

*Wireless Communications  
and  
Mobile Computing*

*MAP-I, Doctoral Program in Informatics*

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## *Professors*

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*Web page*

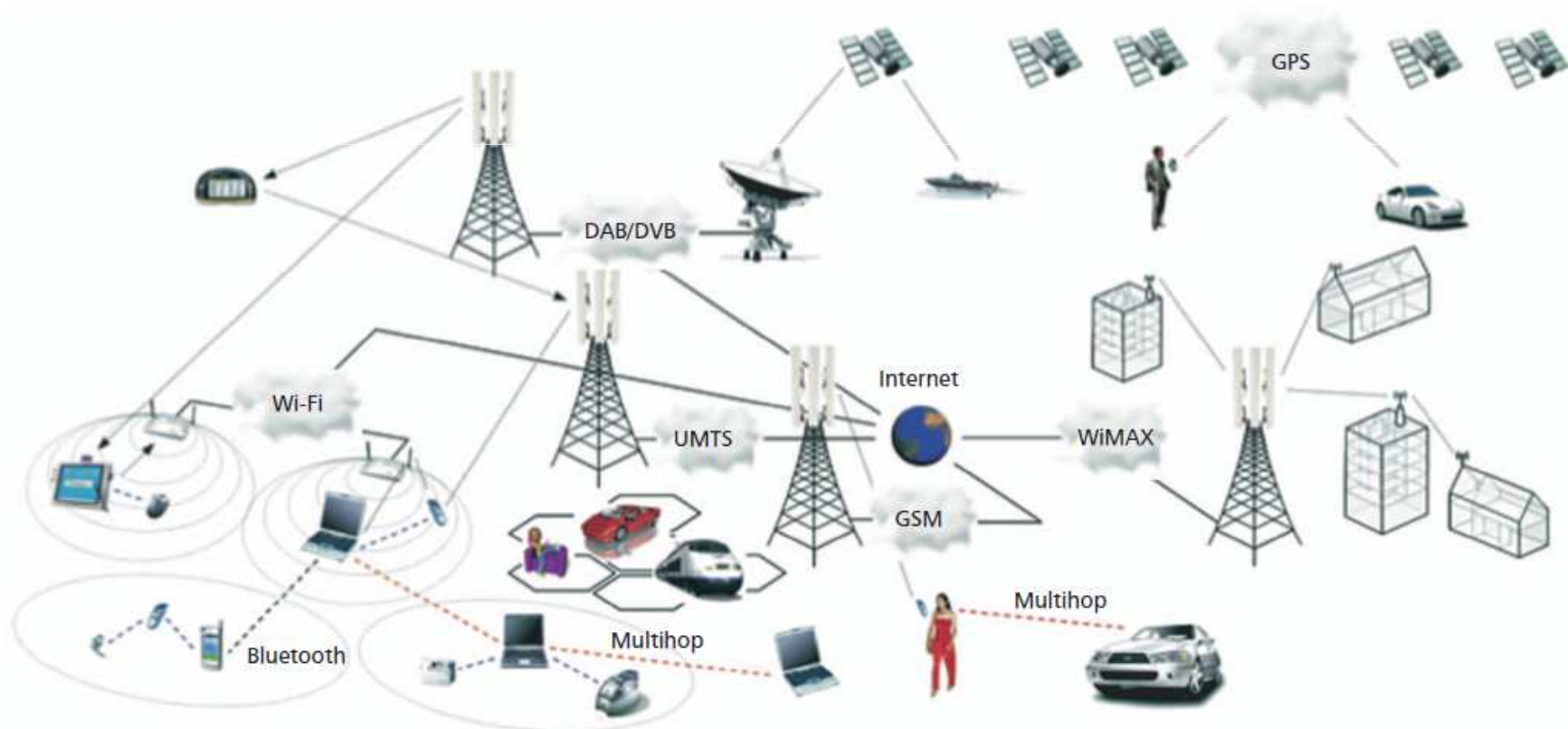
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<http://www.fe.up.pt/~mricardo/wcmc>

# WCMC

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- ◆ About mobile communications systems
- ◆ Addressed from a networking and service perspectives



## *Objectives of WCMC*

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- ◆ To provide students with competences required to understand
  - » Wireless and mobile communications networks
  - » Services and applications enabled by these networks
  - » Relationships between the global, pervasive, computation environment and the communications infrastructure supporting it
  
- ◆ To provide students with the practical skills to develop services and applications for wireless and mobile networks

## *Program (1/3)*

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- ◆ 1. New generation networks overview
  - » a. Integration of services and technologies
  - » b. Networks evolution
  - » c. Standards and market issues
  
- ◆ 2. Communications networks technologies
  - » a. Fundamentals of communications
  - » b. Wireless technologies (WLAN, WMAN)
  - » c. Wireless technologies (GPRS, UMTS)
  - » d. Broadcast and satellite technologies (DVB, DMB)

## *Program (2/3)*

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- ◆ 3. Services and applications in new generation networks
  - » a. Web services
  - » b. Services and applications platforms
  - » c. Service discovery
  - » d. Positioning and location
  - » e. Mobile example: 3G - Integrated Multimedia Subsystem.
  - » f. Research Issues

## *Program (3/3)*

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- ◆ 4. Protocols and functions for integrated networks
  - » a. Mobility management
  - » b. Authentication and access control
  - » c. Quality of service
  
- ◆ 5. Trends for the emerging communications networks
  - » a. Self-organized networks
  - » b. Opportunistic networking
  - » c. Peer-to-peer applications



## *Assessment, Final Classification*

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<b>Assessment</b>	
1	Final exam
2	Review of two papers
3	Practical work consisting in the development of an application for a mobile device involving web services and positioning services; to be developed in groups of two students
<b>Final classification</b>	
Classification = $0.5 * \text{FinalExam} + 0.35 * \text{PracticalWork} + 0.15 * \text{PapersReview}$ ,	
	provided $\text{FinalExam} \geq 9.0$ valores

# Plan of Lectures

Session	Date	Prof	Program
1	6-Oct	RA	1. New generation networks overview
			a. Integration of services and technologies
			b. Networks evolution
			c. Standards and market issues
2	13-Oct	AM	2. Communications networks technologies
			a. Fundamentals of communications
			b. Wireless technologies (WLAN, WMAN)
3	20-Oct	RA	c. Wireless technologies (GPRS, UMTS)
			d. Broadcast and satellite technologies (DVB, DMB)
4	27-Oct	AM	3. Services and applications in novel generation networks
			a. Web services
			b. Services and applications platforms
5	3-Nov	AM	c. Service discovery
			d. Positioning and location
			e. Mobile example: 3G - Integrated Multimedia Subsystem.
			f. Research Issues
6	10-Nov	MR	4. Protocols and functions for integrated networks
			a. Mobility management
7	17-Nov	MR	b. Authentication and access control
			c. Quality of service
8	24-Nov	MR	5. Trends for the emerging communications networks
			a. Self-organized networks
			b. Opportunistic networking
9	15-Dec	MR	c. Peer-to-peer applications
Note - this plan may be changed			

## *Important Dates*

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Important dates	
6-Oct	Professor presents the 5 articles to review (each student reviews two of them)
27-Oct	Professor presents the practical/laboratory work
10-Nov	Student delivers the review of the first paper
22-Dec	Student delivers the review of the second paper
12-Jan	Student demonstrates the laboratory work and delivers its report
?? - Jan	Final exam