

SMS: Smart Mobile Systems @ UPMC

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With the help of:

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Today's Schedule

- Questionnaire
 - Student Introduction
 - Class Introduction
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- Estimated: about 2hrs.

Practicalities

- **SCHEDULE:**
 - **LAB:** Tuesday @ 8.30 AM, Building 23-24 Room 203
 - **LECTURES:** Tuesday @ 10.45 AM, Building 14-15 Room 509
- **Late arrivals to class are **NOT** accepted.**
- **TEAM:**
 - Giovanni Pau: giovanni.pau@lip6.fr (Instructor)
 - Giulio Grassi: giulio.grassi@lip6.fr
 - Davide Pesavento: davide.pesavento@lip6.fr
- **We may have guest speakers throughout the year.**
- **IMPORTANT:** Due the very last minute changes in the schedule imposed by the University some classes may be canceled and make-up classes held in the evenings (6-8pm) or on Saturday mornings. Schedule and Location information will be promptly provided as needed.

Practicalities

- The class is held in **English** in its entirety.
- This is an hands-on class heavy on Projects and Exercises.
- The project consists in designing, implementing and testing a mobile system.
 - Good knowledge of **NETWORKING** and **PROGRAMMING** is required.
 - Its also better if you have previous experience with Embedded systems, Linux, and android programming.
 - We planned a quick brush-up in the LAB sessions.
- **You are ENCOURAGED to ask questions.**
 - As etiquette state your name first so that instructor and fellow students know who you are.

Initial Test

- **Today's Test**

- Is **not Graded** (i.e. will not affect your final score)
- Is designed to assess your background knowledge of essential concepts on Networking, Programming, Algorithms, Distributed Systems and Multitasking.
- We expect you to **ALREADY** know those concepts

- **If today's Test looks too hard:**

- YOU do not have the necessary knowledge and instruments for this class.
- Passing the class will be very hard and will require to quickly learn the concepts that you are missing today.

Grading

Class Evaluation

- **Project**
 - 50% of the total
- **Final**
 - 35% of the total
- **In Class Tests:**
 - 10% of the total
- **In Class Participation:**
 - 5% of the total
 - Asking good questions is used as one of the participation metrics.
- **We will offer RESEARCH projects that may waive the Final**
- **NO MIDTERM EXAM**

Projects (50% of Grade)

- **Regular Project**
 - Simulation Project using a Network Simulator
 - Performed during the LAB
- **If (project==FAIL) then Class = Likely Fail.**
- **Research project**
 - You can do this only if TODAY's Test shows you know the basics
 - After talking with Prof. Pau and the Team
 - Will be based on REAL systems with Real design, implementation and evaluation.
 - Will be based on an actual research challenges.
 - **Final is Waived**
 - **Failing the project = Failing the Class!!!**

Practicalities

- **Embedded systems will be provided if needed**
 - We will loan hardware to you
 - Failing to return the hardware = 0 in the class
- **LAB and Class meetings will start in time!**
 - Being late is disrespectful. Late students wont be admitted;
- **NO other activities are tolerated in Class.**
 - No Browsing, News checking, playing, chatting etc.
 - You are welcome to exit the room if you are not interested in the class topics.

Course Introduction

- **This class aims at exploring current topics on mobile system design with attention on Opportunistic Self Organizing Networks such as Connected Cars.**
- **Topics include:**
 - Mobility
 - Propagation
 - Connectivity
 - Protocol Design
 - Resource Discovery and Allocation
 - Application Design
 - Programming techniques for Mobile Systems
 - Mobile Architectures
 - Various Examples
 - Performance Evaluation

Approach

- **Current Topics**

- Research Driven knowledge: Slides, Research Papers will be our main sources

- **Critical Review of Research Papers**

- I will assign papers to be studied
- I will ask questions on those papers

- **System Oriented Design and Implementation**

- We will Design and Build Systems and Applications
 - mobile-system projects
 - Android Based
 - Linux Based
 - Simulation Based

Class Mechanics

- **A web site will be available and will be updated**
 - Slides
 - Papers
 - Exercises
- **Each lecture/LAB may include:**
 - Teaching
 - Paper Review
 - Student in-class presentation
 - Exercises
 - Tests

General Information

- **CLASS MAILING LIST:**

- We will create a Google group and it is MANDATORY to be part of it
- Details next lecture

- **OFFICE HOURS**

- by appointment
 - To get an appointment just send an e-mail to any of us

Questions?

Thank you for your attention.

Questions?

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