Master degree in Telecommunication Engineering

Presentation

May 10, 2016
Telecom Engineering means cross-disciplinary skills in Padova

cross-disciplinary skills ✔ ✔ ✔ ✔

high impact topics ✔ ✔ ✔ ✔

outstanding job opportunities ✔ ✔ ✔ ✔
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

D all’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. Si, 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 sostolineamo ad esempio da parte di progetti di smart city in Italia.

Il gruppo Vodafone – prosegue il manager – crede molto verso lo sviluppo di progetti in ambito Smart city in Italia.
IL WEB VELOCE QUI È ANCORA ROBA PER POCHI

La connessione base di fatto raggiunge tutti ma la vera differenza si gioca sulla qualità
Location awareness
Digital forensics
Quantum communications
What do you do for fun?
Qué haces para divertirte

Voy a las playas de México
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

relative IPv4 utilization observed using ICMP Ping requests

source: Carna Botnet
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.
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.
Another school of magic surrounded by majestic gardens and fountains, where nymphs serenade the students.
The main traits of the House are courage and sheer determination. Its members must have “daring and nerve.”
Monthly salary after 1 year

UniPD graduates ‘13-’15

source: XVIII survey

[Bar chart showing monthly salaries for different fields after 1 and 3 years, with emblems representing various departments.]
Employment % after 1 year

UniPD graduates ’13-’15

source: XVIII survey
Comparison of salaries: 1 year ➔ 3 years

Graduates ‘13-’15

source: XVIII survey

all 5 magic schools

source: ALMA LAUREA
Monthly salary after 3 years by gender

UniPD graduates ‘13

source: XVIII survey
Master degree

cross-disciplinary skills

high impact topics

outstanding job opportunities

flexible

good

international
5G systems
6 ECTS – 1st semester
Fiber optics
9 ECTS – 1st semester
3D augmented reality
6 ECTS – 1st semester
Web applications
9 ECTS – 2nd semester
Computer vision

9 ECTS – 2\textsuperscript{nd} semester

Google self-driving car
Structure

1st semester

Wireless Communications
Fiber Optics
Digital Signal Processing
Telecom Networks

2nd semester

Digital Transmission
Antennas
Computer Vision
Network Modeling

9 ECTS
Structure

1st semester
- 5G systems
- Quantum communications
- 3D augmented reality
- Machine learning
- Neuroengineering

2nd semester
- Optical devices
- Game theory
- Internet of things
- Security

6 ECTS

* other courses also available – see the full list
Structure

1st semester
- Operations research
- Space optics instrumentation
- Other free choices

2nd semester
- Mathematical methods
  - Quantum & Laser
  - Web applications
  - Robotics & Vision
  - Other free choices

9 ECTS
Structure

Free choice

9 ECTS
Student satisfaction
Academic year ‘14-’15

source: teaching evaluation @uniPD
Internationalization

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

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

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

source: XVIII survey
### Other data

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*source: XVIII survey*
Contacts

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Slides available at:

telecom.dei.unipd.it

peg.dei.unipd.it