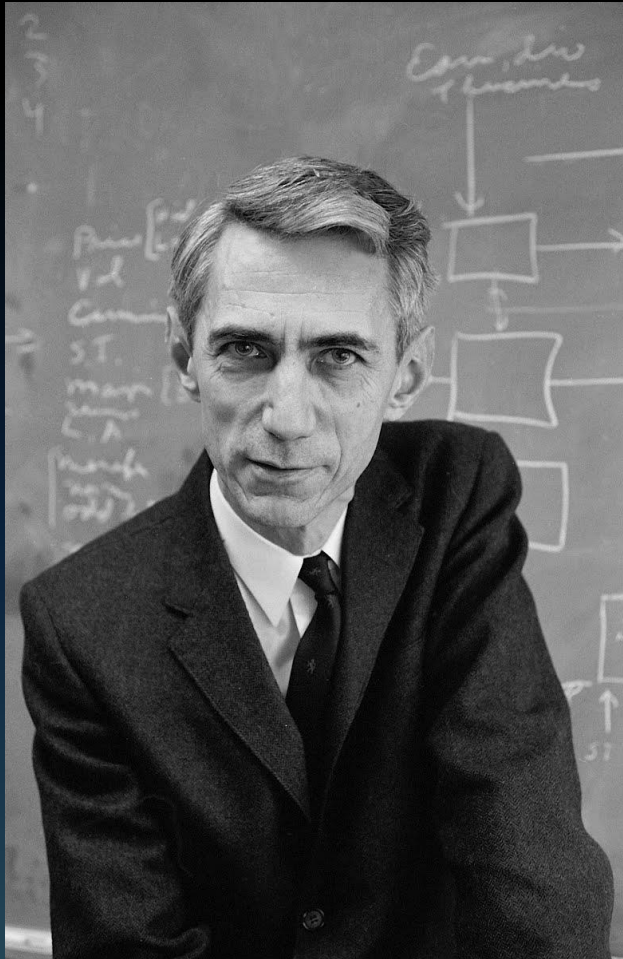
Dun bel, HoD
With great pleasure, captain

Wearable sensors



Claude E. Shannon (1916-2001)

Father of information theory



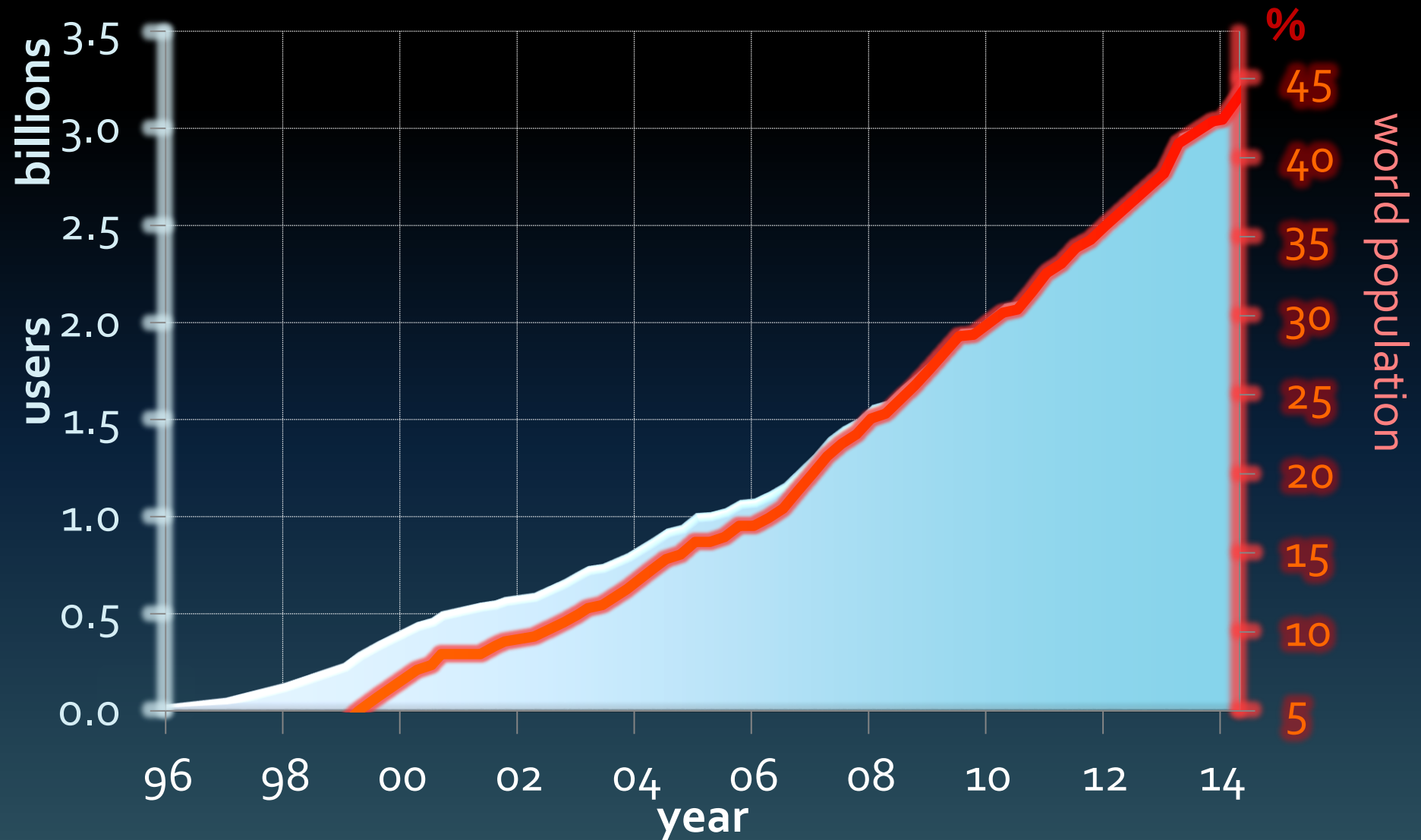
Harriet Tubman (1822-1913)

American abolitionist and humanitarian

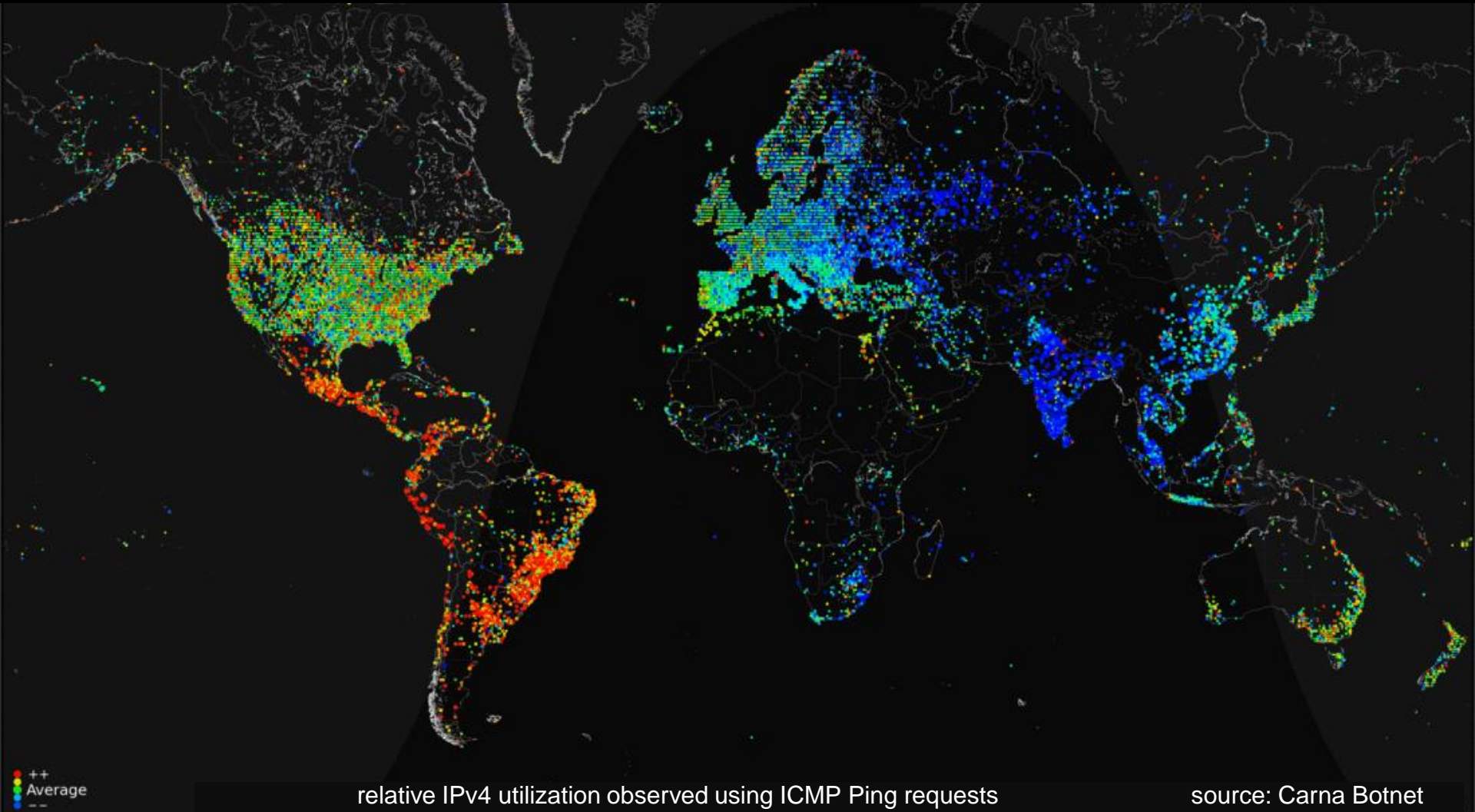


The growth of the Internet

(fonte: internetworldstats.com)

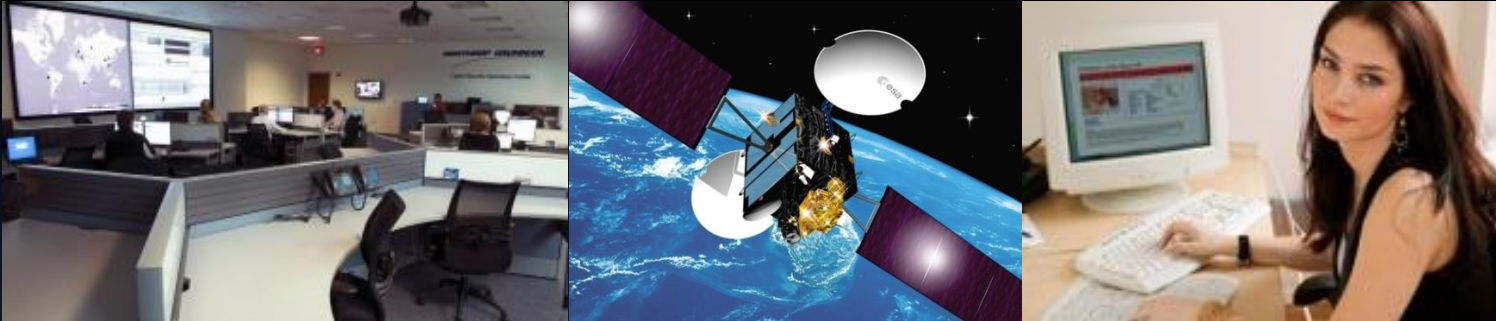


The Internet today



Job opportunities

- Working **in** telecommunications
hardware, infrastructures, networking, application design,
webservices, remote management, digital services...



- Working **with** telecommunications
network management, datacenters, domotics, security...



Job opportunities

Local enterprises



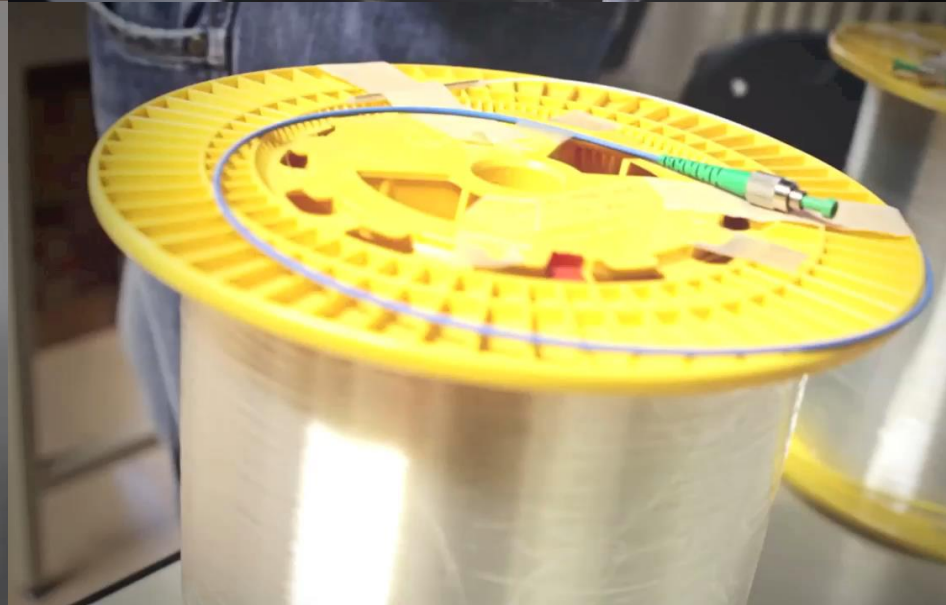
Abroad for work,
education, or both



Universities, consortia,
research centers



It's a kind of magic...



The Houses of mastery



This House prizes wit, intellect and originality. Students can be quirky, a trait that is praised and even celebrated.

The Houses of mastery



This House takes in high esteem hard work, patience, and loyalty rather than a particular aptitude in its members.

The Houses of mastery



A House characterized by cunning, ambition, and resourcefulness.

Members are shrewd and achievement-oriented.

The Houses of mastery



Another school of magic surrounded by majestic gardens and fountains, where nymphs serenade the students.

The Houses of mastery



The main traits of the House are courage and sheer determination. Its members must have “daring and nerve.”

Monthly salary after 1 year

→ 3 years

UniPD graduates '13-'15

source: XVIII survey



Employment % after 1 year → 3 years

UniPD graduates '13-'15

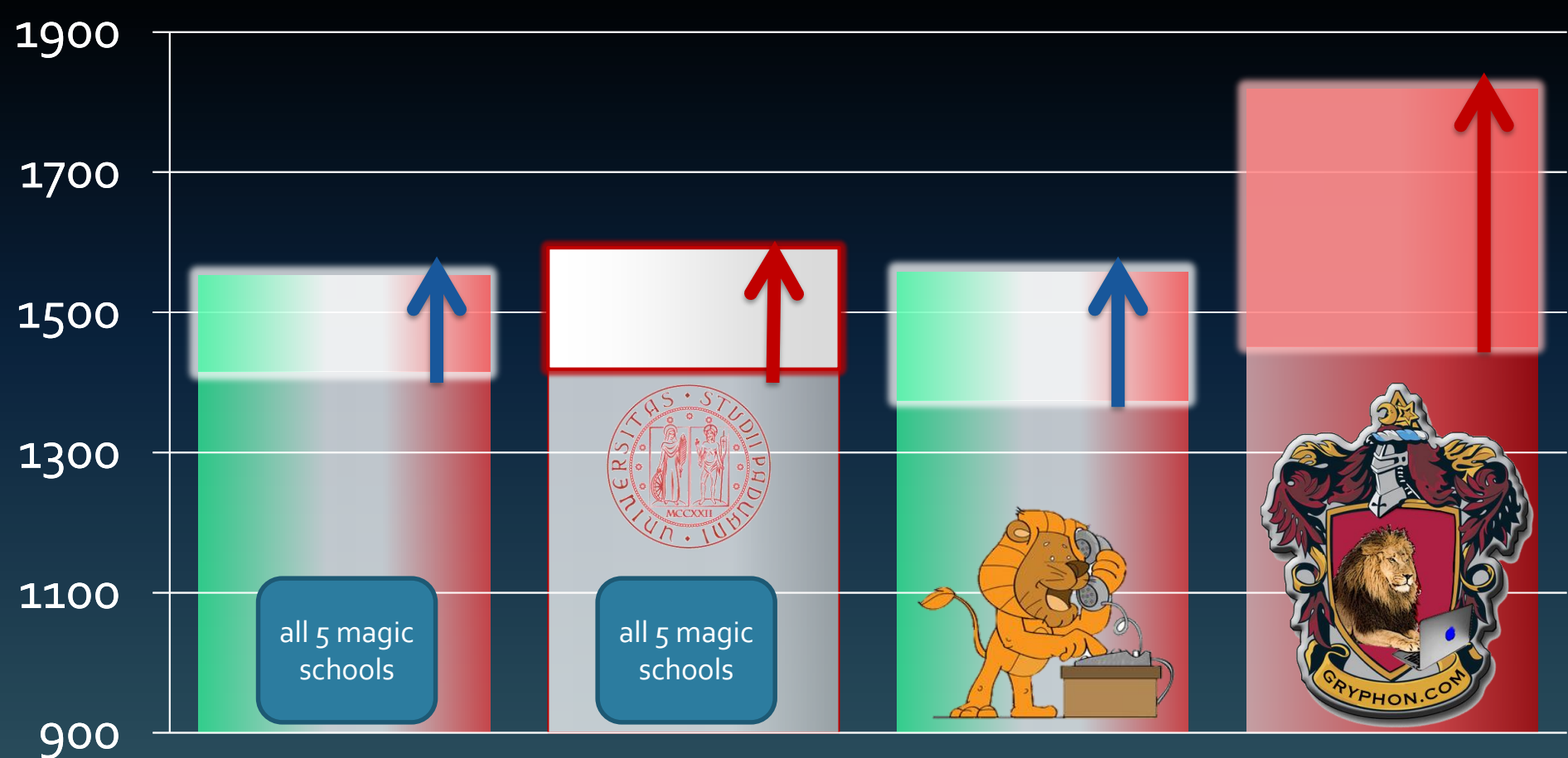
source: XVIII survey



Comparison of salaries: 1 year → 3 years

Graduates '13-'15

source: XVIII survey



Monthly salary after 3 years by gender

UniPD graduates '13

source: XVIII survey



Master degree

cross-disciplinary skills

flexible

high impact topics

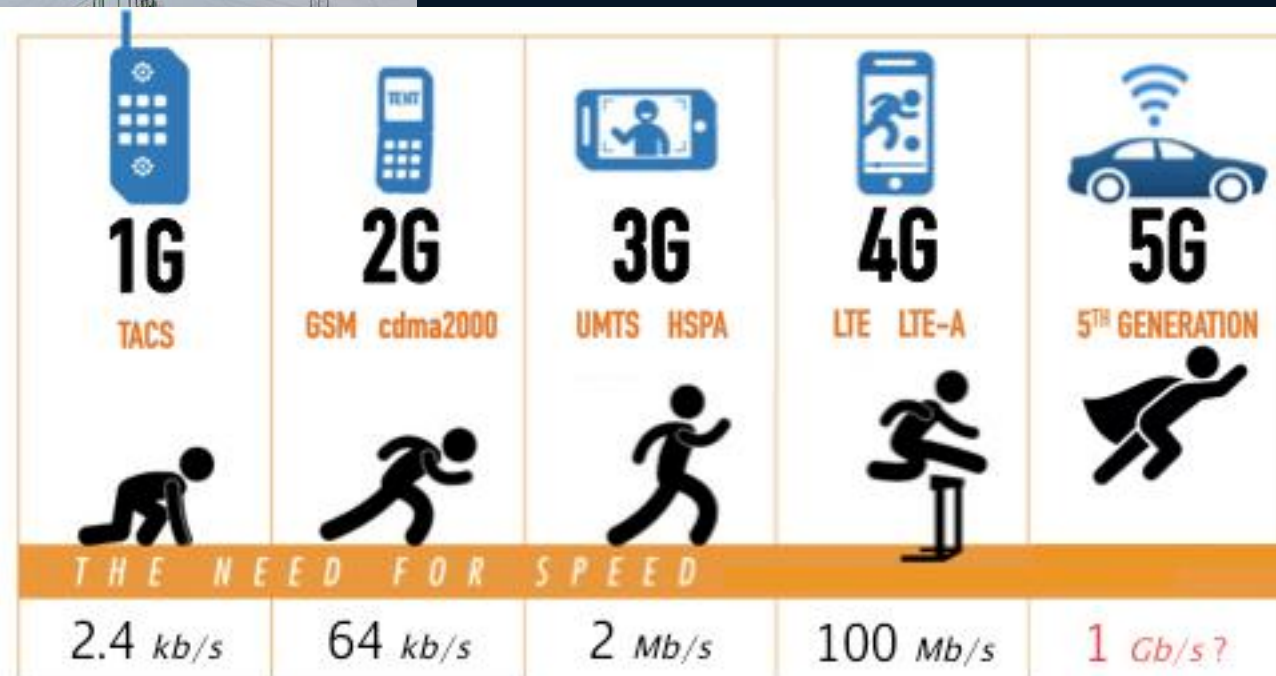
excellent

outstanding job opportunities

international

5G systems

6 ECTS – 1st semester



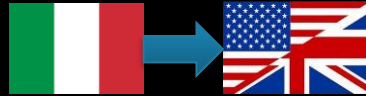
Only for Telecom



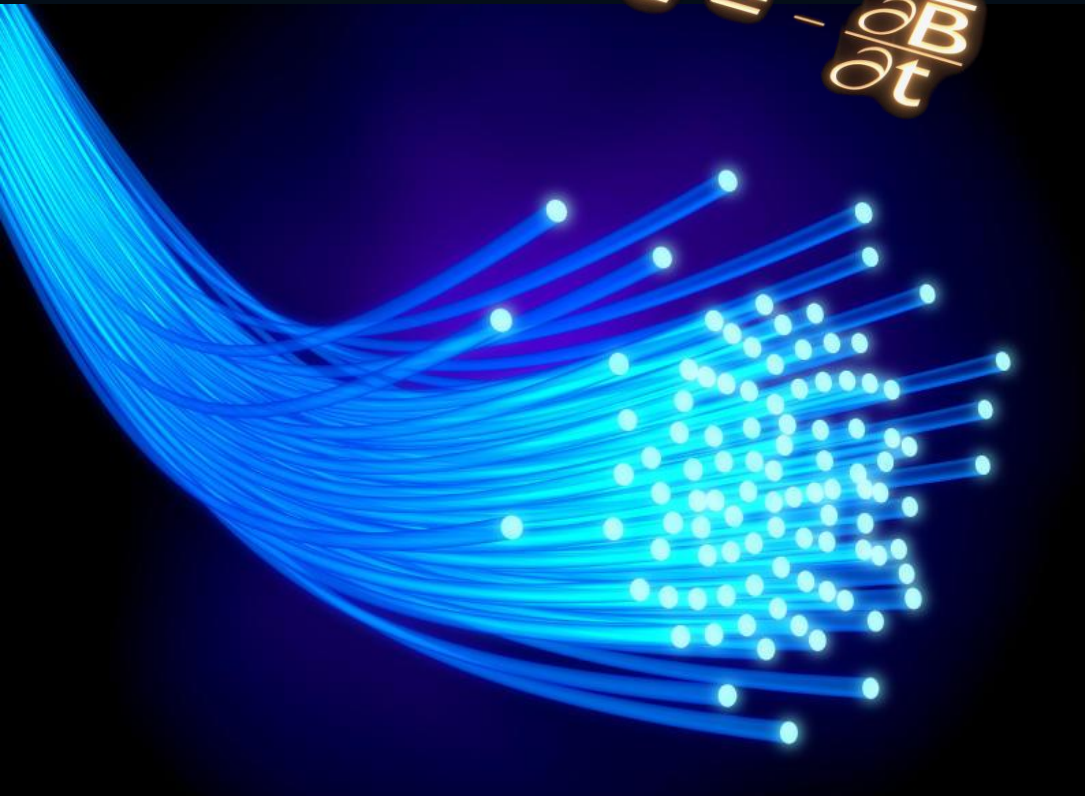
Engineers

Fiber optics

9 ECTS – 1st semester



$$\begin{aligned}\nabla \cdot \vec{B} &= 0 & \nabla \times \vec{H} &= \vec{J} + \frac{\partial \vec{D}}{\partial t} \\ \nabla \cdot \vec{D} &= \rho & \nabla \times \vec{E} &= -\frac{\partial \vec{B}}{\partial t}\end{aligned}$$



Only for Telecom
Engineers



3D augmented reality

6 ECTS – 1st semester



Only for Telecom



Engineers

Web applications

9 ECTS – 2nd semester

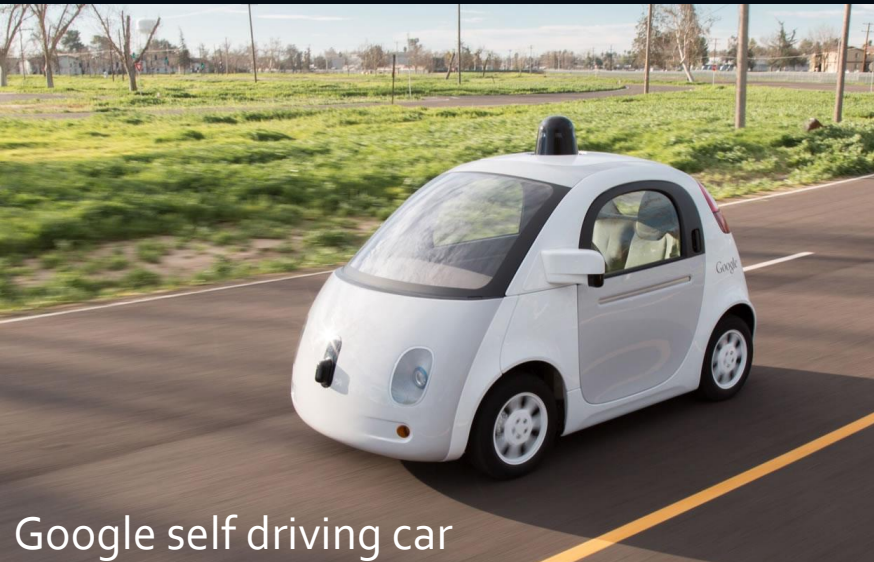


Only for Telecom
Engineers



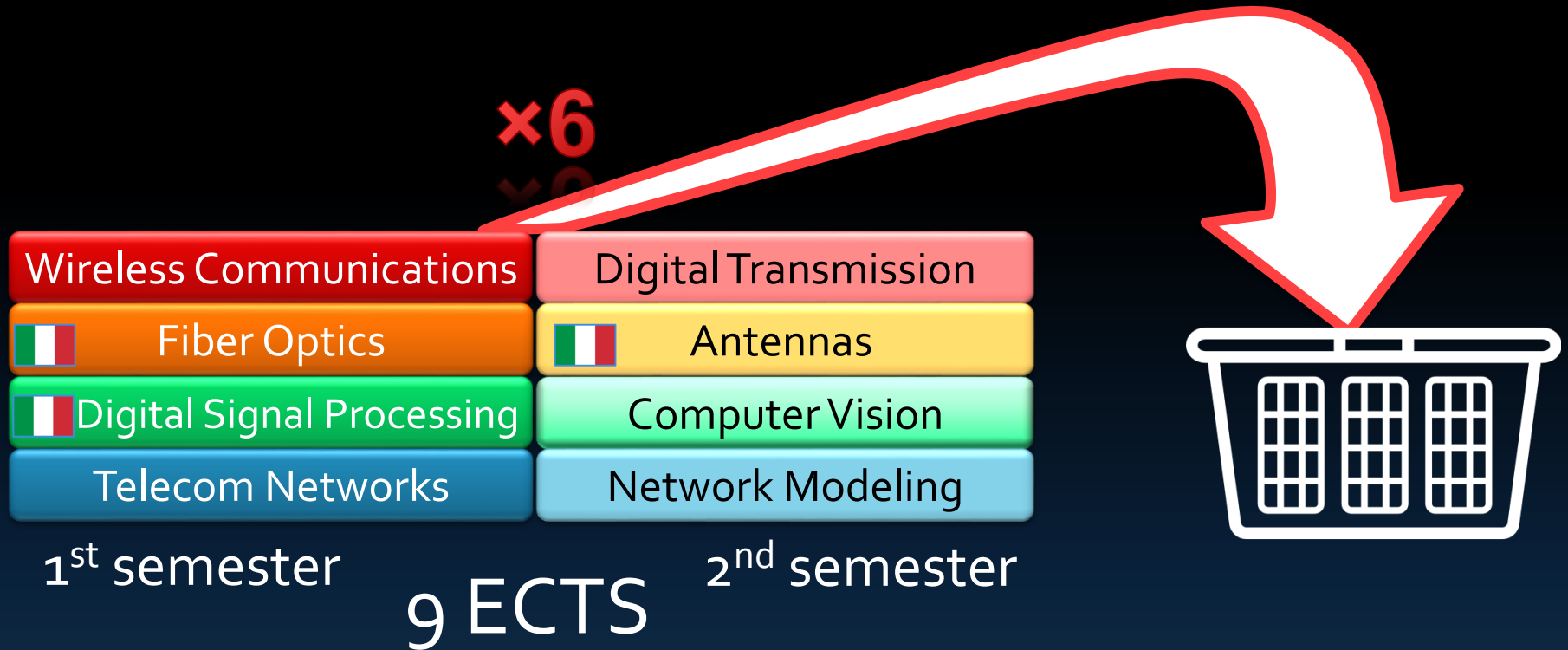
Computer vision

9 ECTS – 2nd semester

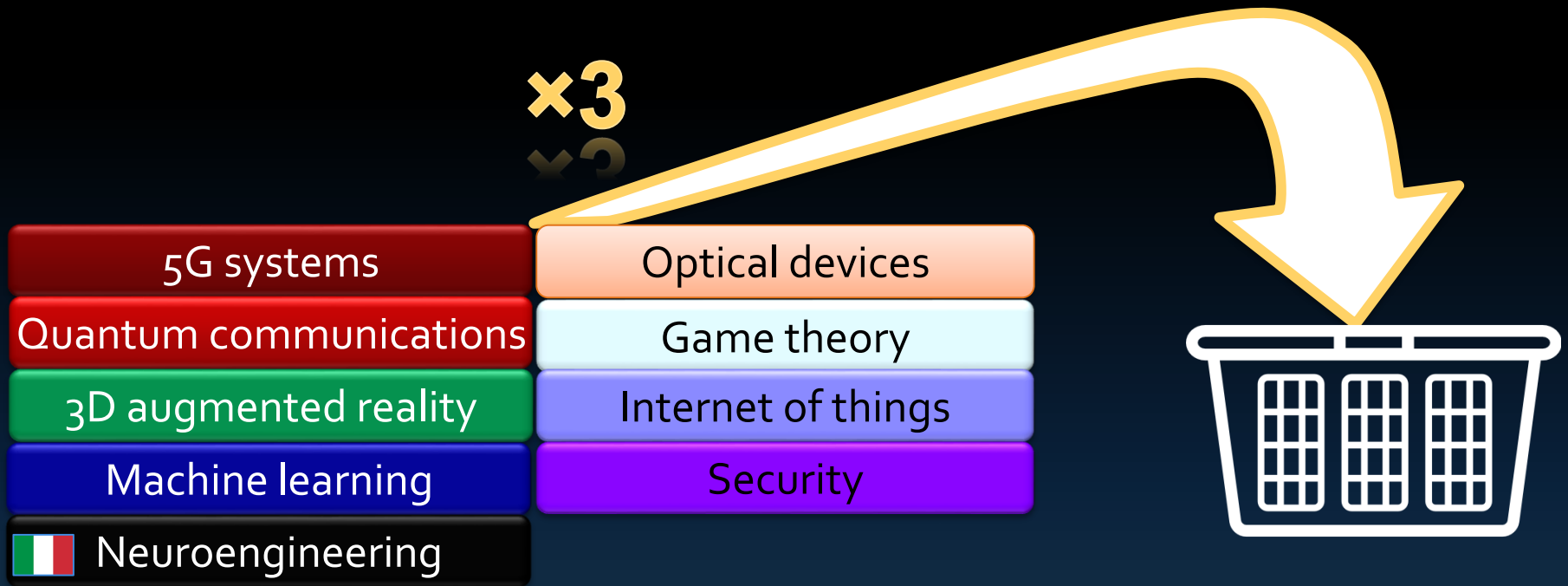


Google self driving car

Structure



Structure



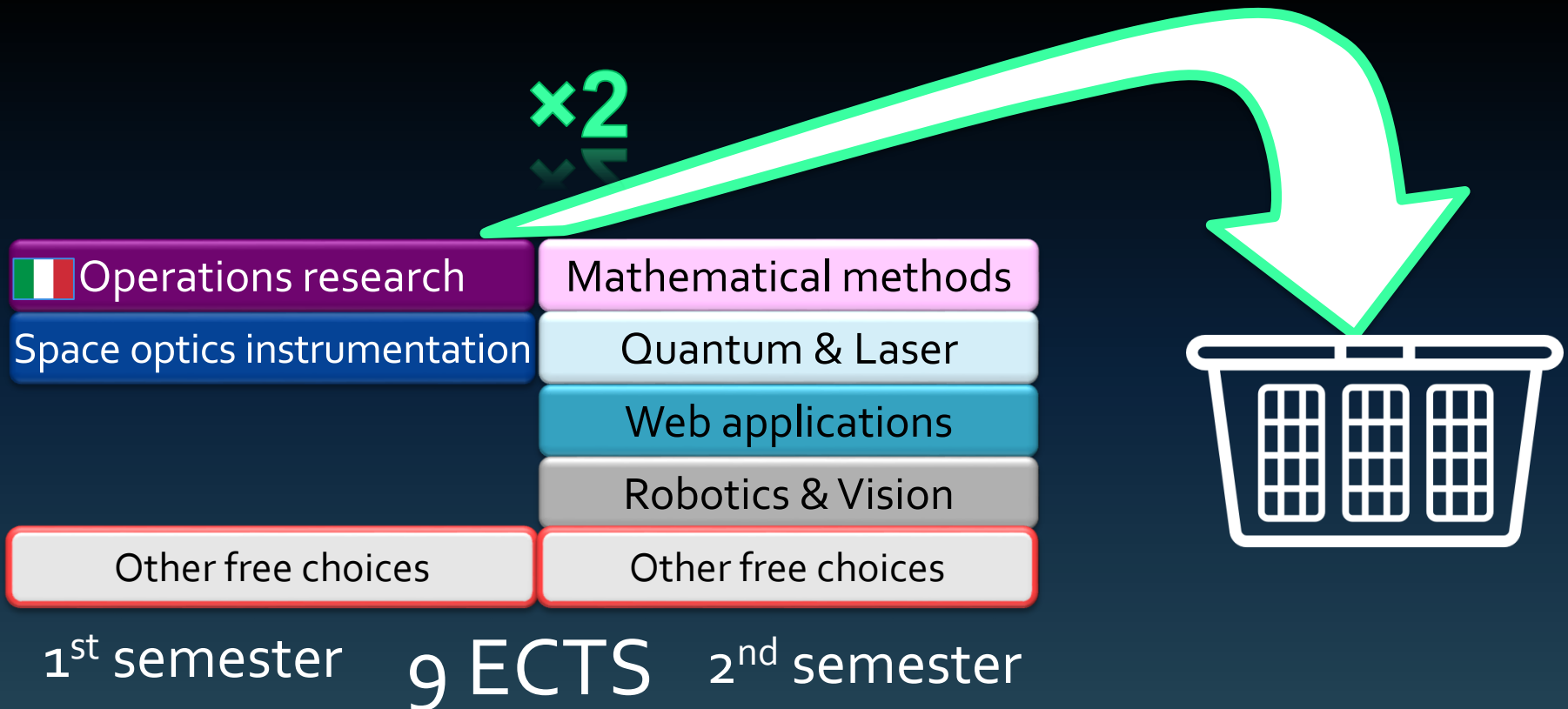
1st semester

6 ECTS

2nd semester

* other courses also available – see the full list

Structure



Structure

Free choice

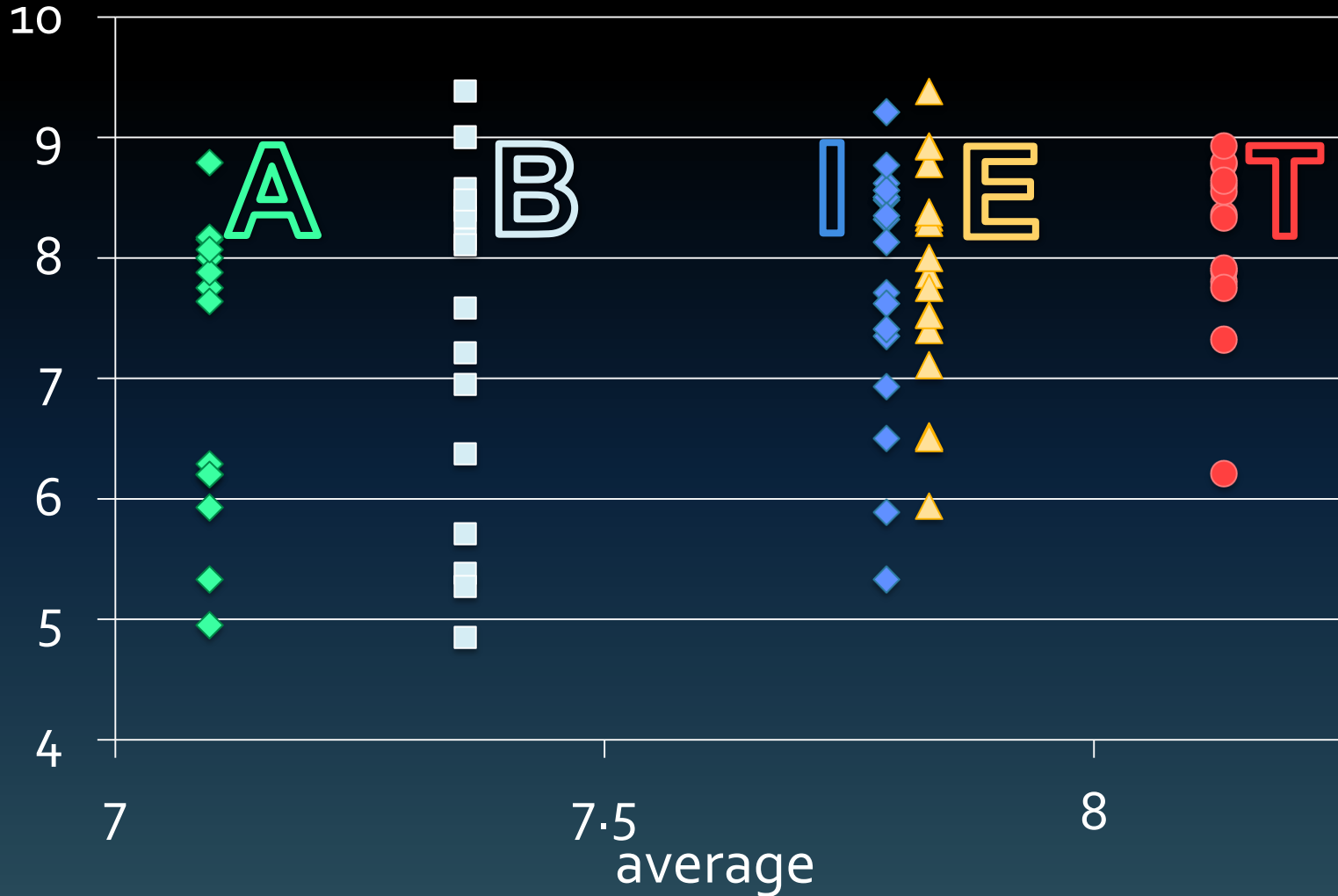
9 ECTS



Student satisfaction

Academic year '14-'15

source:
teaching evaluation
@uniPD



Internationalization



CATS: ALL YOUR BASE ARE BELONG TO US.



DO NOT WANT

courses taught in English:
up to **92%** (...and counting)

in	2012	2013	2014	...	2017
	50%	78%	85%		100%



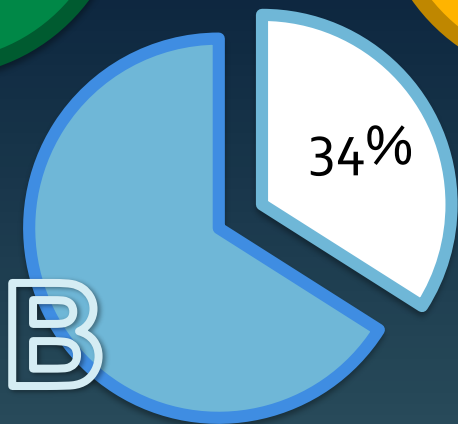
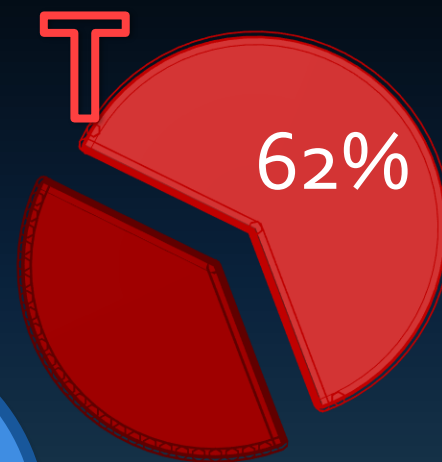
DO WANT

Internationalization

source: XVIII survey







How many spend a period abroad?
(Erasmus+, SEMP, internship)



Other data

source: XVIII survey



	A	B	E	I	T
	13%	46%	3%	3%	26%
	2.7	2.4	2.9	2.5	2.2
	47%	77%	52%	66%	84%
	104.9	103.5	103.6	105.8	109.8

Contacts

Leonardo Badia, Nicola Laurenti, Michele Zorzi
{badia, nil, zorzi} @ dei.unipd.it

Slides available at:

telecom.dei.unipd.it

peg.dei.unipd.it

