TOMORROW
NEEDS
ENGINEERING

EEUM IN NUMBERS

6004
Total students
539 PhD in 23 programmes

321
Teaching staff 100%
PhD holders

74
Non-teaching staff

7 out of **9**
Centers assessed internationally with
the three higher classifications

16
Patent applications per
year (average)

82
Concluded PhDs

1791
WoS/Scopus scientific papers

316
R&D projects

68,4 M€
Projects' dotation

TOMORROW
NEEDS
ENGINEERING

RANKINGS

THE WORLD UNIVERSITY RANKINGS

THE Ranking Engineering & Technology : **301-400**

THE Ranking 100 UNDER 50 2017 : **101-150** (5 Portuguese HEI)

THE World University Ranking – UMinho 601-800

SCIMAGO INSTITUTIONS RANKINGS

SCImago Institutions Rankings : **472/5000**
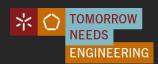
CWUR

Center for World University Rankings (CWUR) : **616/1000**

U-Multirank: **9** features with highest classificaton (A category – Very Good)

ACADEMIC RANKING OF WORLD UNIVERSITIES SINCE 2003

Academic Ranking of World Universities (ARWU) : **401-500**

ARWU-FIELD: Top 100 - Biomedical Engineering, Civil Engineering, Food Science and Technology; Top 200 - Biotechnology; Top 300 - Mechanical Engineering (w/ Production Engineering) and Chemical Engineering; Top 400 - Computer Science and Engineering, Materials Science & Engineering.
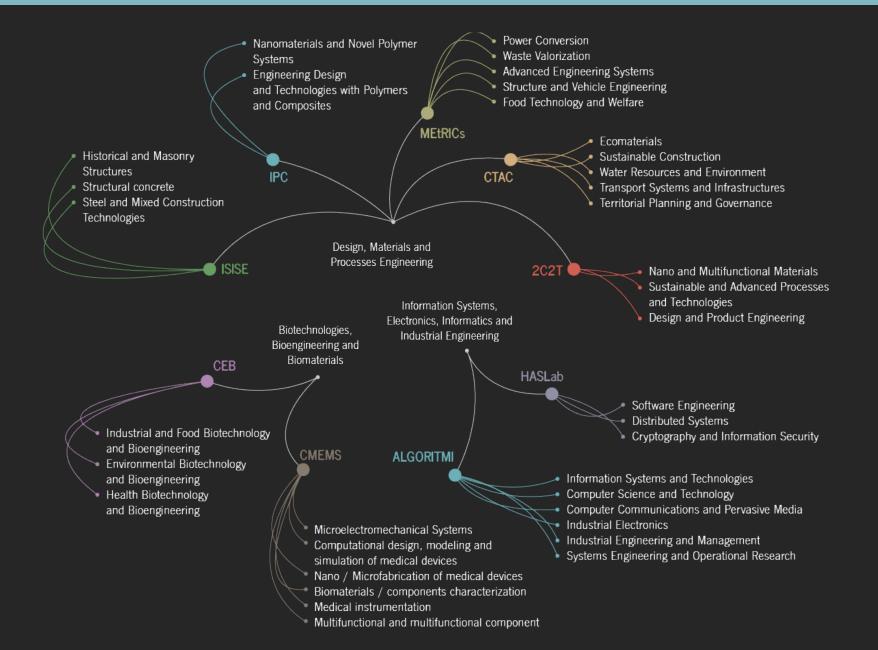
TOMORROW NEEDS ENGINEERING

INTERNATIONAL COOPERATION

- **200** incoming students/year

- **20** international conferences held in Braga/Guimarães per year

- > **10** international MoU/year

- Partner institutions network in around **80** countries, mainly in EU, Asia and PALOP

TOMORROW NEEDS ENGINEERING

IPC
- Nanomaterials and Novel Polymer Systems
- Engineering Design and Technologies with Polymers and Composites

MEtRICs
- Power Conversion
- Waste Valorization
- Advanced Engineering Systems
- Structure and Vehicle Engineering
- Food Technology and Welfare

CTAC
- Ecomaterials
- Sustainable Construction
- Water Resources and Environment
- Transport Systems and Infrastructures
- Territorial Planning and Governance

ISISE
- Historical and Masonry Structures
- Structural concrete
- Steel and Mixed Construction Technologies

Design, Materials and Processes Engineering

2C2T
- Nano and Multifunctional Materials
- Sustainable and Advanced Processes and Technologies
- Design and Product Engineering

Biotechnologies, Bioengineering and Biomaterials

Information Systems, Electronics, Informatics and Industrial Engineering

CEB
- Industrial and Food Biotechnology and Bioengineering
- Environmental Biotechnology and Bioengineering
- Health Biotechnology and Bioengineering

HASLab
- Software Engineering
- Distributed Systems
- Cryptography and Information Security

CMEMS
- Microelectromechanical Systems
- Computational design, modeling and simulation of medical devices
- Nano / Microfabrication of medical devices
- Biomaterials / components characterization
- Medical instrumentation
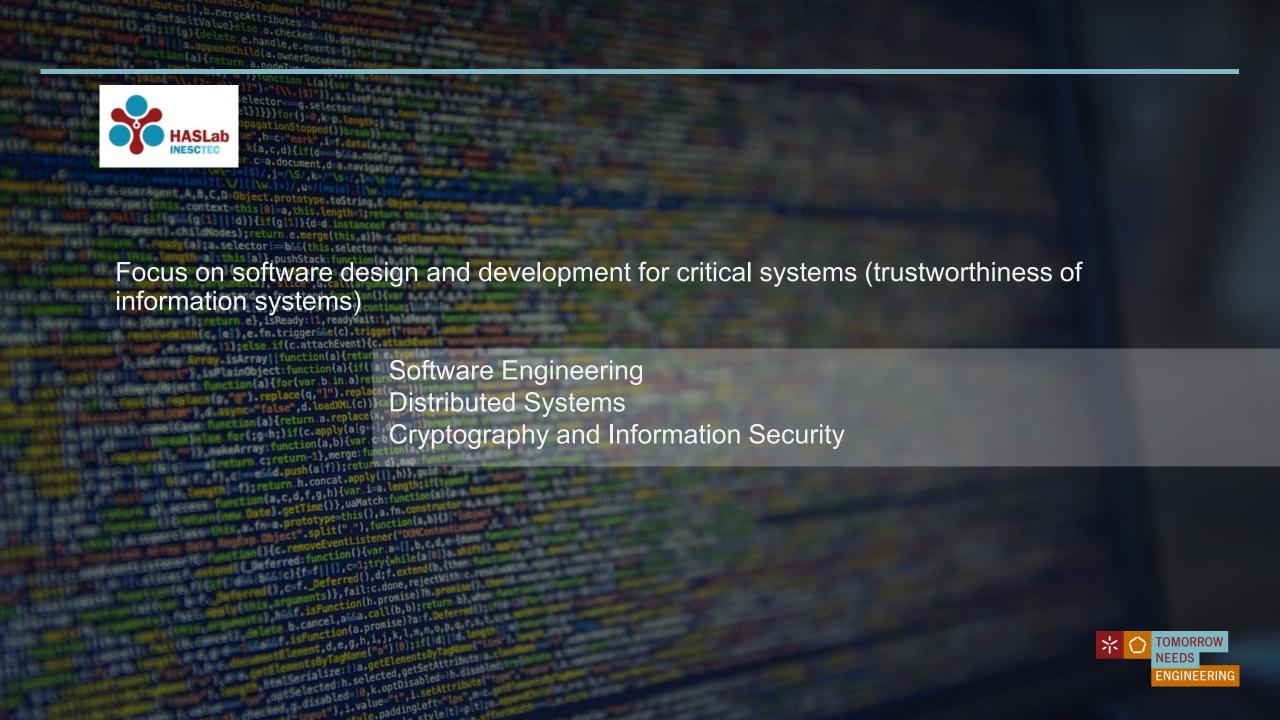- Multifunctional and multifunctional component

ALGORITMI
- Information Systems and Technologies
- Computer Science and Technology
- Computer Communications and Pervasive Media
- Industrial Electronics
- Industrial Engineering and Management
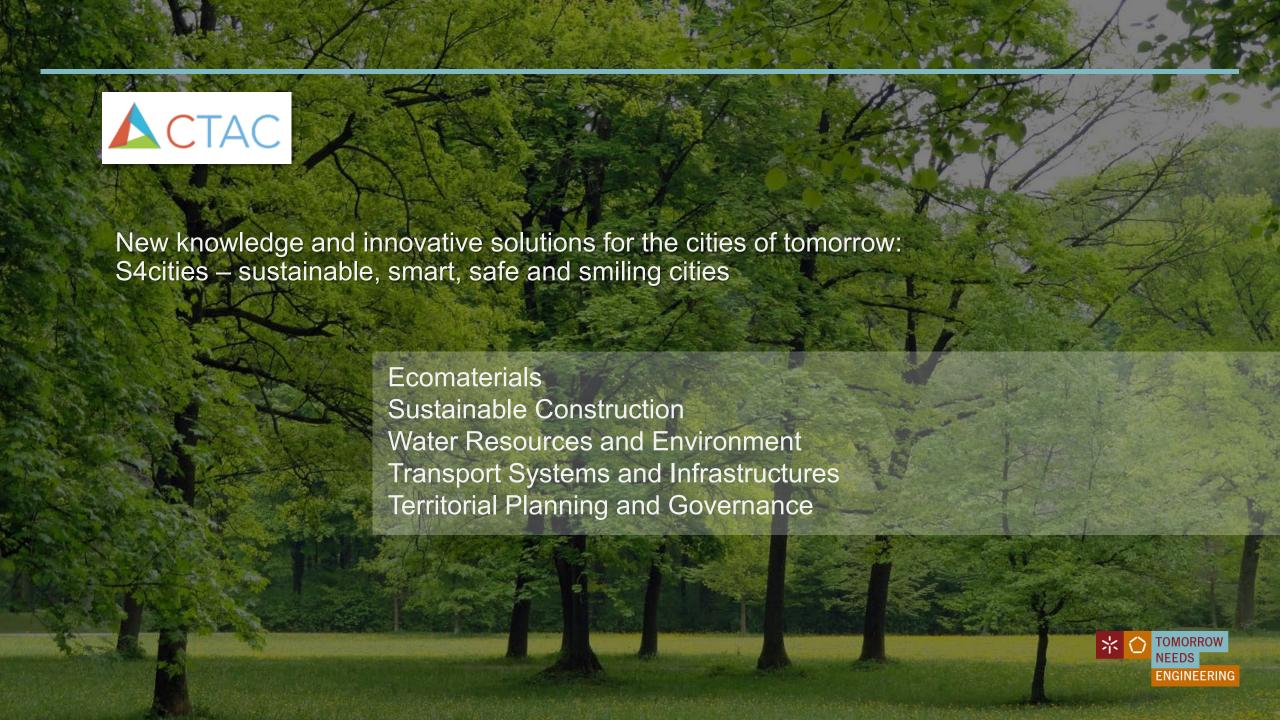- Systems Engineering and Operational Research

TOMORROW NEEDS ENGINEERING

National leader in Biotechnology and Bioengineering

Industrial and Food Biotechnology and Bioengineering
Environmental Biotechnology and Bioengineering
Health Biotechnology and Bioengineering

CMEMS UMINHO
CENTER FOR MICROELECTROMECHANICAL SYSTEMS

Multidisciplinary center focused on research and innovation in the development of smart microsystems and biomedical systems

Microelectromechanical Systems
Computational design, modeling and simulation of medical devices
Nano / Microfabrication of medical devices
Biomaterials / components characterization
Medical instrumentation
Multifunctional and multifunctional component design

TOMORROW NEEDS ENGINEERING

Interdisciplinary research and leading-edge knowledge in Information and Communication Technologies, Electronics, Computer Systems and Industrial and Systems Engineering

Information Systems and Technologies
Computer Science and Technology
Computer Communications and Pervasive Media
Industrial Electronics
Industrial Engineering and Management
Systems Engineering and Operational Research

Focus on software design and development for critical systems (trustworthiness of information systems)

Software Engineering
Distributed Systems
Cryptography and Information Security

1st Portuguese research centre specialized in fibrous materials research

Nano and Multifunctional Materials
Sustainable and Advanced Processes and Technologies
Design and Product Engineering

MEtRICs
Mechanical Engineering and Resource Sustainability Center

Leading research centre in mechanical systems, energy and environmental technologies and functionalised materials

Power Conversion
Waste Valorization
Advanced Engineering Systems
Structure and Vehicle Engineering
Food Technology and Welfare

TOMORROW
NEEDS
ENGINEERING

Fundamental contribution to the advancement of science and technology of polymers and composites, helping Portuguese industry creating added-value products

Nanomaterials and Novel Polymer Systems
Engineering Design and Technologies with Polymers and Composites

Higher quality R&D in promoting innovation and sustainability in the construction sector (structural engineering)

Historical and Masonry Structures
Structural concrete
Steel and Mixed Construction Technologies

DEPARTMENTS

DEB
BIOLOGICAL
ENGINEERING

DEC
CIVIL
ENGINEERING

DEI
INDUSTRIAL
ELECTRONICS

DEM
MECHANICAL
ENGINEERING

DEP
POLYMER
ENGINEERING

DET
TEXTILE
ENGINEERING

DI
INFORMATICS

DPS
PRODUCTION
AND SYSTEMS

DSI
INFORMATION
SYSTEMS

- Cover the majority of areas in Engineering

- Offer 1st and 2nd cycle courses, as well as 3rd cycle courses together with the Research Centres

- Support the development of research projects and knowledge transfer projects in co-operation with industry and services

TOMORROW
NEEDS
ENGINEERING

EDUCATIONAL OFFER

1st
Cycle
(180 ECTS)

2nd
Cycle
(120 ECTS)

3rd
Cycle
(180 or 240 ECTS)

- Biomedical Engineering
- Chemical and Biological Engineering
- Civil Engineering
- Engineering and Management of Information Systems
- Engineering Physics
- Fashion Design and Marketing
- Industrial Electronics and Computers Engineering
- Industrial Engineering and Management
- Informatics Engineering
- Materials Engineering
- Mechanical Engineering
- Polymer Engineering
- Telecommunications and Informatics Engineering
- Textile Engineering

TOMORROW
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ENGINEERING

EDUCATIONAL OFFER

1st
Cycle
(180 ECTS)

2nd
Cycle
(120 ECTS)

3rd
Cycle
(180 or 240 ECTS)

- Engineering and Operations Management
- Bioinformatics
- Biomedical Engineering
- Biotechnology
- Building Information Modelling - BIM A+ (European Master)
- Chemical and Biological Engineering
- Civil Engineering
- Design and Marketing of Textile Products, Apparel and Accessories
- Engineering and Management of Information Systems
- Engineering and Quality Management
- Engineering of Computer Networks and Telematic Services
- Engineering Physics
- Engineering Project Management
- Fashion Design and Communication
- Food Science and Technology
- Human Engineering
- Industrial Electronics and Computers Engineering
- Industrial Engineering and Management
- Informatics Engineering
- Information Systems
- Interactive Technologies
- Materials Engineering
- Mechanical Engineering
- Mechatronics Engineering
- Micro/Nano Technologies
- Polymer Engineering
- Product Engineering
- Structural Analysis of Monuments and Historical Construction (European Master)
- Structural Engineering
- Sustainable Built Environment
- Sustainable Construction and Rehabilitation
- Systems Engineering
- Telecommunications and Informatics Engineering
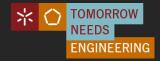- Textile Engineering
- Urban Engineering

TOMORROW
NEEDS
ENGINEERING

EDUCATIONAL OFFER

1st
Cycle
(180 ECTS)

2nd
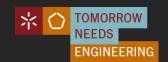Cycle
(120 ECTS)

3rd
Cycle
(180 or 240 ECTS)

- Doctoral Program in Advanced Engineering Systems for Industry
- Doctoral Program in Bioengineering
- Doctoral Program in Computer Science (MAP-i)
- Doctoral Program in Food Science and Technology and Nutrition
- Doctoral Program in Industrial and Systems Engineering
- Doctoral Program in Information Systems and Technology
- Doctoral Program in Mechanical Engineering

- Doctorate in Biomedical Engineering
- Doctorate in Chemical and Biological Engineering
- Doctorate in Civil Engineering
- Doctorate in Electronics and Computer Engineering
- Doctorate in Informatics
- Doctorate in Materials Engineering
- Doctorate in Polymers and Composites Engineering
- Doctorate in Solid Waste Management and Treatment
- Doctorate in Sustainable Built Environment
- Doctorate in Textile Engineering

TOMORROW NEEDS ENGINEERING

INTERFACES

Centro de Computação Gráfica
Investigação & Desenvolvimento Tecnológico

Applied research and development in the fields of computer graphics, information, communication and electronic technologies, as well as to their application at national and international level.
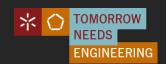
- Computer Vision, Graphics and Interaction
- Engineering Process, Maturity & Quality for information systems and technologies
- Perception, Interaction & Usability
- Urban and Mobile Computing

INTERFACES

Research, scientific analysis and application of real solutions in the area of waste valorisation.

- Waste characterisation
- Gas emissions
- Materials and Geotechnics
- Occupational safety

INTERFACES

Fulfil R&DT needs of associates and clients in plastic and mould industry, based on differentiated knowledge in strategic technological domains, assisting in know-how development and turning ideas into products.

- Materials
- Processing technologies
- Product engineering
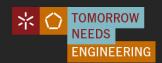- Tests and trials

INTERFACES

Support to the development of new technologies/products/processes.

Design and implementation of educational and training activities (classroom and e-learning), organizational development and transnational mobility of human resources.
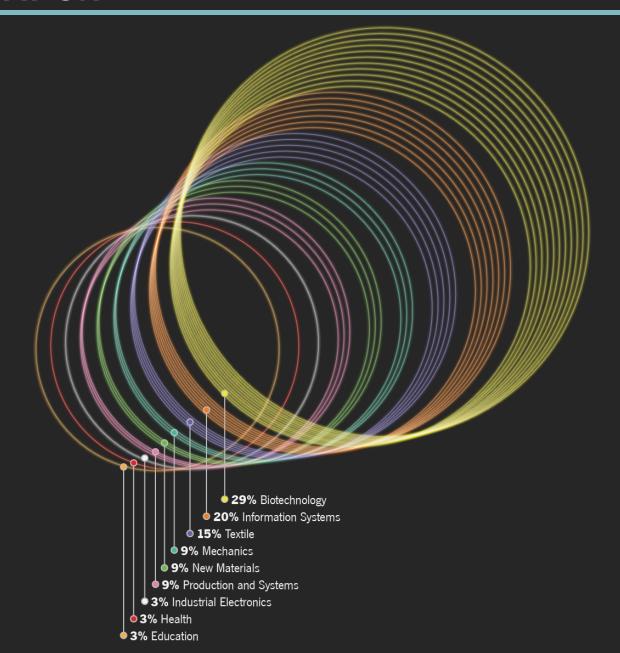
Support to university entrepreneurship and creation of innovative companies, focusing on academic spin-offs.

KNOWLEDGE VALORISATION

33 SPIN-OFFS

- **29%** Biotechnology
- **20%** Information Systems
- **15%** Textile
- **9%** Mechanics
- **9%** New Materials
- **9%** Production and Systems
- **3%** Industrial Electronics
- **3%** Health
- **3%** Education

TOMORROW NEEDS ENGINEERING

LINK WITH INDUSTRY

Protocols of Cooperation, Dissertations and Traineeships

@eeuminho

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Escola de Engenharia
da Universidade do Minho

www.eng.uminho.pt

TOMORROW
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ENGINEERING