GIORNATA DELLA RICERCA UCBM

2016 Research Highlights

Department of Engineering

Marcella Trombetta

Research Coordinator

GIORNATA DELLA RICERCA UCBM

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

Biomedical Robotics and Biomicrosystems

Computer Systems and Bioinformatics

Tissue Engineering & Chemistry for Engineering

Chemical-Physics Fundamentals in Chemical Engineering

Nonlinear Physics and Mathematical Modeling

DEPARTMENT OF ENGINEERING

Electronics for Sensor Systems

Automation and Control Theory

Process Engineering

Measurements and Biomedical Instrumentation

Electrical Engineering

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DEPARTMENT OF ENGINEERING

ACADEMIC STAFF

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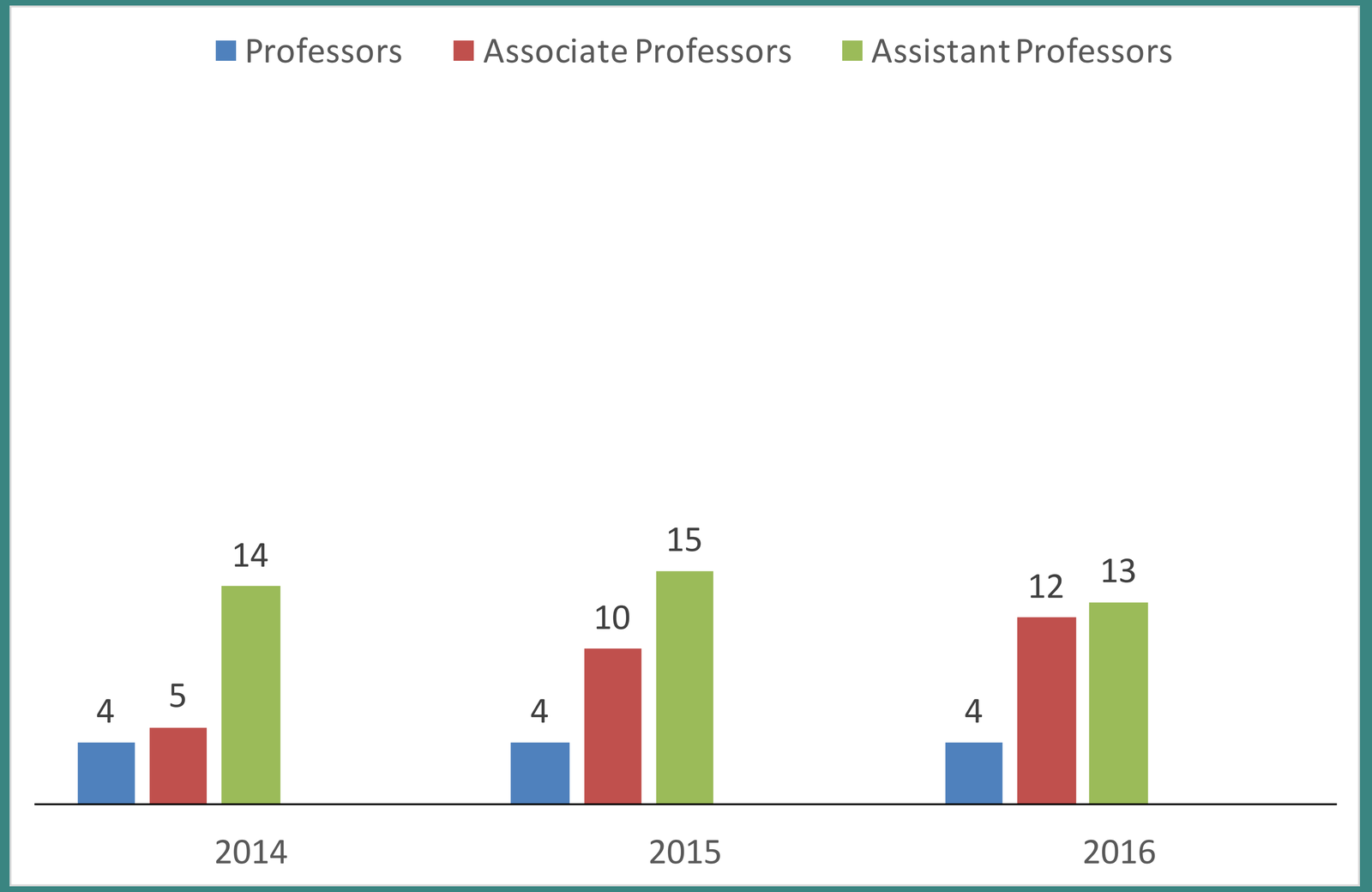

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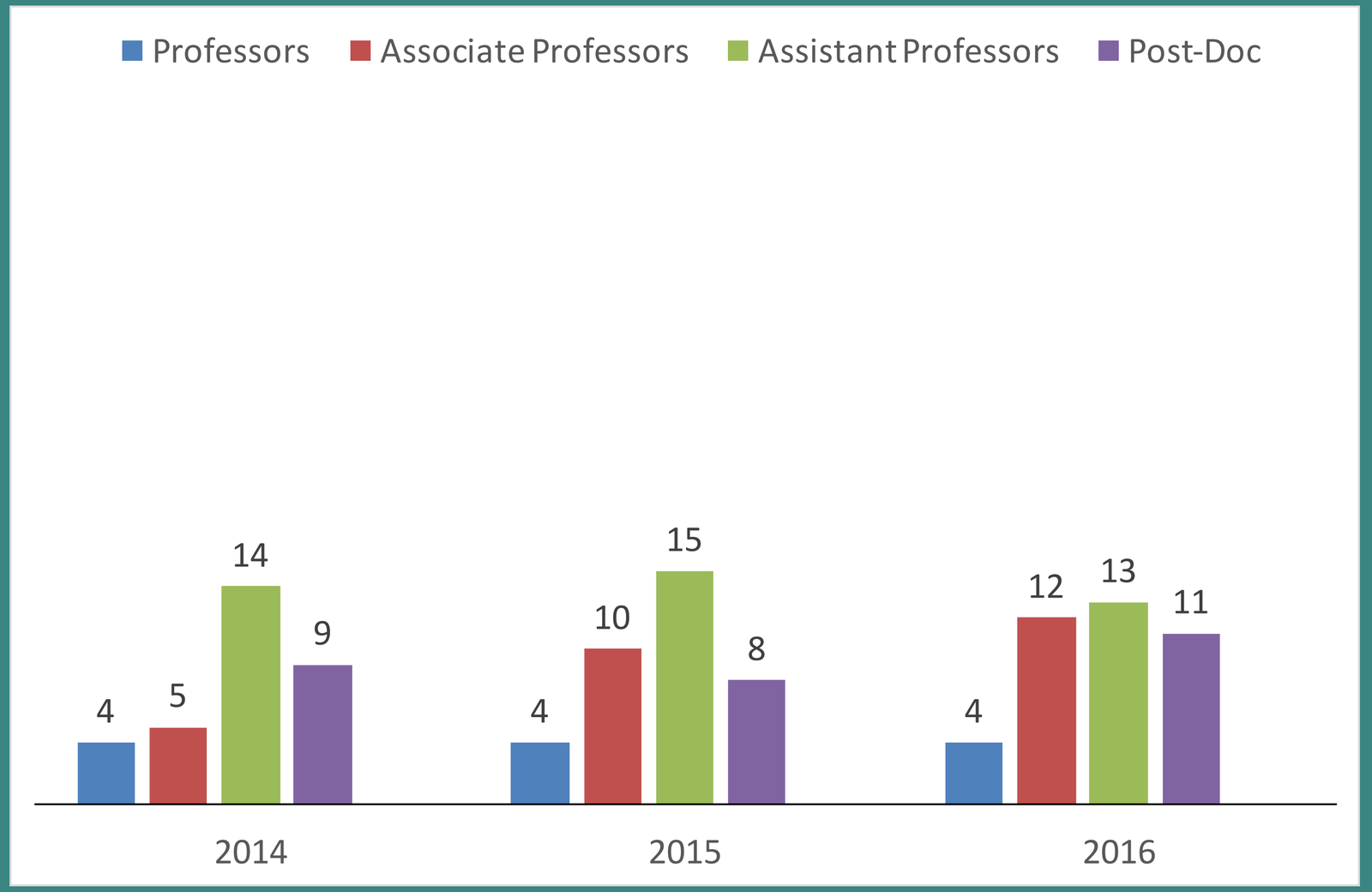

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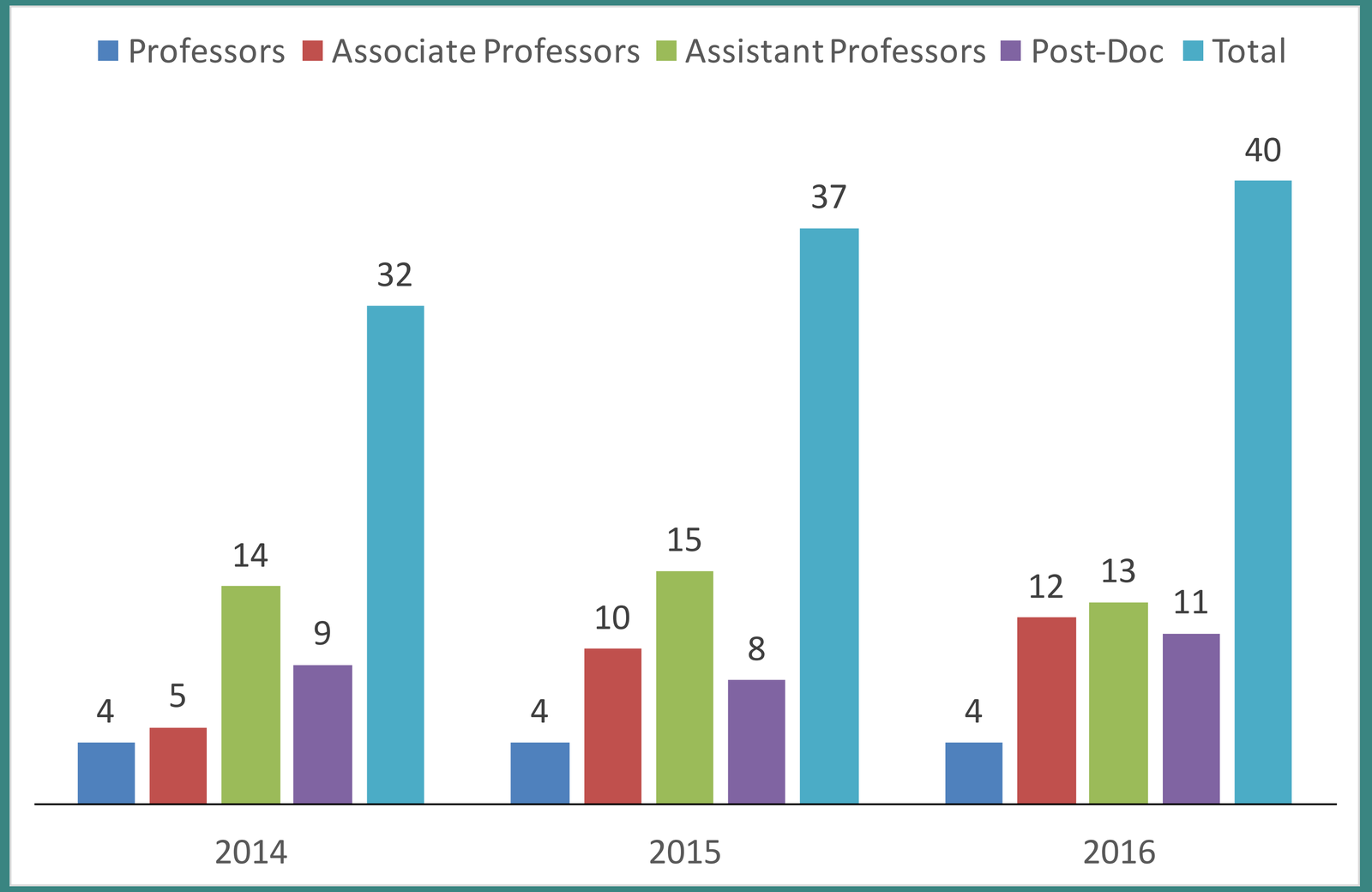

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DEPARTMENT OF ENGINEERING

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DEPARTMENT OF ENGINEERING

European Commission

PRIN MIUR

Ricerca finalizzata

OTHER GRANTS

esa

agenzia spaziale italiana

ICRANet

et al.

COMMISSIONED RESEARCH

INAIL
ISTITUTO NAZIONALE PER L'ASSICURAZIONE CONTRO GLI INFORTUNI SUL LAVORO

et al.

Strategic University Projects

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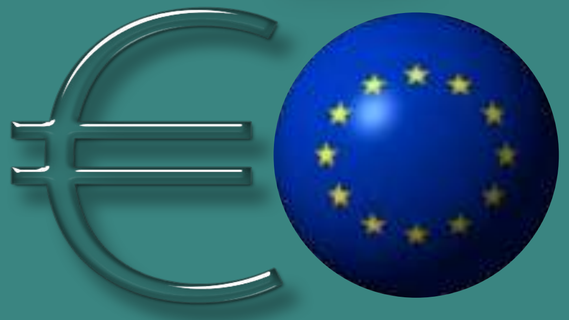
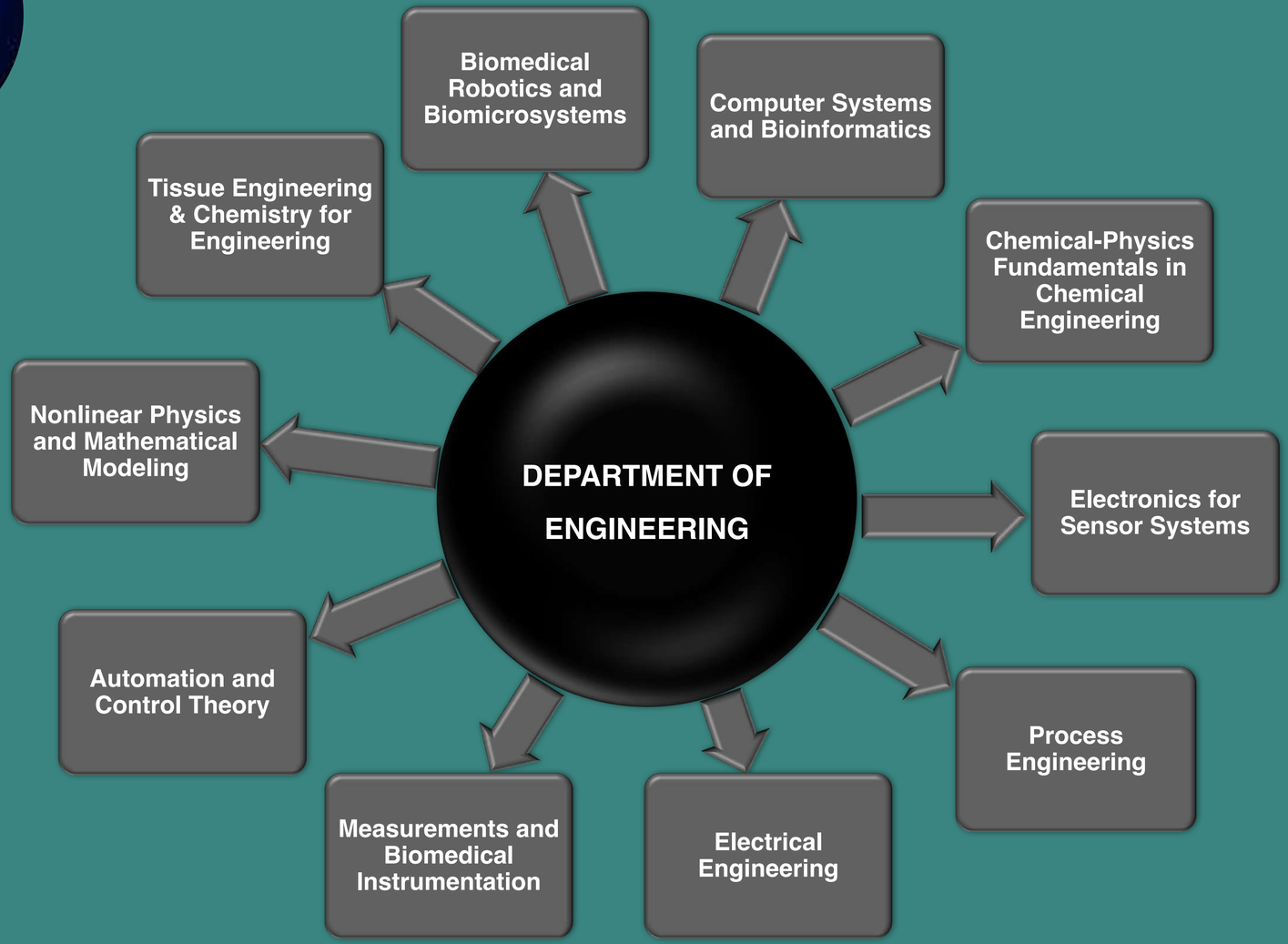
GRANTS FROM COMPETITIVE CALLS





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European Commission

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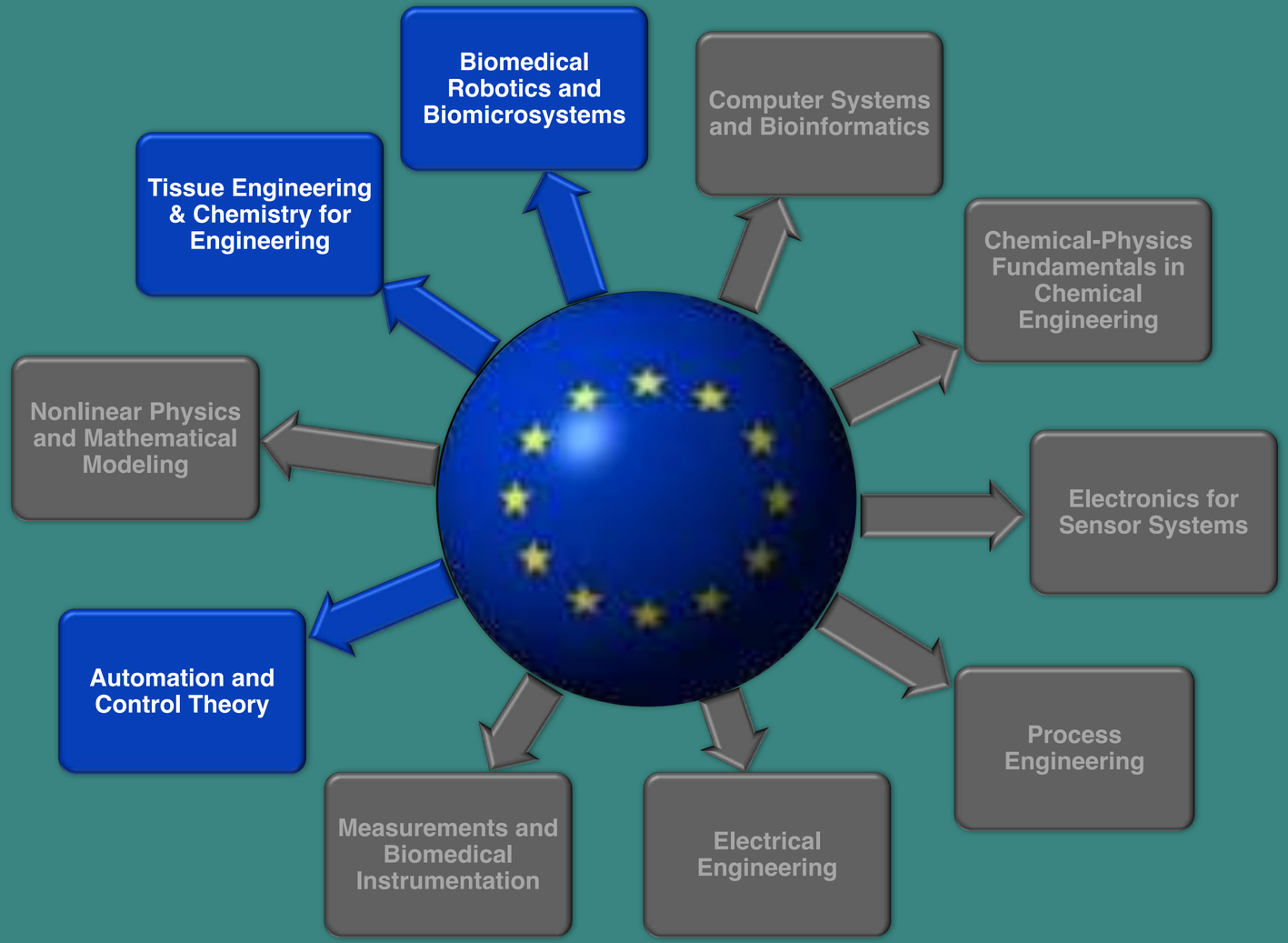

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European Commission

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

AIDE

Adaptive Multimodal Interfaces to Assist Disabled People in Daily Activities

RISING

Indoor localization and building maintenance using radio frequency identification and inertial navigation

Biomedical Robotics and Biomicrosystems

Automation and Control Theory

Tissue Engineering & Chemistry for Engineering

erc

reshape

REstoring the Self with embodiable HAnd ProsthesEs

CIPR Net

Critical Infrastructure Preparedness and Resilience Research Network

EUROPOL

ASKLEPIOS: Actions on food Supplements, faKe genuine (not) food exhibition, e-LEarning platform, action on Pesticides, operation “In Our Sites” and JAD

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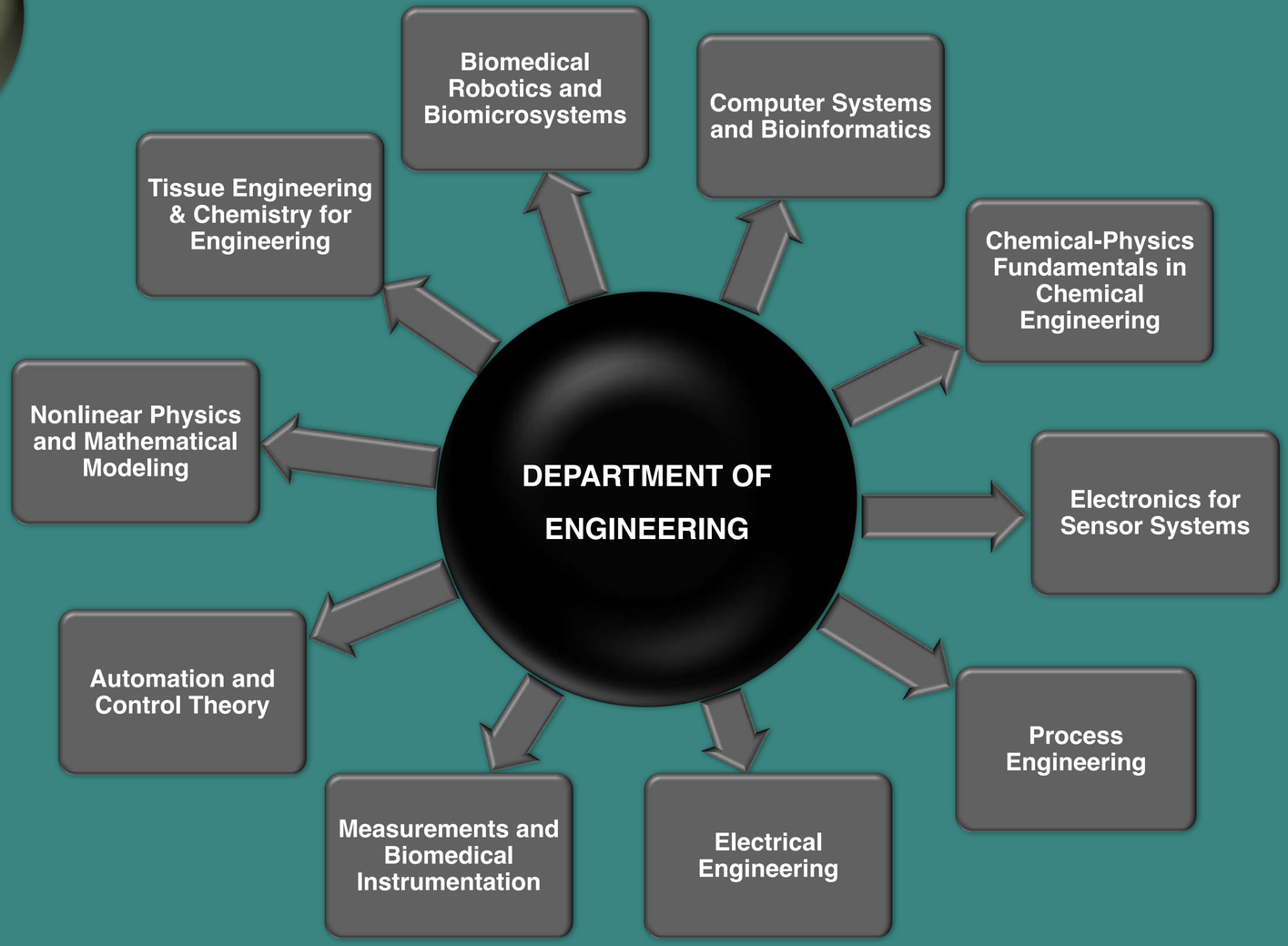
GRANTS FROM COMPETITIVE CALLS



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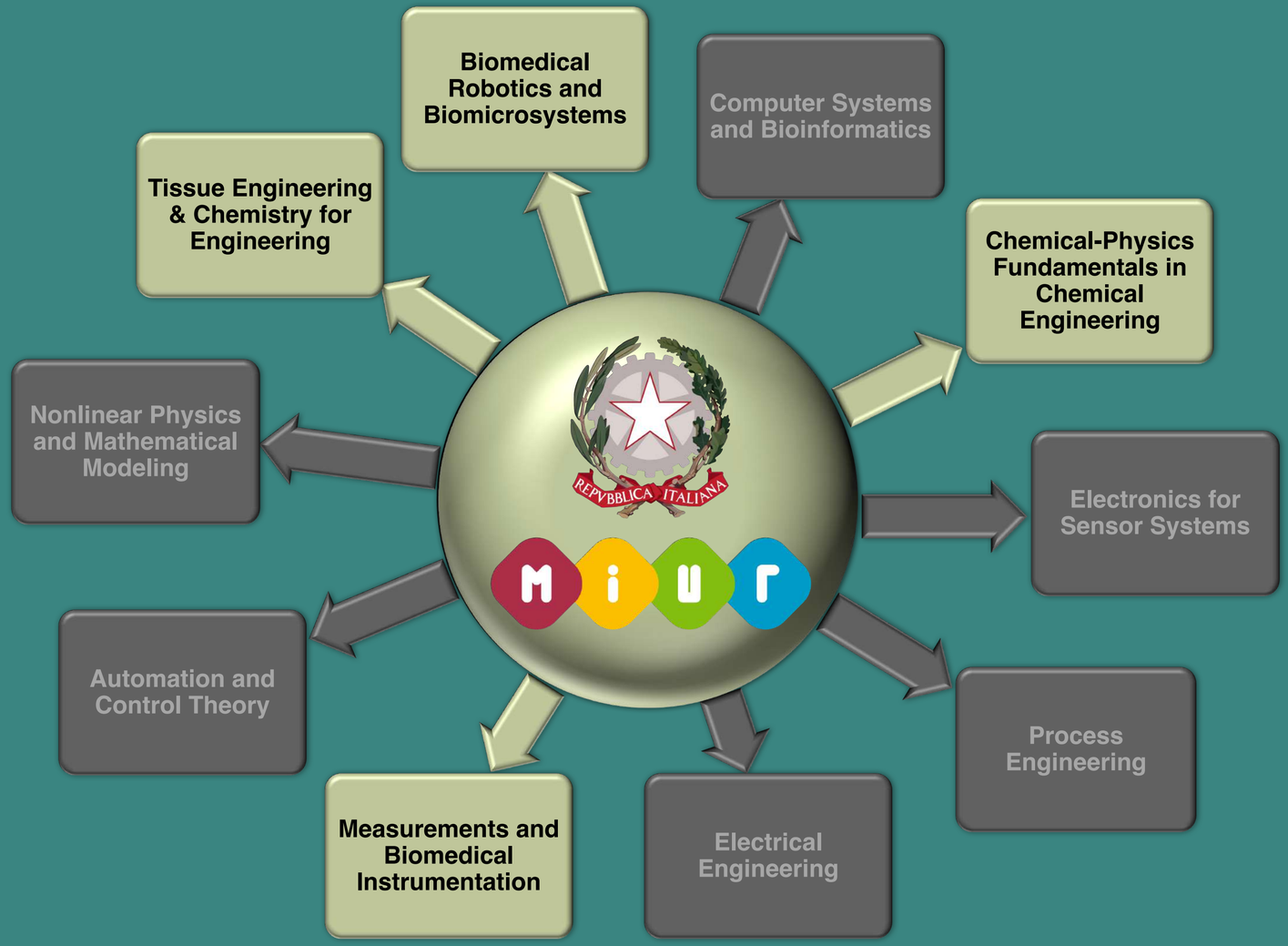

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PRIN MIUR

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

PRIN 2010-2011

Biomechatronic hand prostheses endowed with bio-inspired tactile perception, bi- directional neural interfaces and distributed sensori-motor control

Biomedical Robotics and Biomicrosystems

Chemical-Physics Fundamentals in Chemical Engineering

PRIN 2010-2011

Root growth control: a systems biology approach

PRIN 2010-2011

Engineering physiologically and pathologically relevant organ Models for the INvestigation of age related Diseases (MIND)

Tissue Engineering & Chemistry for Engineering

Measurements and Biomedical Instrumentation

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Measurements and Biomedical Instrumentation

PRIN 2012

Cells-on-chip technologies for the study of the endocannabinoid system in an in vitro model of tumor/immune system interaction

PRIN 2012

Mechanical measurements for the muscu-loskeletal apparatus: novel and standardizable methodologies for metrological assessment of measurement systems

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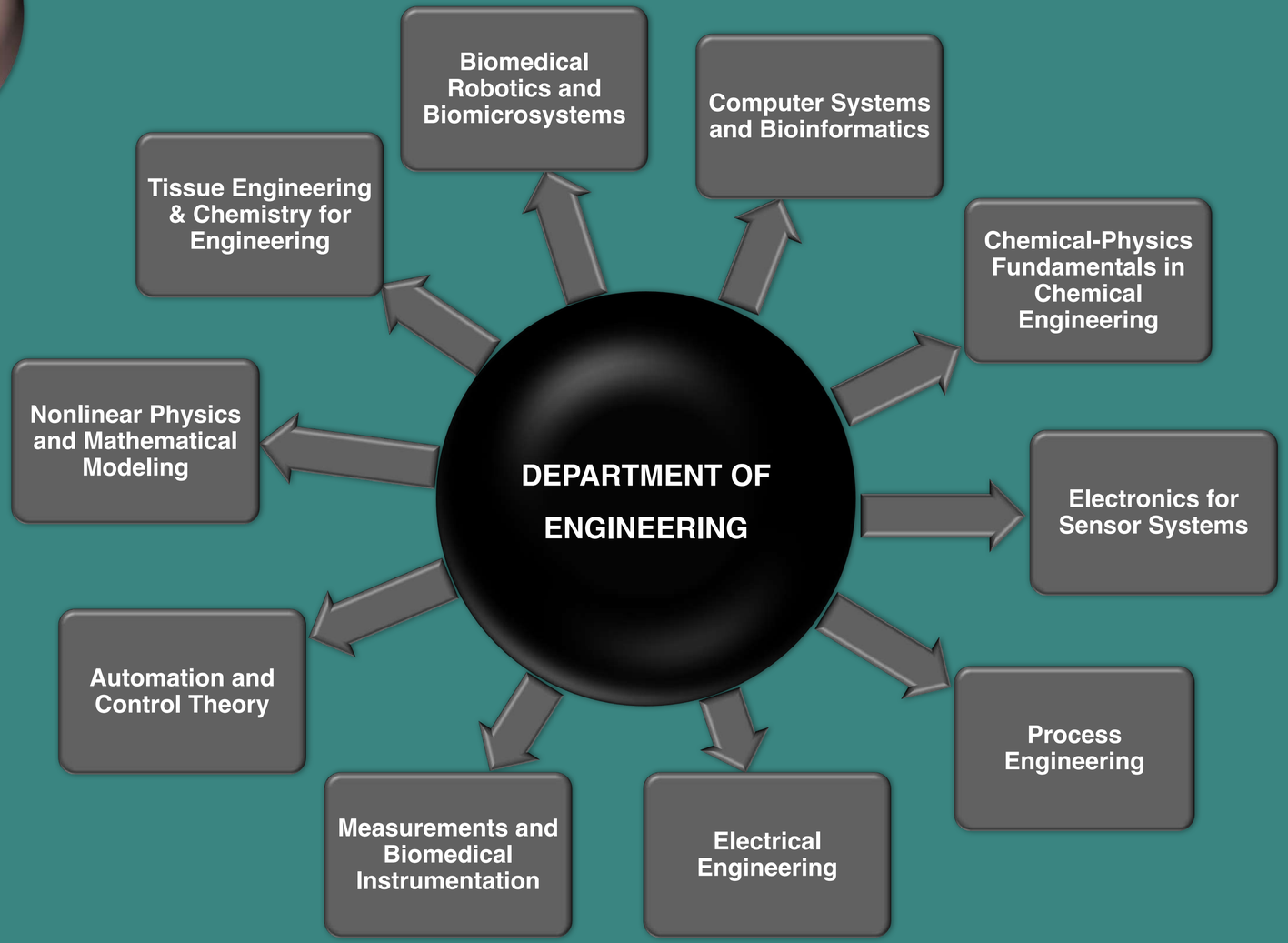
GRANTS FROM COMPETITIVE CALLS



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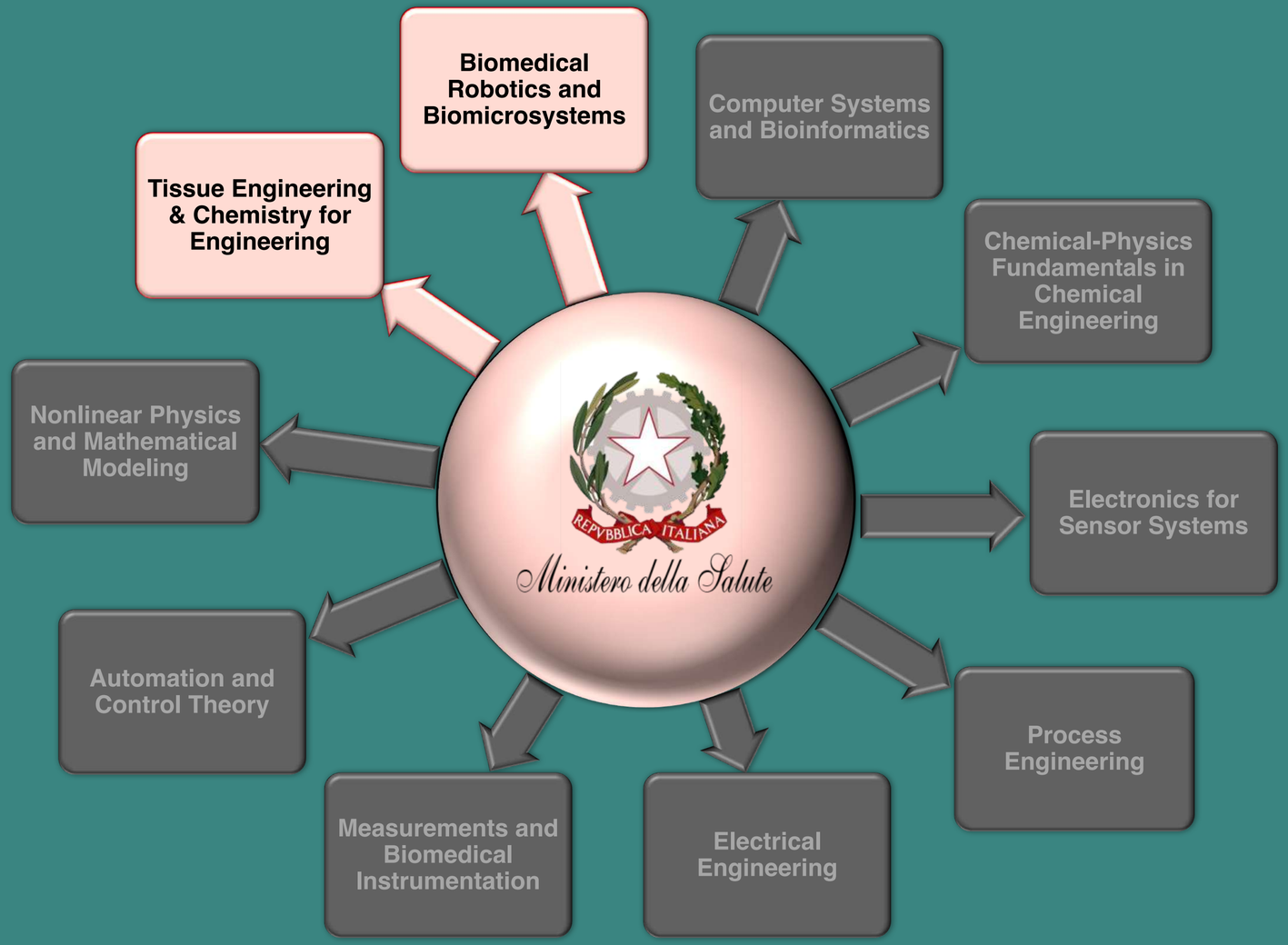
Ricerca finalizzata



UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

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Ricerca finalizzata

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

GR Ordinary 2009

Neurocontrolled Mechatronic prosthesis (NEMESIS)

GR Ordinary 2010

Towards intervertebral disc regeneration: mesenchymal stem/stromal cells with a novel bioactive hydrogel based approach

Biomedical Robotics and Biomicrosystems

Tissue Engineering & Chemistry for Engineering

GR Ordinary 2011-2012

Daily at-home follow-up of Parkinson's disease patients motor performance through robotic and portable devices

RF Ordinary 2011-2012

Cell-on-Chip technology as a novel tool to investigate the crosstalk between cancer and immune cell: role of the transcription factors Interferon Regulatory Factor 1 and 8 (IRF1, IRF8) in melanoma as a model system

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GRANTS FROM COMPETITIVE CALLS

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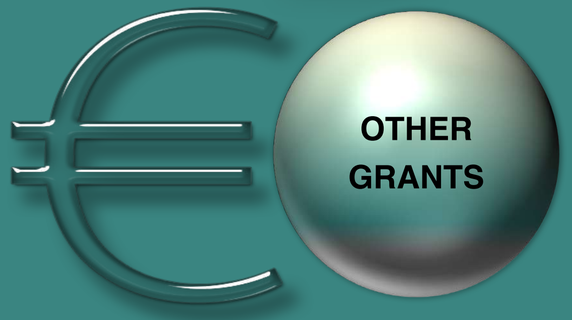

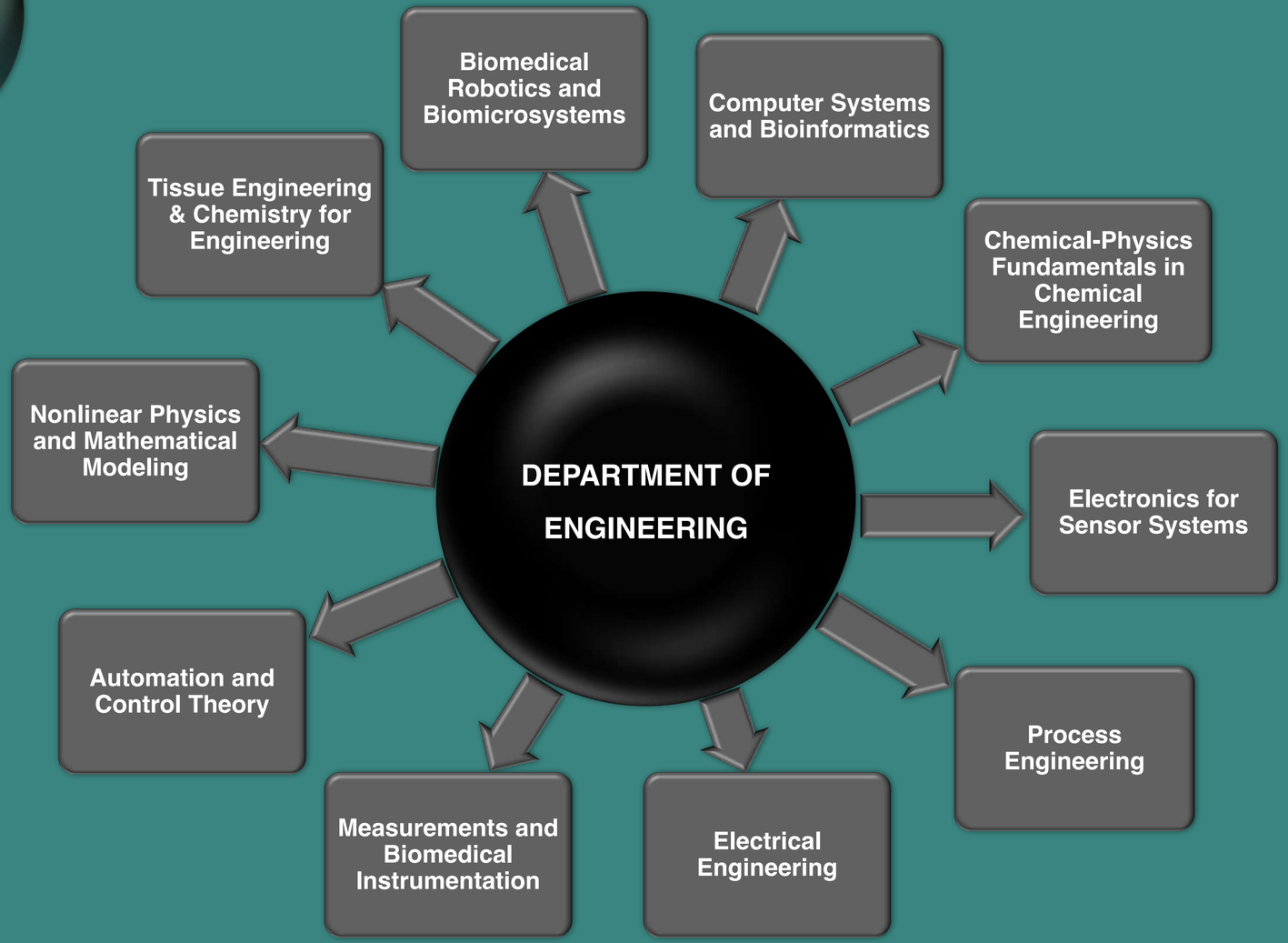

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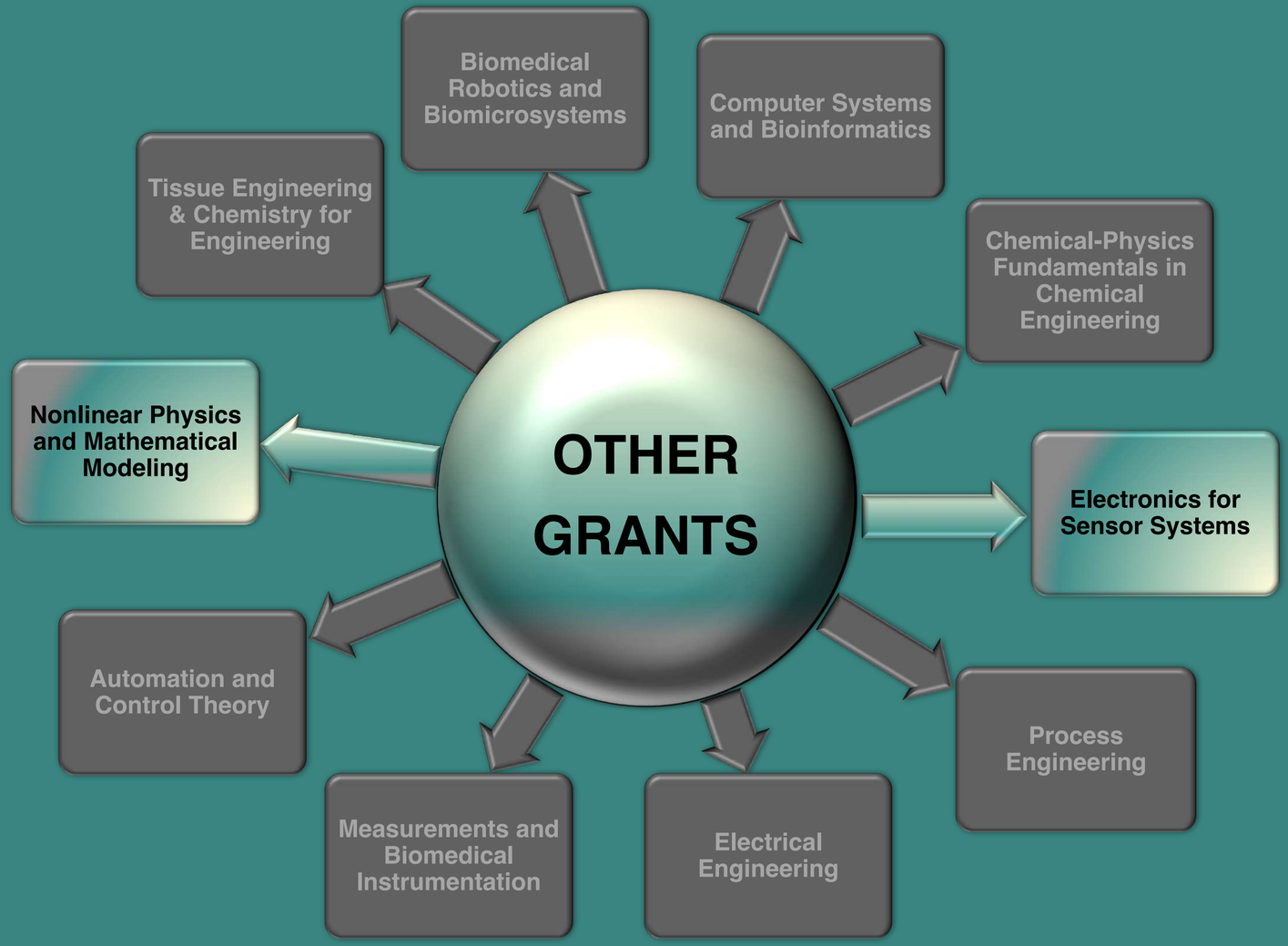

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An Electronic and Optical Investigation of Highly Ordered Switchable Molecular Layers for Optical Memories and Storage Devices (HiOrSMoL)

A full atomistic computational study of the ion permeation in the human alpha7 nicotinic receptor. Acronym (IONLGIC)

CINECA SCAI
SuperComputing Applications and Innovation

Hearth Remote monitoring – COR

asi agenzia spaziale italiana

A novel approach to identify COPD phenotypes, forecast clinical course and plan the therapeutic strategy

FONDAZIONE ROMA

Nonlinear Physics and Mathematical Modeling

OTHER GRANTS

Electronics for Sensor Systems

A full atomistic computational study of the active and inactive states of the human α7 nicotinic receptor

ICHEC
Irish Centre for High-End Computing

KOSMOMED - Telemedicine satellite services for Healthcare professional network

esa

Interdisciplinary Complex Systems

DCRANet

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IMPACT OF RESEARCH ON SOCIETY

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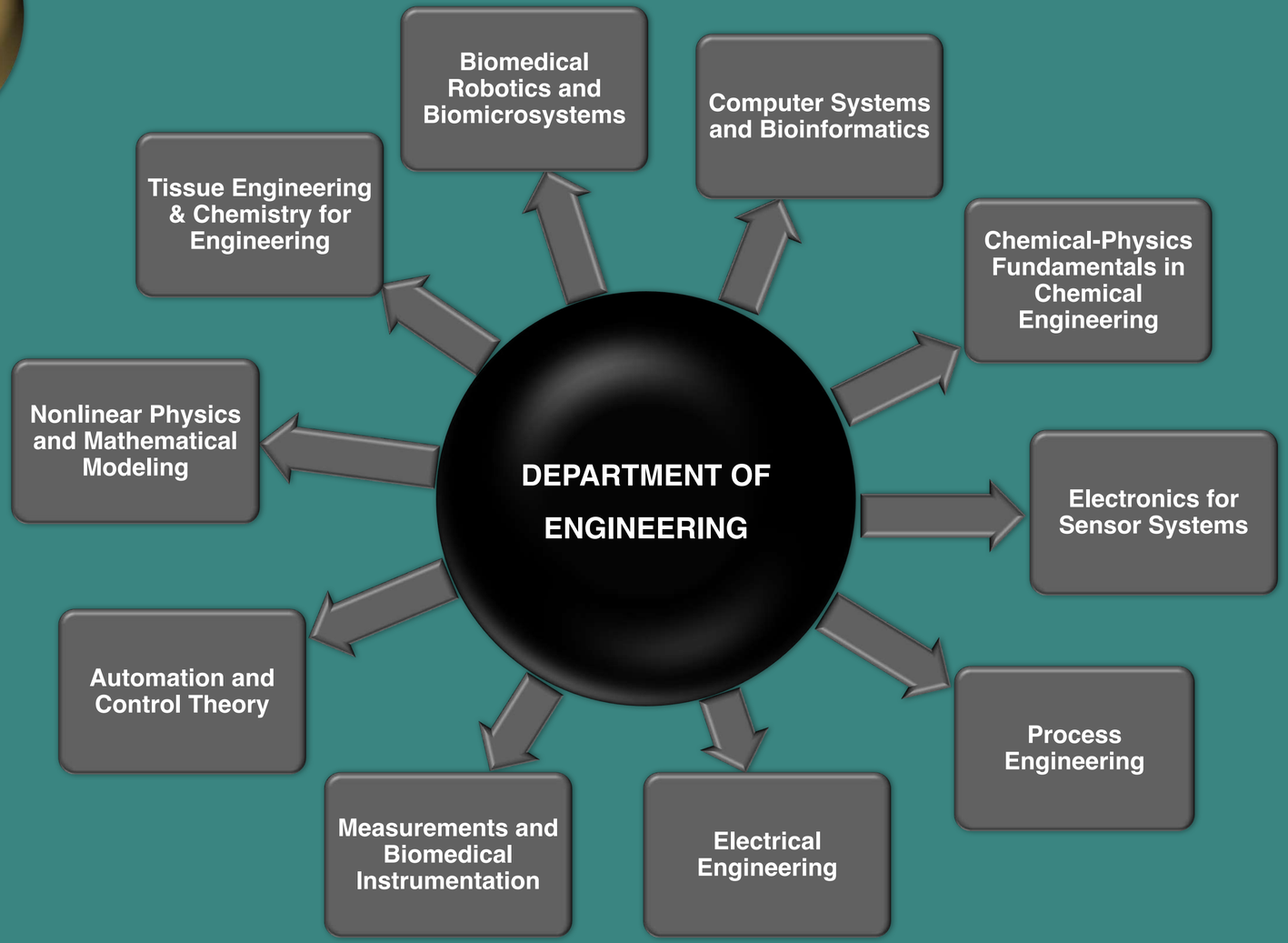
COMMISSIONED RESEARCH



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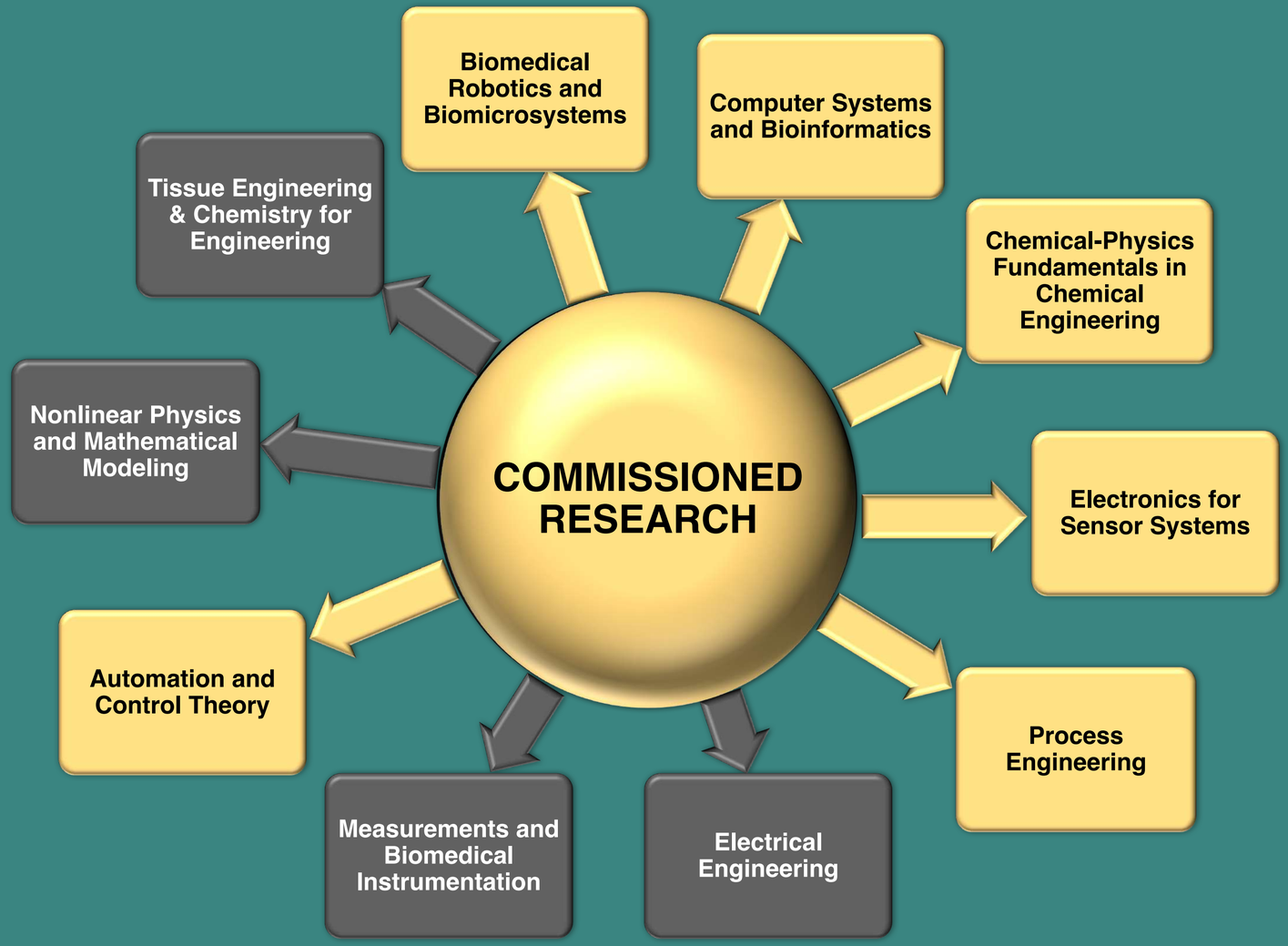
IMPACT OF RESEARCH ON SOCIETY

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA



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IMPACT OF RESEARCH ON SOCIETY

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

Posteitaliane

BNL Gruppo BNP PARIBAS

UPGRADING SERVICES S.p.A. GLOBAL SERVICE & ENERGY MANAGEMENT

progesoftware

INAIL Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro

ARTSANA

LIA Laboratori Informatica Applicata

COMMISSIONED RESEARCH

- Automation and Control Theory
- Chemical-Physics Fundamentals in Chemical Engineering
- Biomedical Robotics and Biomicrosystems
- Electronics for Sensor Systems
- Computer Systems and Bioinformatics
- Process Engineering

PURETECH Tecnologia e Qualità in ogni goccia d'acqua

AUTENTICA

Serintel

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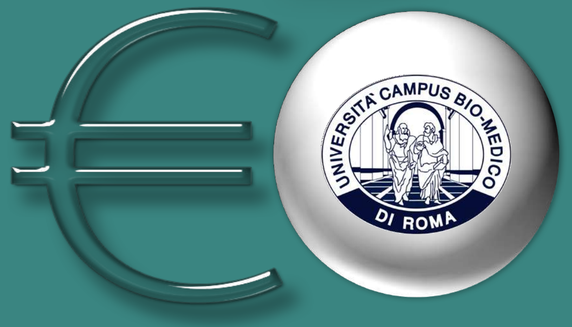
STRATEGIC UNIVERSITY PROJECTS



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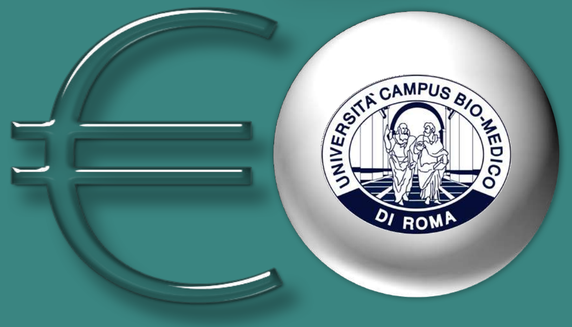
STRATEGIC UNIVERSITY PROJECTS



A competitive call has been launched in 2014 with the aims of enhancing the capabilities of UCBM Research Units to oversee and participate in the HORIZON 2020 European research programme, promoting synergy and collaboration between the Engineering and Medicine and Surgery Departments as well as promoting young researchers.

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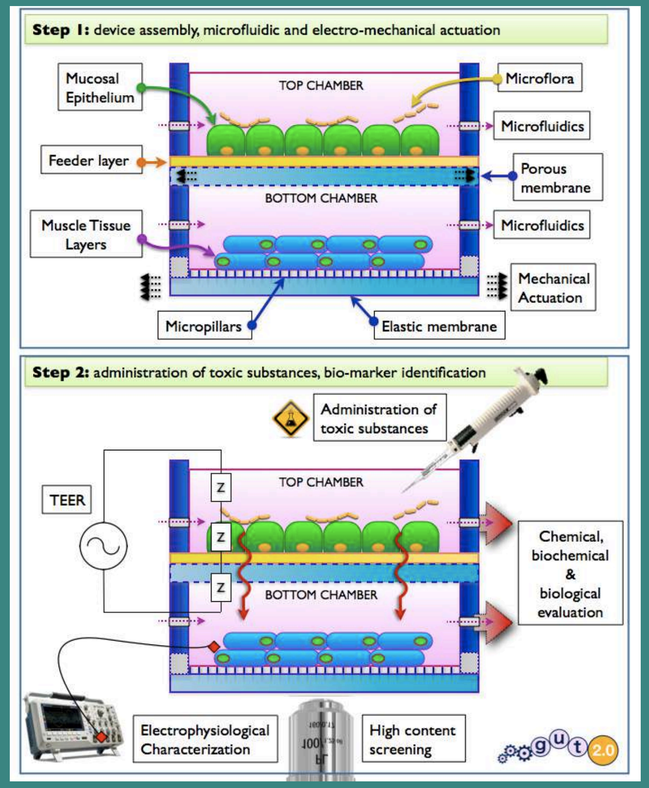

gut 2.0

A multi-cellular 'gut-on-chip' technology for predictive human safety testing: an integrated experimental and modeling approach.

PI: Dr. Alberto Rainer, Research Unit of Tissue Engineering and Chemistry for Engineering

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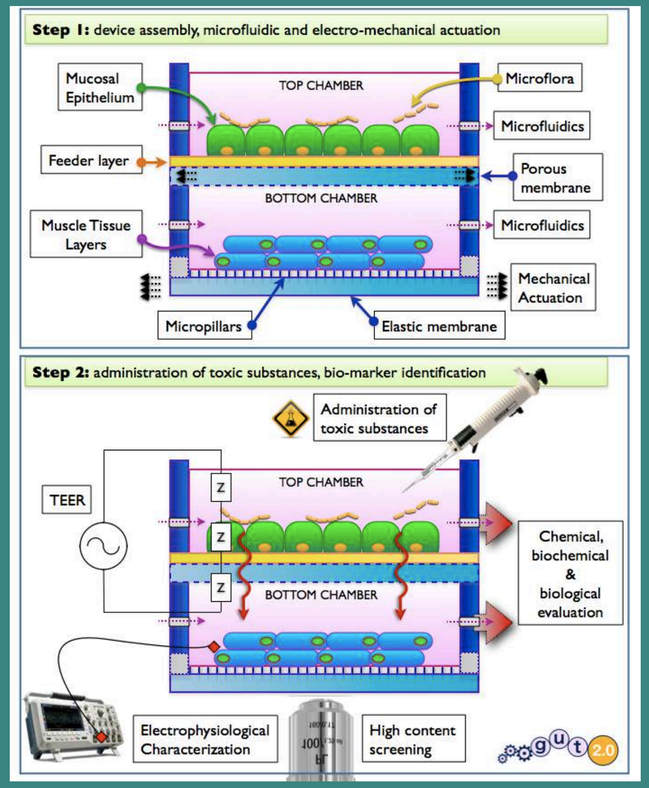

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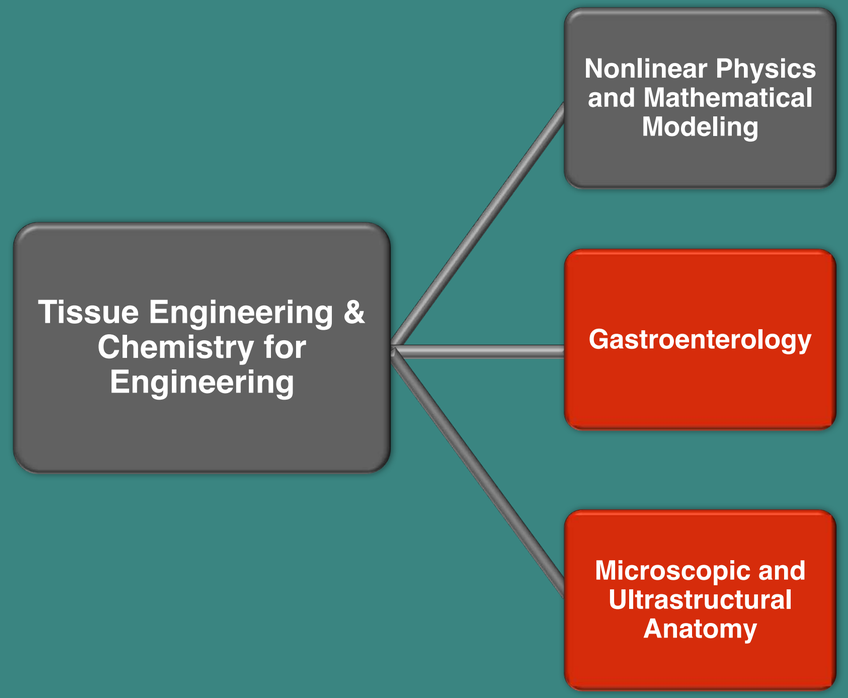

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DEPARTMENT OF ENGINEERING

SCIENTIFIC PUBLICATIONS

UNIVERSITÀ CAMPUS BIO-MEDICO DI ROMA

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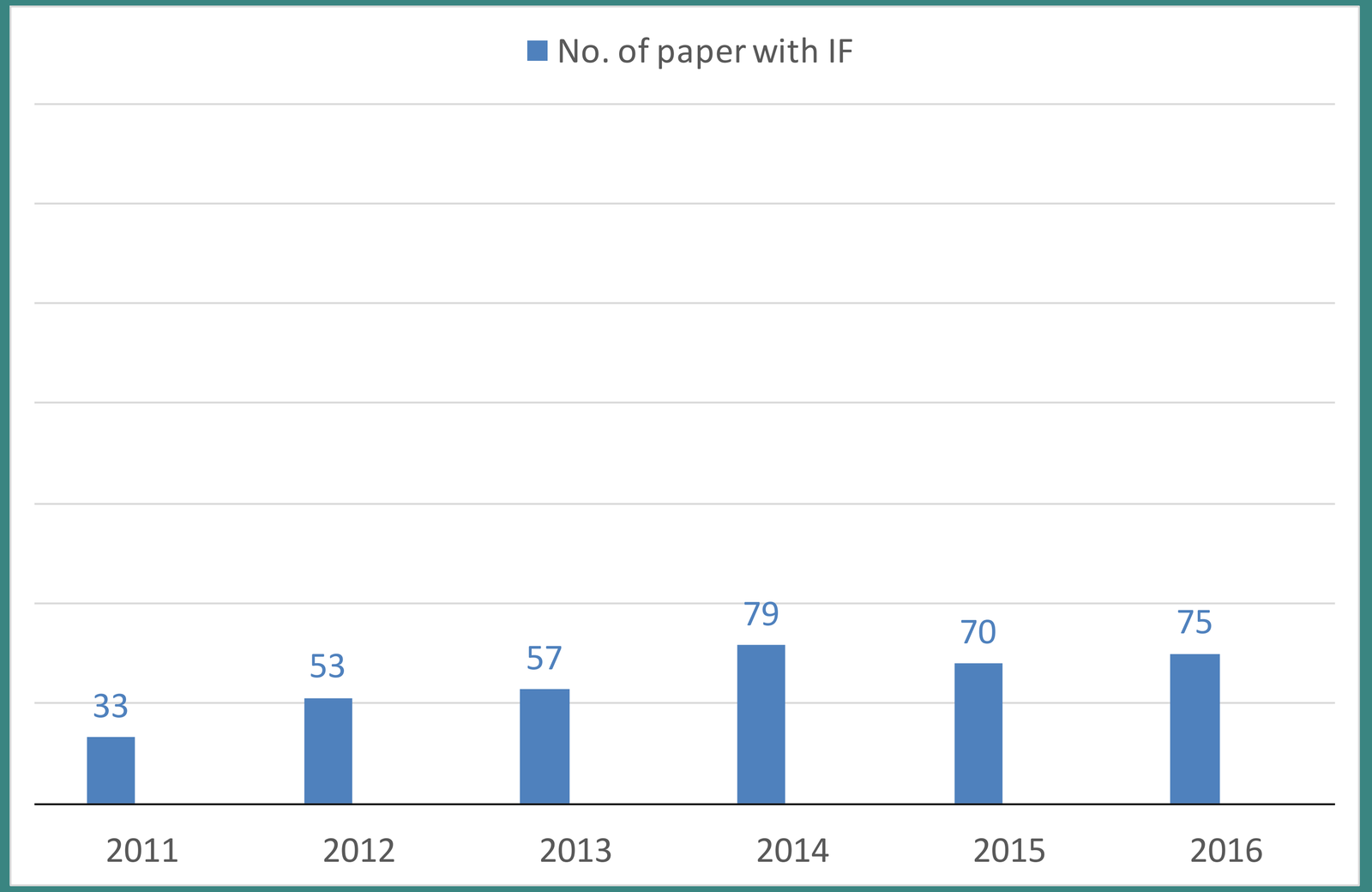

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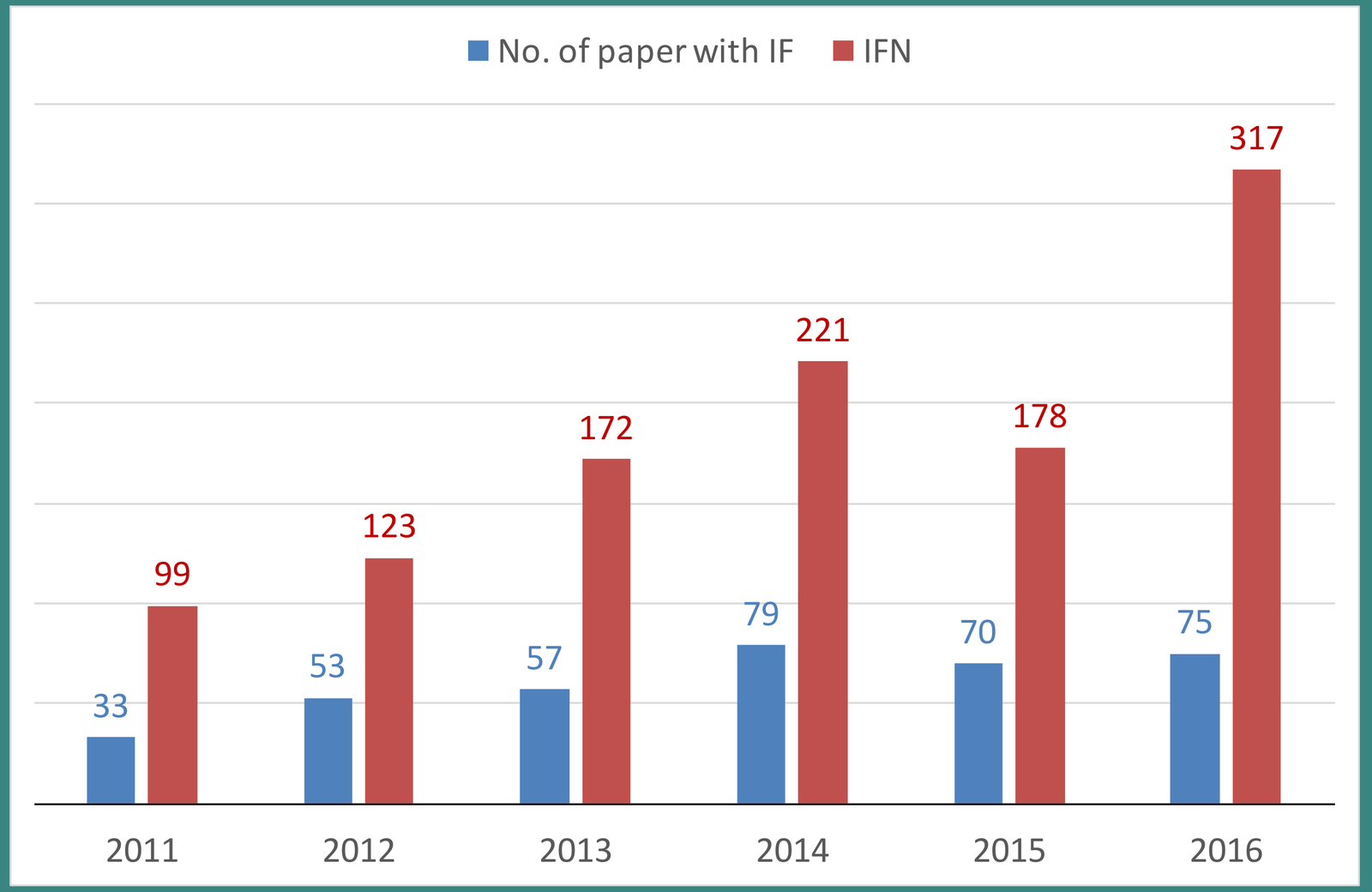

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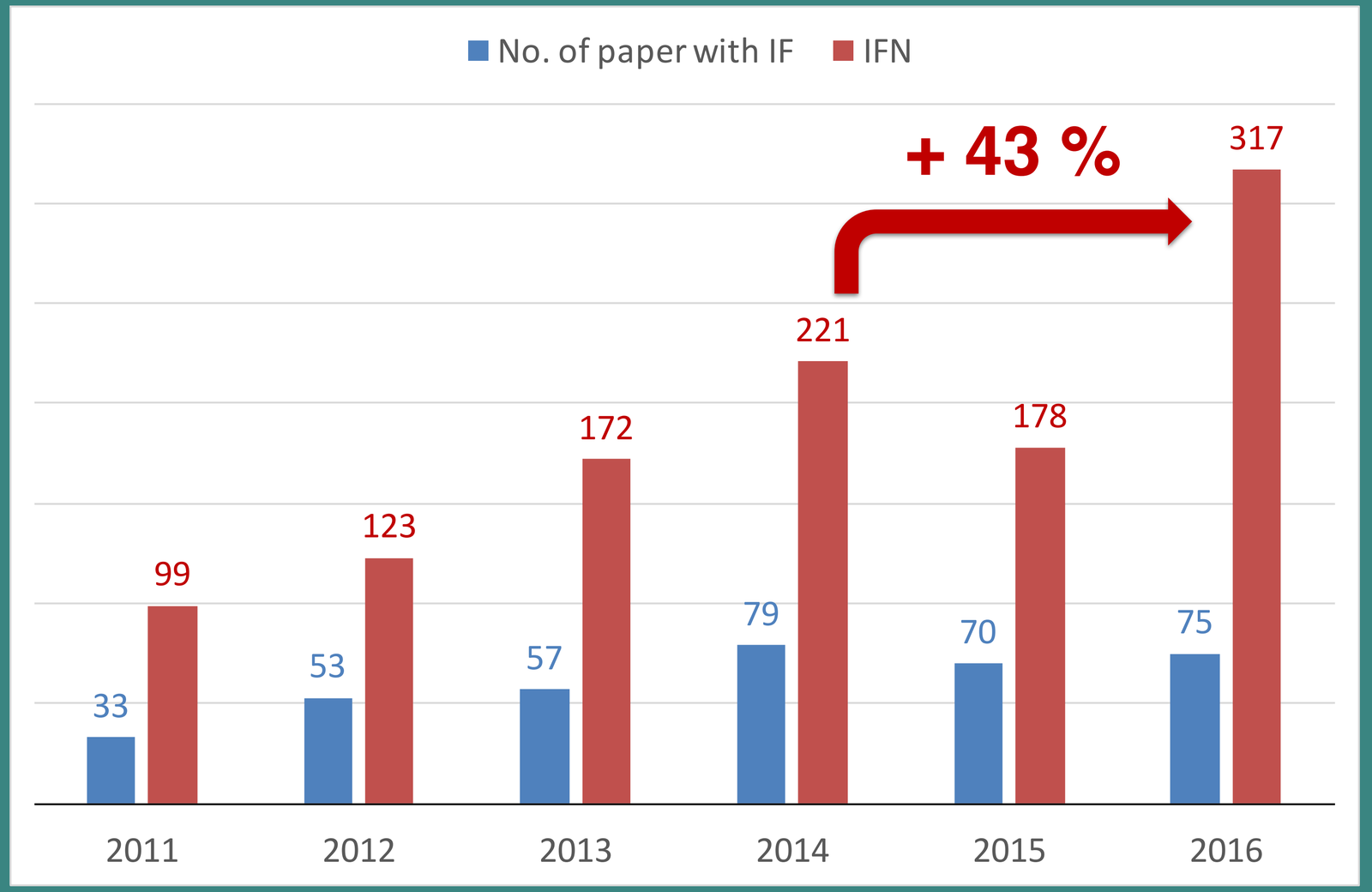

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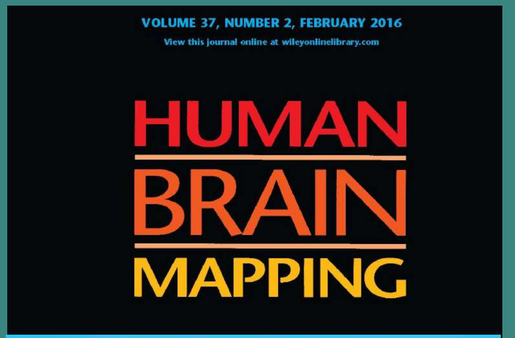

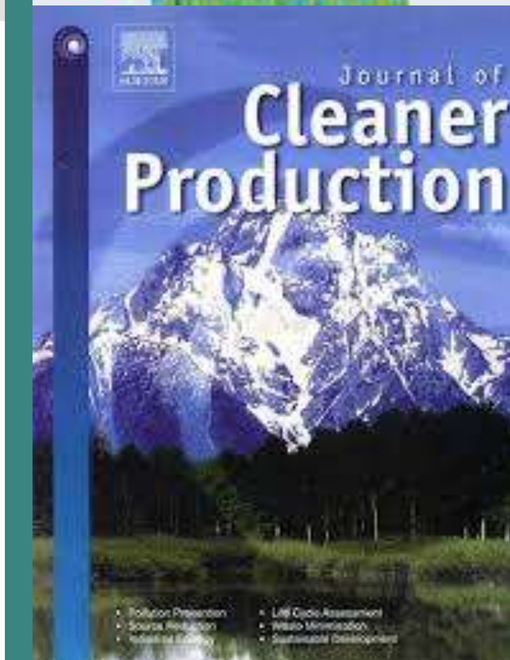

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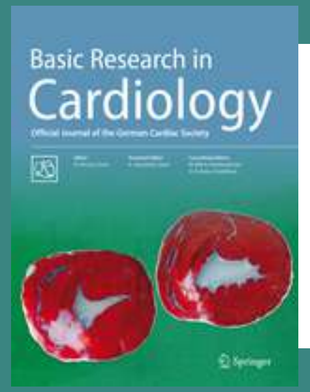
Computer Systems and Bioinformatics

TeraFly: real-time three-dimensional visualization and annotation of terabytes of multidimensional volumetric images

Alessandro Bria[1–3], Giulio Iannello[1], Leonardo Onofri[1] & Hanchuan Peng[3]

Tissue Engineering & Chemistry for Engineering



Basic Res Cardiol (2016)111:16
DOI 10.1007/s00395-016-0534-9

CrossMark

REVIEW

Cells and extracellular matrix interplay in cardiac valve disease: because age matters

Cristiano Spadaccio[1] · Pamela Mozetic[2] · Francesco Nappi[3] · Antonio Nenna[4] · Fraser Sutherland[1] · Marcella Trombetta[2] · Massimo Chello[4] · Alberto Rainer[2]

Process Engineering

Dimethyl ether production from CO_2 rich feedstocks in a one-step process: Thermodynamic evaluation and reactor simulation

Marcello De Falco [a,*], Mauro Capocelli [a], Gabriele Centi [b]

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