Auditorium of the Vèrtex Building
UPC North Campus
Friday 8 November 2019

Welcome ceremony for PhD students by the UPC Doctoral School 2019-2020 academic year

UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Doctoral School

Announcement of the winners of the 2019 Special Doctoral Awards

Field: Architecture, Urbanism and Construction

Álvaro Clúa Uceda, doctoral thesis entitled *La condición intersticial en los proyectos de articulación urbana: del Slussen al Estocolmo de Tage William-Olsson en cuatro tiempos*. **Doctoral programme *Urbanism***, PhD supervisor Prof. Josep Parcerisa Bundo.

Álvaro Rodrigo Cuéllar Jaramillo, doctoral thesis entitled *El bosque habitable. La experiencia de construir ciudad paisaje en Finlandia*. **Doctoral programme *Urbanism***, PhD supervisor Prof. Joaquim Sabaté Bel.

María Carmen Rodríguez Pedret, doctoral thesis entitled *El vademécum de la ciudad. París y Barcelona en las guías y descripciones urbanas. 1750 - 1920*. **Doctoral programme *Theory and History of Architecture***, PhD supervisor Prof. Marta Llorente Diaz.

David Steegmann Mangrané, doctoral thesis entitled *Ciudad Casa Comida. Una aproximación poliédrica a los límites entre lo público y lo privado*. **Doctoral programme *Architectural Design***, PhD supervisor Prof. Francisco Javier Monteys Roig.

Field: Civil Engineering

Elisabet Alacid Fernandez, doctoral thesis entitled H*ost-parasite interactions: The Parvilucifera sinerae model in marine microalgae*. **Doctoral programme *Marine Sciences***, PhD supervisor Prof. Esther Garcés i Pieres.

Albert Carles Brangarí, doctoral thesis entitled *Microbial and geochemical dynamics in soils and their impact on the hydraulic properties: From laboratory experiments to model development*. **Doctoral programme *Earthquake Engineering and Structural Dynamics***, PhD supervisors Prof. Daniel Fernández García and Prof. Xavier Sánchez Vila.

Claudia Rivetti, doctoral thesis entitled *The use of integrative approaches to characterize new mechanisms of toxicity of pollutants in the aquatic environment*. **Doctoral programme *Marine Sciences***, PhD supervisor Prof. Carlos Barata Martí.

Laura Scheiber Pagès, doctoral thesis entitled *Support tools for groundwater management in the proximity of a mine site*. **Doctoral programme *Geotechnical Engineering***, PhD supervisors Prof. Carlos Ayora Ibañez and Prof. Enric Vázquez Suñé.

Alessandro Solimeno, doctoral thesis entitled *Numerical Modelling of Microalgae Systems for Wastewater Treatment*. **Doctoral programme *Environmental Engineering***, PhD supervisor Prof. Joan García Serrano.

Field: ICT Engineering

Miguel Calvo Fullana, doctoral thesis entitled *Estimation and Control in Energy Harvesting Wireless Communication Networks*. **Doctoral programme *Signal Theory and Communications***, PhD supervisors Prof. Carles Antón Haro and Prof. Javier Matamoros Morcillo.

Sergio Gorreta Mariné, doctoral thesis entitled *Dielectric charge control in contactless capacitive MEMS*. **Doctoral programme *Electronic Engineering***, PhD supervisors Prof. Manuel M. Domínguez Pumar and Prof. Joan Pons Nin.

Pol Henarejos Hernández, doctoral thesis entitled *Polarization and Index Modulations: a Theoretical and Practical Perspective*. **Doctoral programme *Signal Theory and Communications***, PhD supervisor Prof. Ana Isabel Pérez Neira.

Sandra Lagén Morancho, doctoral thesis entitled *Coordination Strategies for Interference Management in MIMO Dense Cellular Networks*. **Doctoral programme *Signal Theory and Communications***, PhD supervisors Prof. Adrian Agustin de Dios and Prof. Josep Vidal Manzano.

Prodromos Vasileios Mekikis, doctoral thesis entitled *Design and Stochastic Analysis of Emerging Large-Scale Wireless-Powered Sensor Networks*. **Doctoral programme *Signal Theory and Communications***, PhD supervisors Prof. Lluis Alonso Zarate and Prof. Christos Verikoukis.

Ricard Picas Prat, doctoral thesis entitled *Control and Modulation of Modular Multilevel Converters*. **Doctoral programme *Electronic Engineering***, PhD supervisors Prof. Josep Pou Felix and Prof. Jordi Zaragoza Bertomeu.

Field: Industrial Engineering

Victòria Beltran Sanchidrian, doctoral thesis entitled *Vibrational spectroscopies study of Pinus resin in materials from cultural heritage objects*. **Doctoral programme *Polymers and Biopolymers***, PhD supervisors Prof. Salvador Buti Papio and Prof. Nativitat Salvadó Cabré.

Francesca Capelli, doctoral thesis entitled *Development of high-capacity substation connectors compatible with HTLS technology*. **Doctoral programme *Electrical Engineering***, PhD supervisor Prof. Jordi Riba Ruiz.

Anna Díez Escudero, doctoral thesis entitled *Tuning the biological performance of calcium phosphates through microstructural and chemical modifications*. **Doctoral programme *Materials Science and Engineering***, PhD supervisors Prof. Montserrat Español Pons and Prof. Maria Pau Ginebra Molins.

Edmundo Guerra Paradas, doctoral thesis entitled *Monocular SLAM: Data association and sensing through a human-assisted uncalibrated visual system*. **Doctoral programme *Automatic Control, Robotics and Vision***, PhD supervisors Prof. Antoni Grau Saldes and Prof. Rodrigo Francisco Munguía Alcalá.

Elyas Rakhshani, doctoral thesis entitled *Analysis and Control of Multi-area HVDC Interconnected Power Systems by using Virtual Inertia*. **Doctoral programme *Electrical Engineering***, PhD supervisors Prof. Álvaro Luna Alloza and Prof. Pedro Rodríguez Cortés.

Mònica Reig i Amat, doctoral thesis entitled *Integration of electrically driven membrane separation processes for water treatment and resources recovery*. **Doctoral programme *Chemical Process Engineering***, PhD supervisors Prof. Jose Luis Cortina Pallas and Prof. Oriol Gibert Agulló.

David Valentin Ruiz, doctoral thesis entitled *Influence of the boundary conditions on the dynamic behavior of large hydraulic machines*. **Doctoral programme *Mechanical, Fluids and Aerospace Engineering***, PhD supervisors Prof. Eduard Egusquiza Estevez and Prof. Maria del Camen Valero Ferrando.

Alexander Vallmitjana Lees, doctoral thesis entitled *Multiscale Image Analysis of Calcium Dynamics in Cardiac Myocytes*. **Doctoral programme *Biomedical Engineering***, PhD supervisor Prof. Raúl Benítez Iglesias.

Weiyi Zhang, doctoral thesis entitled *Control of Grid Connected Power Converters with Grid Support Functionalities*. **Doctoral programme *Electric Energy Systems***, PhD supervisor Prof. Pedro Rodríguez Cortés.

Field: Sciences

Francisco Javier Burgos Fernández, doctoral thesis entitled *Gonio-Hyperspectral imaging system based on light-emitting diodes for the analysis of automotive coatings*. **Doctoral programme *Optical Engineering***, PhD supervisors Prof. Jaume Pujol Ramo and Prof. Meritxell Vilaseca Ricart.

Azahara de la Torre Pedraza, doctoral thesis entitled *On the fractional Yamabe problem with isolated singularities and related issues*. **Doctoral programme *Applied Mathematics***, PhD supervisor Prof. María del Mar González Nogueras.

Ariadna Giné Blasco, doctoral thesis entitled *Population dynamics of Meloidogyne spp. on tomato and cucumber and biologically-based management strategies*. **Doctoral programme *Agri-Food Technology and Biotechnology***, PhD supervisors Prof. Cèsar Ornat Longarón and Prof. Francisco Javier Sorribas Royo.

Alejandro Torres Sánchez, doctoral thesis entitled *A Theoretical and Computational Study of the Mechanics of Biomembranes at Multiple Scales*. **Doctoral programme *Applied Mathematics***, PhD supervisor Prof. Marino Arroyo Balaguer.

Achim Woessner, doctoral thesis entitled *Exploring flatland nano-optics with graphene plasmons*. **Doctoral programme *Photonics***, PhD supervisor Prof. Frank Koppens.

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