INTER-IoT
3rd Edition

Integrator & Manager of Internet of Things Systems

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UNIVERSITÀ DELLA CALABRIA
DIPARTIMENTO DI INGEGNERIA INFORMATICA, MODELLISTICA, ELETTRONICA E SISTEMISTICA
DIMES

ICAR — Istituto di Calcolo e Reti ad Alte Prestazioni

The goal of our 2nd level Master is the professional training of a new ICT expert: the integrator and manager of systems based on Internet of Things (IoT) technology. The new professional will have high technical skills as well as business competences in the ICT area, being responsible of the technical management (including analysis, design, implementation and maintenance) of complex IoT systems and their integration. Such new professional is emerging both at National and International levels due to the pervasive and fast diffusion of the IoT technology in the context of strategic application domains such as e-Health, Smart City, Automotive, Logistics, Smart Home and Buildings, wearables and in all those sectors and subsectors that will be enabled by IoT technologies. The specific skills of such trained professionals will allow them to be easily inserted in large enterprises, small-medium enterprises, utility companies, city councils, and research institutions that are involved (or will be involved in the near future) in the development and/or management of IoT Systems, as it is evident from the state of the art and current trends in the ICT sector.

Information

Course delivery	*On-line - Taught in English*
Duration	12 months
Start date	February 2021
End date	January 2022
N. students	[n. max 20 – n. min 12]
N. non-examination students	[max n. 3]
Frontal lessons (lessons, exercises, use cases, etc)	[n. hours 220 (n. Credits 30)]
Asynchronous Learning	[n. hours 100 (n. Credits 10)]
Training on the job (TOJ)	[n. hours 300 (n. Credits 12)]
Final Report	[n. hours 180 (n. Credits 8)]
Total amount of hours	n. hours 1500 (n. Credits 60) including individual study
Tuition fee	2000 euros

Call: https://unical.portaleamministrazionetrasparente.it/archivio22_bandi-di-concorso_0_6353_874_1.html
Applications: https://unical.esse3.cineca.it/

Teaching modules

Module 1: IoT Systems Development: Programing, Engineering Methods and Big Data Analytics:
    1.1 IoT Systems Programming – Software level (resp. Prof. Fortino)
    1.2 IoT Systems Implementation – Hardware level (resp. Prof. Corsonello)
    1.3 Big data analytics for IoT systems (resp. Prof. Flesca)
    1.4 Techniques and Tools for the Development of IoT Applications (resp. Prof. Spezzano)

Module 2: Methodologies for IoT Systems Management: Security, Integration Methods, Business Process Management and Models:
    2.1 Security of IoT Communications (resp. Prof. Aloi)
    2.2 Integration and Interoperability of IoT Systems (resp. Prof. Gravina)
    2.3 Business Process Management and IoT (resp. Prof. Guzzo)
    2.4 Business Models for IoT (resp. Dr. Scarpelli)

Module 3: Training on-the-job:
    Development of a project in a partner organization.

Organizing Commitee

Giancarlo Fortino - *Director of the Master*
    Prof. of Computer Engineering, UNICAL
Pasquale Corsonello
    Prof. of Electronics Engineering, UNICAL
Sergio Flesca
    Prof. of Computer Engineering, UNICAL
Gianluca Aloi
    Prof. of Telecommunications Engineering, UNICAL
Giandomenico Spezzano
    Research Director, ICAR-CNR

Scientific and Technical Commitee

Prof. Giancarlo Fortino, DIMES - UNICAL
Prof. Sergio Flesca, DIMES - UNICAL
Prof. Pasquale Corsonello, DIMES - UNICAL
Prof. Gianluca Aloi, DIMES - UNICAL
Prof. Giandomenico Spezzano, ICAR-CNR
Prof. Natale Arcuri, DIMEG - UNICAL
Dr. Giorgio Scarpelli, NTT Data S.p.A.
Ing. Vincenzo D'Agostino, Omnia Energia S.p.A.
Dr. Michele De Buono, SCAI Lab
Prof. Valeria Fionda, DEMACS – UNICAL
Prof. Mario Cannataro, University Magna Grecia (CZ)
Prof. Antonio Liotta, University of Bozen
Prof. Carlos Palau, Universitat Politecnica de Valencia (Spain)
Prof. Noel Crespi, Institut Mines-Telecom (France)
Prof. Wenfeng Li, Wuhan University of Technology (China)
Prof. Mengchu Zhou, New Jersey Institute of Technology (USA)
Prof. Marcello La Rosa, Univ. of Melbourne (Australia)

Administrative headquarters

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Class Location

On-line via MS Teams and Distretto DOMUS - Univ. of Calabria, Centro Residenziale Chiodo 2 - Rende (CS)

Professional outlets

The 2nd level Master allows to acquire conceptual tools and technical/scientific skills suitable to satisfy the needs of several professional figures such as:

- Professionals able to define and manage the main organization processes, policies and models in the IoT context inside an organization.
- Professionals able to develop innovative IoT systems in various application domains.
- Professionals able to integrate even heterogeneous IoT systems in various application domains.
- Professionals able to develop and manage business models for IoT systems.

The expert of integration and management of IoT systems finds employment in enterprises, research institutions, public companies, and in all those organizations that directly or indirectly focus on the development, integration, and management of IoT systems.

Enrollment requirements

Candidates should have one of the following MSc-level (1st level Master) degrees:
1. *Laurea magistrale ex D.M. 270/04 or specialistica ex D.M. 509/99* in the class of Information Engineering or in the class of Information Science and Tecnologies.
2. *Laurea magistrale ex D.M. 270/04 or specialistica ex D.M. 509/99* in one of the following areas: Engineering, Mathematics, Physics, Science, and Statistics.
3. *Laurea vecchio ordinamento (antecedente D.M. 509/99)* or Master of Science degree at foreign universities of a duration of at least 4 years, equivalent to one of the degrees at points 1 or 2.

Sponsor Institutions and Companies

Institutions

- ICAR-CNR
- Distretto DOMUS
- Ordine degli Ingegneri della Provincia di Cosenza
- Polo Smart Manufacturing
- ASI UNICAL
- IEEE SMC Society (Italy Chapter)

International Universities

- Universitat Politecnica de Valencia (Spagna)
- Wuhan University of Technology (Cina)
- New Jersey Institute of Technology (USA)
- Institut Mines-Telecom (Francia)
- University of Melbourne (Australia)

Companies

- NTT Data S.p.a.
- SCAI Lab
- Omnia Energia S.p.a.
- Talent Garden Cosenza
- Sensyscal S.r.l.
- E Way Enterprise Business Solutions S.r.l.
- Webgenesys S.r.l.
- ITHEA S.r.l.
- Fairs Wind Digital S.r.l.
- Easyanalysis S.r.l.
- IFM S.r.l.
- Artaud S.r.l.

IEEE SMC Systems, Man, and Cybernetics Society — Italy Chapter

About us

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