



UNIVERSITÀ
DEGLI STUDI DI TRIESTE

Area dei Servizi Istituzionali
Settore Servizi agli studenti e alla didattica
Ufficio Dottorati di ricerca

ATTACHMENT 6

LAST REVISED 09/05/2016

**PhD IN
INDUSTRIAL AND INFORMATION ENGINEERING
OVERVIEW**

IN BRIEF

CURRICULUM: Information engineering

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|---|---|
| 1 | automation |
| 2 | electronic bioengineering and Informatics |
| 3 | electromagnetic fields |
| 4 | signal and image processing |
| 5 | informatics |
| 6 | measures and electronic instruments |
| 7 | operational research |
| 8 | telecommunication |
| 9 | converters, machines and electric drives |

Lines of research

CURRICULUM: Mechanical engineering, naval architecture, energy and production

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|---|---|
| 1 | design and optimization of fluid machines and power plants |
| 2 | rational use of energy in civil and industrial fields |
| 3 | inverse problems and functional and shape optimization in heat transfer |
| 4 | design, synthesis and mechanical construction |
| 5 | theoretical and experimental methodologies for the analysis and design of ships and ocean structures |
| 6 | product development, process modeling and optimization, design, management and logistics of industrial plants |

Administrative location

University of Trieste

Organizing Department

Department of Engineering and Architecture

Duration

3 years

Attendance abroad that entitles to a scholarship increase - min. max. of months for each PhD student (over 3 years)

0-12

Official language

Italian

Language (alternative to Italian) partially used in PhD activities

The PhD activity may be partly carried out in English, either upon request of the lecturer or if there are non-Italian speaking students

Subject Areas

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| 01 | MATHEMATICS AND INFORMATICS |
| 08a | CIVIL ENGINEERING |
| 09 | INDUSTRIAL AND INFORMATION ENGINEERING |

Macro Research Fields (in alphabetical code order)

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|------|---|
| 01/A | MATHEMATICS |
| 08/A | LANDSCAPE AND INFRASTRUCTURAL ENGINEERING |

	09/A	MECHANICAL AND AEROSPACE ENGINEERING AND NAVAL ARCHITECTURE
	09/B	MANUFACTURING, INDUSTRIAL AND MANAGEMENT ENGINEERING
	09/C	ENERGY, THERMOMECHANICAL AND NUCLEAR ENGINEERING
	09/E	ELECTRICAL AND ELECTRONIC ENGINEERING AND MEASUREMENTS
	09/F	TELECOMMUNICATIONS ENGINEERING AND ELECTROMAGNETIC FIELDS
	09/G	SYSTEMS ENGINEERING AND BIOENGINEERING
	09/H	COMPUTER ENGINEERING
Scientific Disciplinary Sectors (in alphabetical code order)	ICAR/05	TRANSPORTATION
	ING-IND/01	NAVAL ARCHITECTURE
	ING-IND/02	SHIP STRUCTURES AND MARINE ENGINEERING
	ING-IND/08	FLUID MACHINERY
	ING-IND/09	ENERGY SYSTEMS AND POWER GENERATION
	ING-IND/10	THERMAL ENGINEERING AND INDUSTRIAL ENERGY SYSTEMS
	ING-IND/13	APPLIED MECHANICS
	ING-IND/14	MECHANICAL DESIGN AND MACHINE CONSTRUCTION
	ING-IND/17	INDUSTRIAL MECHANICAL SYSTEMS ENGINEERING
	ING-IND/32	POWER ELECTRONIC CONVERTERS, ELECTRICAL MACHINES AND DRIVES
	ING-INF/01	ELECTRONIC ENGINEERING
	ING-INF/02	ELECTROMAGNETIC FIELDS
	ING-INF/03	TELECOMMUNICATIONS
	ING-INF/04	SYSTEMS AND CONTROL ENGINEERING
	ING-INF/05	INFORMATION PROCESSING SYSTEMS
	ING-INF/06	ELECTRONIC AND INFORMATICS BIOENGINEERING
	ING-INF/07	ELECTRICAL AND ELECTRONIC MEASUREMENT OPERATIONS RESEARCH
	MAT/09	
Domain European Research Council	PE	PHYSICAL SCIENCES AND ENGINEERING
	PE6	COMPUTER SCIENCE AND INFORMATICS: INFORMATICS AND INFORMATION SYSTEMS, COMPUTER SCIENCE, SCIENTIFIC COMPUTING, INTELLIGENT SYSTEMS
	PE7	SYSTEMS AND COMMUNICATION ENGINEERING: ELECTRONIC, COMMUNICATION, OPTICAL AND SYSTEMS ENGINEERING
ERC Panels	PE8	PRODUCTS AND PROCESSES ENGINEERING: PRODUCT DESIGN, PROCESS DESIGN AND CONTROL, CONSTRUCTION METHODS, CIVIL ENGINEERING, ENERGY SYSTEMS, MATERIAL ENGINEERING
	PE1	MATHEMATICS: ALL AREAS OF MATHEMATICS, PURE AND APPLIED, PLUS MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE, MATHEMATICAL PHYSICS AND STATISTICS

WHO'S WHO	
Chair	Prof. Diego Micheli - Department of Engineering and Architecture – University of Trieste – phone N. 040.558.3809; email micheli@units.it
Vice	Prof. Claudio Amadio – Department of Engineering and Architecture – University of Trieste – phone N. 040.558.3833; email amadio@univ.trieste.it
Web site	http://dottorato.dia.units.it
Email	phd.dia@units.it

<p>Learning outcomes</p>	<p>The PhD course prepares researchers with high scientific profile and culture oriented to the engineering applications, able to develop knowledge, new methods of investigation and design and research activity in public or private bodies, also with managerial competences. Curricula are active in: Information Engineering - Mechanical, Naval Architecture, Energy and Production Engineering.</p> <p>Activities are oriented to advanced design, theoretical analysis, soft-computing and experimentation. The first year includes courses or lectures on basic scientific subjects and organizational aspects of research, selected according to the weaknesses of the individual initial preparation and the selected research themes. An analysis of the state of the art will be also carried out, and the main theme of study identified. The second and third year will be devoted to the individual themes, and it will be proposed a stay in a research body of international relevance. Common features are a multidisciplinary theoretical-experimental approach and the interaction with territory, industrial and professional world.</p> <p>Main objective is the enhancement of skills and professionalism of the PhD students, with reference to the international job market. The correspondence of the planned activities to the course objectives will be evaluated during the planned meetings of the body of teachers.</p>
<p>Job placement opportunities</p>	
<p>Main cooperating international Universities and Research Institutions</p>	<p>1 Osaka University - Department of Naval Architecture and Ocean Engineering</p>