Internet Interdisciplinary Institute (IN3): 20 years shaping the future Internet

Annual Report
2020

Universitat Oberta
de Catalunya

Internet Interdisciplinary Institute (IN3)

Annual Report
2020

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01

Introduction

What is the IN3?

The **Internet Interdisciplinary Institute (IN3)** is a cutting-edge research centre at the Universitat Oberta de Catalunya (UOC) specializing in the study of the network society. The network society is the result of the increased centrality and the changes—in the conditions for generating and processing information and data—arising from the emergence of the internet and digital technologies (ICT).

The IN3, unlike other research centres, connects different engineering disciplines, particularly IT and telecommunications, with the social sciences, health sciences, life sciences and the arts. As a result, the IN3, currently concentrated in **11 research groups**, is grounded in **multidisciplinarity, transdisciplinarity and interdisciplinarity.**

In the context of the engineering disciplines, the IN3 creates technologies that feed into the network society and impact multiple areas of human activity. And in the context of the social sciences, health sciences, life sciences and the arts, the IN3 identifies and analyses the effects of new technologies on society. Thanks to the mutual feedback of the engineering disciplines, social sciences, health sciences, life sciences and the arts, the IN3 identifies open problems in the network society and the challenges of ICT related to human activity.

The IN3, in order to maintain scientific excellence, hosts an annual meeting of the **Scientific Advisory Board**. This board, made up of ten researchers from diverse research centres and universities in Europe and the United States, serves a dual purpose. First, the board periodically evaluates the IN3's research groups and, second, it advises the IN3 on attracting new talent and suggests areas of improvement for the future.

Mission, Vision and Values of the IN3

Mission

The **IN3's mission**, based on research on the **knowledge society** (network society), puts transversality and interdisciplinarity at the forefront, placing special emphasis on the interaction between Human and Engineering Sciences, and establishes social progress as a major research goal.

Vision

With regard to its **vision**, the IN3 aspires to become a **pioneering reference centre** in terms of the collaboration of the life sciences and the engineering disciplines in order to conduct **frontier research on the network society.** To this end, it focuses its research efforts on **analysis of the effect of ICT and internet development on human activity**, leading **the formulation of technological solutions to address the needs and demands of the network society**, and, in doing so, contributing to **social progress**.

Values

The **IN3's values** are **commitment**, **respect**, **transparency**, **professionalism** and **sustainability.**

20 years of the IN3

In 2020, the IN3 celebrated its **20th anniversary**. Founded in 2000 at the hands of **Gabriel Ferraté** (president of the UOC and the IN3) and **Imma Tubella** (UOC vice president for research and vice president of the IN3), it was the UOC's first research centre.

The IN3's anniversary coincided with two key milestones in recent years, the **25th anniversary of the UOC**, the first totally online university in the world, in 2020, and the **25th anniversary of the publication of the first volume of the trilogy *The Information Age*** by Professor Manuel Castells, in 2021.

Accordingly, on the basis of the concurrence of these anniversaries, the conference **"The Network Society Today: (Revisiting) The Information Age Trilogy"** was held. The conference, which, on account of the COVID-19 pandemic was conducted virtually on the **Decidim** platform last November, gave academics from different disciplines and different universities and research centres the opportunity to retrospectively review the trilogy and analyse the relevance of the pioneering work of Manuel Castells in light of today's information society.

2000

The Internet Interdisciplinary Institute (IN3) was created.

The **Doctoral Programme in Information and Knowledge Society** was launched.

2001

The **First Phase of Project Internet Catalonia** began, led by Manuel Castells and Imma Tubella, analysing the characteristics and explaining the development of the Information Society in Catalonia.

2002

Joan Torrent Sellens defended the UOC-IN3's first doctoral thesis in the Doctoral Programme in Information and Knowledge Society.

2003

Opening of the headquarters of the **IN3 in Castelldefels**, located in the **Parc Mediterrani de la Tecnologia.**

The **Second Phase of Project Internet Catalonia** began.

The IN3 **Scientific Advisory Board** was formed, chaired by Manuel Castells, to assess and guide research at the IN3 and the Information and Knowledge Society Doctoral Programme.

2005

Launch of the **UOC Doctoral Grants** intended for full-time trainee research staff.

The **Master's Degree in Information and Knowledge Society** was created as part of the UOC's postgraduate studies.

2007

Project Internet Catalonia (PIC) was completed and the reports containing the results obtained were published.

2008

Reorganization of the IN3 under the leadership of Manuel Castells, with a new structure and strategic lines.

2009

The **IN3's International Mobility Programme** began in order to welcome visiting teaching and research staff.

The **Knowledge Communities programme** was created with the aim of promoting collaboration between the IN3's research groups and other institutions.

Creation of **HAROSA**, the first of the **"Knowledge Communities"**, led by the DPCS-ICSO group.

2010

The **IN3's Working Paper Series** was launched a pioneering initiative for open access to scholarly production from the scientific community.

2012

Manuel Castells was awarded the **Holberg Prize,** *the Nobel of Social Sciences, Art, Theology, Humanities and Law.*

2013

Manuel Castells was awarded the **Prize of the International Balzan Foundation** which honours scientists from all over the world for their contribution to the fields of the sciences and the arts.

2014

The IN3 joined the **Global Network of Internet and Society Research Centres**.

The first patent of the IN3 and of the UOC was presented by researchers who now form the WiNe research group.

2015

Incorporation of the First ICREA Research Professor at the IN3. Jordi Cabot, principal investigator in the **SOM Research Lab** group, was appointed by the Catalan Institution for Research and Advanced Studies as senior ICREA research professor.

2016

New reorganization of the IN3 under the leadership of David Megías, giving rise to 10 of the 11 current research groups: CareNet, CNSC, CoSIN3, DIMMONS, GenTIC, ICSO, KISON, SOM Research Lab, TURBA LAB and WiNe.

2017

The UOC (through the CNSC research group) and Barcelona City Council created the **Decidim** Project, a participatory platform to build a more open and collaborative society.

All of the IN3's groups obtained or renewed their SGR recognition, granted by the **Government of Catalonia's Agency for Management of University and Research Grants**.

2018

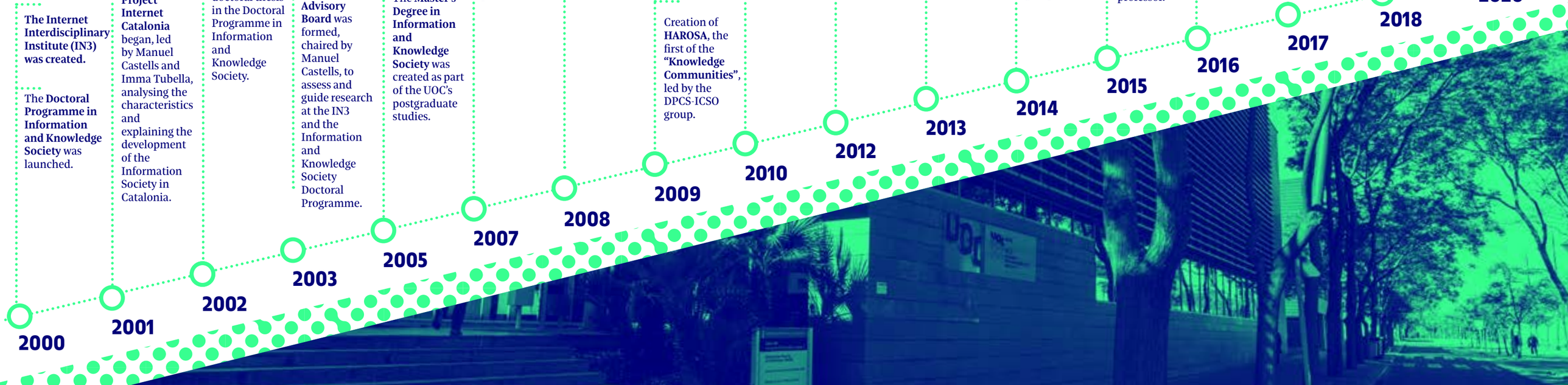
Barcelona hosted the **Sharing Cities Summit**, the biggest encounter of cities focusing on the collaborative economy, organized by the DIMMONS group and Barcelona City Council.

Incorporation of the **first ERC Starting Grant researcher at the IN3. Diana Roig-Sanz**, principal investigator of the GlobaLS group, received a grant from the European Research Council (ERC) and her group joined the IN3.

2020

20th anniversary of the IN3!

The researcher **Diana Roig-Sanz** obtained recognition as a research professor in the **ICREA Senior** call.

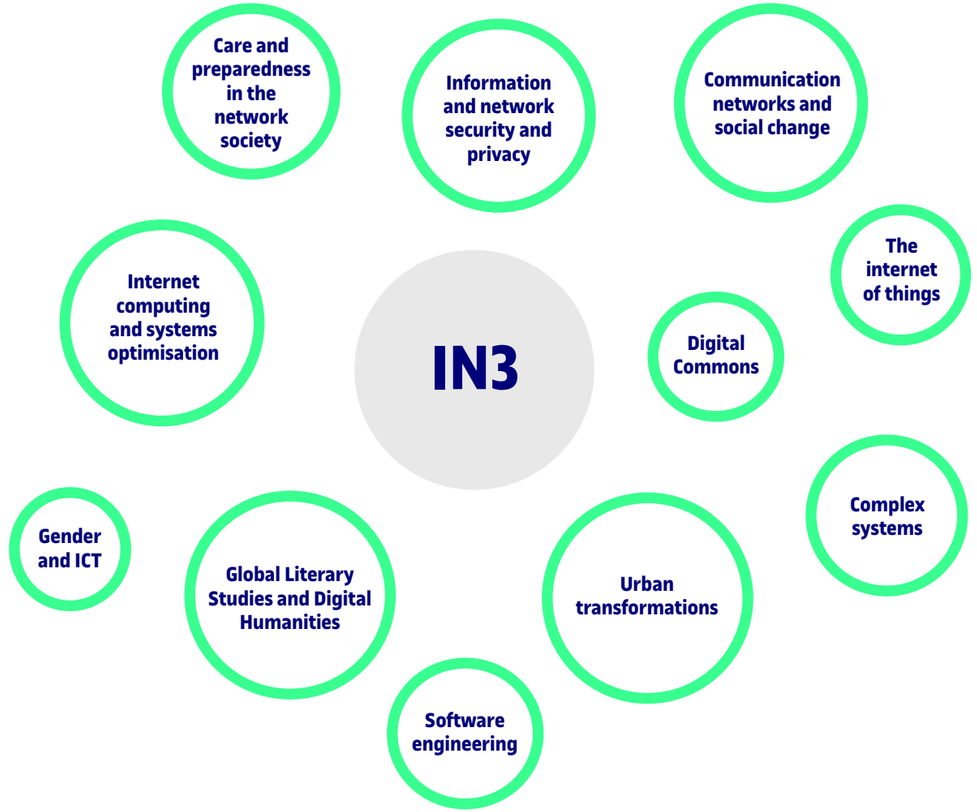


02

Organization

Knowledge and research areas

The knowledge areas of the IN3 correspond to the research areas of each of the 11 groups that comprise the IN3.



Who are we?

Executive Board

The executive board is an advisory and executive body that sets guidelines and action strategies with respect to research and innovation.

Marta Aymerich Martínez
Vice President for Strategic Planning and Research

David Megías Jímenez
Director

Mónica de Forn Riera
Deputy General Manager of Research

Organization

Who are we?

Administrative Staff

The administrative staff is a working group that provides support to both the centre's management and the research staff in the various research groups in the management of work spaces, the communication of activities and the welcoming of new staff, among other duties.

Isabel Carol Ciurana
Management and Administrative Support Specialist

Holder of a llicenciatura in Humanities from Pompeu Fabra University. She has been a Management and Administrative Support Specialist at the IN3 since 2005 and a Support Specialist at the UOC Doctoral School since 2015.

Montserrat Mir Buxalleu
Management and Administrative Support Specialist

Holder of a llicenciatura in English Philology from the University of Barcelona and completion of a postgraduate course in Software Localization from the University of Limerick. She has been a Management and Administrative Support Specialist at the IN3 since 2010.

Raissa Alvear Contreras
Management and Administrative Support Specialist

Holder of a llicenciatura in Psychology and Master's Degree in Mental Health and Research in Neurotoxicology from Universitat Rovira i Virgili. She has been a Management and Administrative Support Specialist at the IN3 since 2020.

Who are we?

Technical Staff

The technical staff is a working group that provides support to the various IN3 research groups in the design of software solutions and the analysis of statistical data.

Alexandre Dotor Casals
Specialist

Holder of a llicenciatura in Computer Engineering from the Universitat Politècnica de Catalunya. Research assistant in the KISON (K-riptography and Information Security for Open Networks) research group for three years. He has been a Software Engineering Specialist at the IN3 since 2015.

Claudia Malpica Lander
Specialist

Holder of a llicenciatura in Sociology from the Central University of Venezuela and a Doctorate in Statistics from the University of Salamanca. Adjunct Professor at the University of Barcelona and Quantitative Research and Data Analysis Tools Specialist at the IN3 since 2015.

Who are we?

Communication Staff

The communication staff is responsible for coordinating the communication of the IN3 and its research groups through different information channels.

Goretti Brunet Gonzalez
Communication Specialist

Holder of a llicenciatura in Journalism from the Universitat Autònoma de Barcelona and a llicenciatura in Political Science and Government from Pompeu Fabra University. Completion of postgraduate Community Manager and Social Media courses from the University of Barcelona. She has been a Communication Specialist in the UOC Research and Media Communication Department since 2019. She coordinates the communication of the IN3 and the Doctoral School of the UOC.

Who are we?

Research Groups

The IN3 is currently composed of **11 research groups.**

Care and Preparedness in the Network Society (CareNet)

Group Leader: **Dr. Israel Rodríguez Giralt** *(Full Research Professor)*
Research area: **Social Sciences**

Communication Networks & Social Change (CNSC)

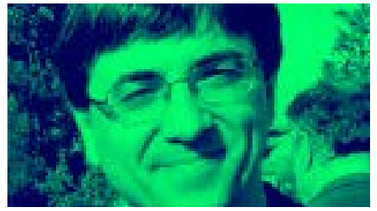
Group Leader: **Dra. Mireia Fernández-Ardèvol** *(Senior Researcher)*
Research area: **Communication, digital sociology, datified societies, technopolitics and human-computer interaction**

Complex Systems @ IN3 (CoSIN3)

Group Leader: **Dr. Javier Borge Holthoefer** *(Senior Researcher)*
Research area: **Multidisciplinary applications and complex systems theory (urban science, computational social science, big data analysis)**

Digital Commons (DIMMONS)

Group Leader: **Dra. Mayo Fuster** *(Senior Researcher)*
Research area: **Multidisciplinary (political science, social anthropology, economics, informatics and arts)**



Internet Computing & Systems Optimization (ICSO)

Group Leader: **Dr. Ángel A. Juan** *(Full Professor)*
Research area: **Computer engineering**

K-ryptography and Information Security for Open Networks (KISON)

Group Leader: **Dr. David Megías** *(Full Professor and Director del IN3)*
Research area: **Computer science and artificial intelligence, telecommunications engineering**

Gender and ICT (GenTIC)

Group Leader: **Dra. Milagros Sáinz** *(Senior Researcher)*
Research area: **Multidisciplinary (psychology, sociology, economics, geography and anthropology)**

Who are we?

Research Groups

The IN3 is currently composed of **11 research groups.**

Global Literary Studies (GlobaLS)

Group Leader: **Dra. Diana Roig Sanz**
(ERC Starting Grant holder, ICREA Research Professor)
Research area: **Multidisciplinària (humanities and social sciences)**

Systems, Software and Models (SOM Research Lab)

Group Leader: **Dr. Jordi Cabot** *(ICREA Research Professor)*
Research area: **Computer engineering**

Urban Transformation and Global Change Laboratory (TURBA Lab)

Group Leader: **Dr. Ramon Ribera** *(Adjunct Professor)*
Research area: **Multidisciplinary (geography, urban studies, environmental science, political science, economics, and science and technology studies)**

Wireless Networks Research Lab (WiNE)

Group Leader: **Dr. Xavier Vilajosana** *(Full Professor)*
Research area: **Computer and telecommunications engineering**

IN3 Visiting Program

The **IN3 Visiting Program** aims to create a space for interdisciplinary exchange of an international nature among researchers at different stages of their research careers.

The welcoming of visiting academic staff serves a dual purpose. First, it makes it easier for researchers visiting the IN3 to find their place in a consolidated and interdisciplinary research environment. Second, it offers IN3 researchers the opportunity to learn and share knowledge, the possibility of opening up new lines of research and the consolidation, and possible expansion, of networks.

The **IN3 Visiting Program** entails a dual commitment. The IN3 commits to providing, for the duration of the academic's stay, the necessary conditions for working. In turn, the visiting scholar commits to securing the necessary funding for their stay and to contributing, through one or more products resulting from their visit, to the IN3's interdisciplinary exchange space.

03

The IN3 in figures

The IN3 in figures

Team

Group Directors	11
Predoctoral Researchers	43
Postdoctoral Researchers	38
Research Assistants	32
Staff Researchers	5
Interns	5
Visiting professors (**Maynooth University** (Ireland), **University of Namur** (Belgium), **National Pedagogic University** (Colombia), **Universitat Rovira i Virgili** (Tarragona), **University of the North** (Colombia), UNED and UOC)	10
External Collaborators	17

Publications

Individual scientific publications	173
Inter-group scientific publications (Collaboration between two or more IN3 research groups)	8
Open-access publications	95
Books	20
Book chapters	41
Scientific publications indexed on Web of Science (WoS)	143
Publications indexed on Scopus	160
in Q1 on Web of Science (WoS)	39
in Q1 on Scopus	59

Citations

Citations received on Web of Science (WoS)	185
Citations received on Scopus	255
Citations received on Google Scholar	467

Theses

Doctoral Theses	4
Inter-group Doctoral Thesis	1

The IN3 in figures

Conferences and Scientific Symposia

Activities organized by the IN3 with some *4,595* participants	50
Seminars	20
Talks	2
Conferences	3
Lectures	7
Presentations	4
Workshops	5
Webinars	7
Festival	1
Symposium	1

IN3 researchers participating in activities of other institutions, centres and organizations outside the IN3	25

Projects

Projects awarded	12
Inter-group projects awarded (More than one IN3 research group)	4
Projects in progress	52
Inter-group projects incourse	1

Other grants/funding and research contracts

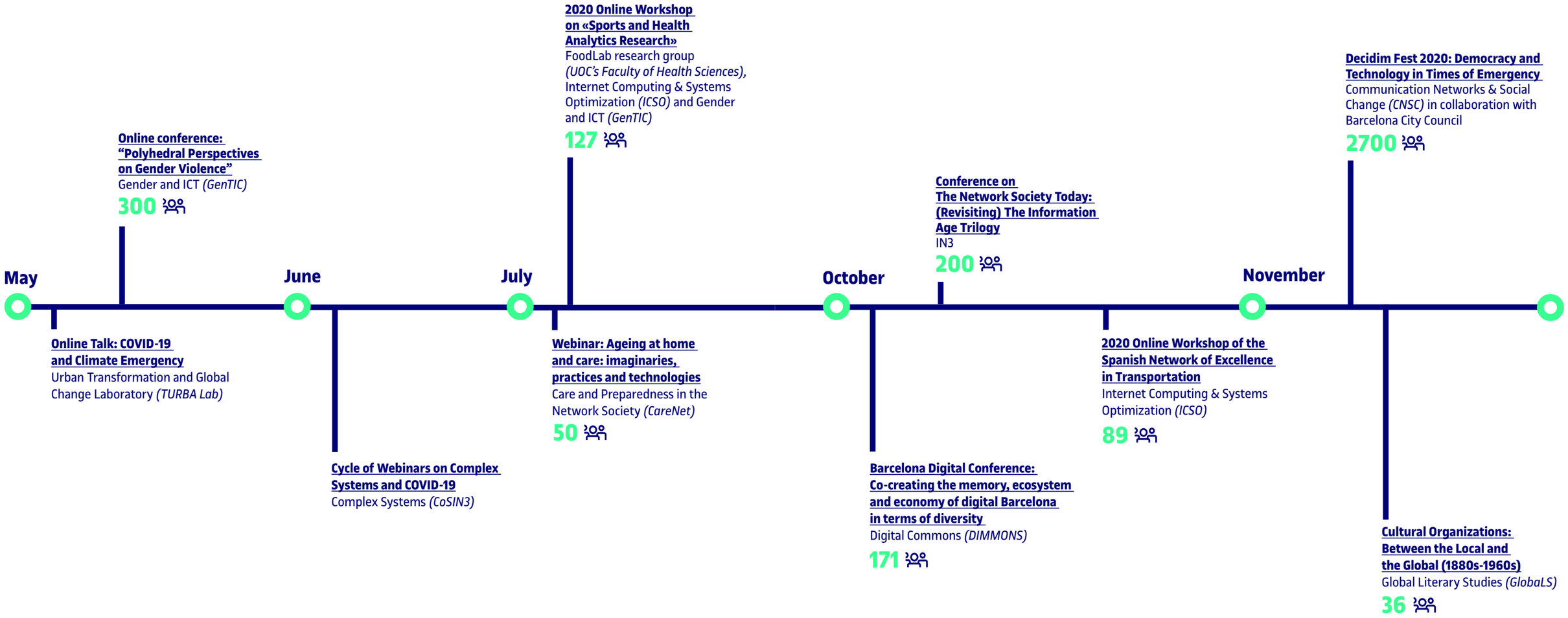
Mobility grants with external funding	2
Contracts with external funding	5
Research contracts	8

Talent recruitment

Research professor from the Catalan Institution for Research and Advanced Studies (ICREA)	1
Grant for Juan de la Cierva (JdC) **contracts**	1
Grants for hiring new research staff (FI)	3

04

2020 Milestones


May
June
July
October
November
Online conference: "Polyhedral Perspectives on Gender Violence"
Gender and ICT (GenTIC)
300
Online Talk: COVID-19 and Climate Emergency
Urban Transformation and Global Change Laboratory (TURBA Lab)
Cycle of Webinars on Complex Systems and COVID-19
Complex Systems (CoSIN3)
2020 Online Workshop on «Sports and Health Analytics Research»
FoodLab research group (UOC's Faculty of Health Sciences), Internet Computing & Systems Optimization (ICSO) and Gender and ICT (GenTIC)
127
Webinar: Ageing at home and care: imaginaries, practices and technologies
Care and Preparedness in the Network Society (CareNet)
50
Conference on The Network Society Today: (Revisiting) The Information Age Trilogy
IN3
200
Barcelona Digital Conference: Co-creating the memory, ecosystem and economy of digital Barcelona in terms of diversity
Digital Commons (DIMMONS)
171
2020 Online Workshop of the Spanish Network of Excellence in Transportation
Internet Computing & Systems Optimization (ICSO)
89
Decidim Fest 2020: Democracy and Technology in Times of Emergency
Communication Networks & Social Change (CNSC) in collaboration with Barcelona City Council
2700
Cultural Organizations: Between the Local and the Global (1880s-1960s)
Global Literary Studies (GlobaLS)
36

05

News

News

Links

Replantejar els models residencials en la vellesa, una necessitat encara més evident després de la crisi per la COVID-19

"New normality" and its effects on ICT use

'Big data' per fomentar la integració dels refugiats sirians

The feminist economy makes headway in the wake of COVID-19

ICSO research group supports the "maker" community with intelligent algorithms for efficient logistics during COVID-19

Coronavirus crisis brings rise in cybercrime

Showcasing successful women's STEM achievements, a social vaccine against gender stereotypes among young girls

The transnational professionalization of European literary criticism during the interwar period

Tool designed to automate device programming in the IoT

Un estudio analiza los movimientos sociales contra el cambio climático en Barcelona y Sevilla

UOC project wins Tech & Climate challenge to reduce tech companies' environmental impact

06

Impact and Presence

Impact and Presence

Website and Blog

IN3 (Internet Interdisciplinary Institute) Website (EN/ES/CA). Since **2016.**

News items 49

Sessions +26.670

Page views 41.460

IN3 Blog. Since **2019.**

Posts in 2020 23

New users in 2020 1.919

Sessions 3.516

Printouts 29.700

Social Media

Twitter @IN3_UOC. Since **2010.**

Followers

+ 3.137

Tweets

+ 677

Retweets

+ 1.140

Likes

+ 2.550

IN3 (Internet Interdisciplinary Institute) (EN/ES/CA) YouTube channel. Since **2008.**

155 videos,
of which 7
are from 2020

155

Views in 2020

+2.239

Impact and Presence

Social Media

Newsletter IN3 Keep Updated! Since **2018.**

Newsletters
sent out in 2020

23

+ 200 recipients
(Researchers, collaborators
and doctoral students)

+ 677

It is sent out on Thursdays, fortnightly.

It **covers news**, **new developments**, **activities in Spain and internationally**, **internal and external scientific calls for papers**, **hiring and rehiring of permanent and visiting staff** and other **relevant day-to-day** information about the various research groups that make up the Institute.

07

Awards and Recognition

Awards

Best Poster/Demo en la 20th International Conference on Web Engineering 2020 (ICWE)

The article **«Gadolinium: Monitoring Non-Functional Properties of REST APIs»**, d'**Steven Bucaille** (intern), **Javier Cánovas** (adjunct professor and researcher), **Hamza Ed-Douibi** (postdoctoral researcher) and **Jordi Cabot** (ICREA research professor and director) of the **Systems, Software and Models (SOM Research Lab)** research group, was awarded the prize for the Best Poster/Demo at the **20th International Conference on Web Engineering 2020 (ICWE).**

Science Stories Contest

The **Urban Transformation and Global Change Laboratory (TURBA Lab)** research group was the inspiration for the story ***«La Laura i en Joan lluiten contra el canvi climàtic»*** [Laura and John fight climate change], written by year five pupils at the Lumen School in Terrassa, winner of the **Science Stories** contest organized by the Secretariat of Universities and Research of the Government of Catalonia.

First Edition of the Tech & Climate Challenge

Borja Martínez (postdoctoral researcher) and **Xavier Vilajosana** (director, researcher professor), of the **Wireless Networks Research Lab (WiNE)** research group, winners of the **First Edition of the Tech & Climate Challenge**.

Best Demonstration at the 23rd International Conference on Model-Driven Engineering Languages and Systems (MoDELS 20)

The **PapyGame**, platform, created by the **Systems, Software and Models (SOM Research Lab)**, research group, won the prize for the ***Best Demonstration*** **at the 23rd International Conference on Model-Driven Engineering Languages and Systems (MoDELS 20)**.

Awards and Recognition

Awards

SOS Cultura Prize

María Heras, postdoctoral researcher in the **Urban Transformation and Global Change Laboratory (TURBA Lab)** research group, was awarded the SOS Cultura Prize by the Carulla Foundation.

Best Rising Star at the 17th 2020 ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks (PE-WASUN).

Pere Tuset-Peiró, adjunct professor in the Faculty of Computer Science, Multimedia and Telecommunications and senior researcher in the **Wireless Networks Research Lab (WINE)** research group, was named ***Best Rising Star*** at the **17th Conference ACM International Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, and Ubiquitous Networks 2020 (PE-WASUN).**

Prize for Scientific Research on Urban Challenges in the City of Barcelona

The project **"Infrastructures for independent living: participatory research for rethinking living spaces, care and community in times of pandemic"** by researcher **Andrea García-Santesmases** (postdoctoral researcher) and researchers **Joan Moyà** (postdoctoral researcher), and **Lluvi Farré** (predoctoral researcher) in the **Care and Preparedness in the Network Society (CareNet) research group was awarded the 2020 Prize for Scientific Research on Urban Challenges in the City of Barcelona** awarded by Barcelona City Council.

Prize for the Best 2019 Paper Published on Ecosystems and People

The article **«Disentangling 'ecosystem services' and 'nature's contributions to people»** by researcher **Maria Dolores López-Rodríguez**, postdoctoral researcher in the **Urban Transformation and Global Change Laboratory (TURBA Lab)**, research group, was awarded the prize for the Best 2019 paper published on Ecosystems and People in the open-access journal Ecosystems and People.

Awards and Recognition

Recognition

Israel Rodríguez-Giralt, researcher and director of the **Care and Preparedness in the Network Society (CareNet)**, research group, was selected to form part of the **COVID-19 Monitoring Unit Technical Support Group of the Department of Health of the Government of Catalonia** from June to September of this year.

Diana Roig-Sanz, a beneficiary of a **Starting Grant del Consejo Europeo de Investigación (ERC)** and coordinator of the **Global Literary Studies**, research group, was named senior **ICREA research professor**.

Marta Puxan-Oliva, collaborator of the **Global Literary Studies**, research group, was awarded the Ramón y Cajal grant by the Spanish Ministry of Science and Innovation.

Ángel A. Juan (professor and director of the **Internet Computing & Systems Optimization (ICSO))**, **Xavier Vilajosana** (professor, director and researcher of the **Wireless Networks Research Lab (WINE)** research group)**, Hug March** (researcher in the l'**Urban Transformation and Global Change Laboratory (TURBA Lab))** and **Jordi Cabot** (ICREA research professor and director of the **Systems, Software and Models (SOM Research Lab))** among the most cited scientists in 2019 according to the **Ranking of the World Scientist: World's Top 2 % Scientists**.

Ángel A. Juan, professor and director of the **Internet Computing & Systems Optimization (ICSO)** research group, and, **Jordi Cabot**, ICREA research professor and director of the **Systems, Software and Models (SOM Research Lab)**, in 96th and 79th place, respectively, in the **Guide2Research Ranking for Computer Science in Spain.**

Lucía Argüelles, postdoctoral researcher in the **Urban Transformation and Global Change Laboratory (TURBA Lab)**, research group, was selected, based on a competitive call for applications, to form part of the **Postdoc Academy for Transformational Leadership.**

01

Appendix 1 Scientific Publications

Appendix 1 : Scientific Publications

This appendix reflects the scientific production of the various research groups at the IN3 in 2020.

Appendix 1 : Scientific Publications

Care and Preparedness in the Network Society (CareNet)

Articles

Correa-Urquiza, M., Pié Balaguer, A., Coll-Florit, M., Hernàndez Encuentra, E., Climent Roca, S. (2020). **Orgullo loco y metáforas para una disidencia: un análisis lingüístico y simbólico.** *Salud colectiva*, vol. 16, pp. 1-15. DOI: 10.18294/sc.2020.2886. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q3.

García-Santesmases Fernández, A. (2020). **CRIP, WHAT?? Enunciaciones, tensiones y apropiaciones en torno a la reivindicación de lo tullido en el contexto español.** Papeles del CEIC, vol. 2020, no. 2, pp. 1-20. DOI: 10.1387/pceic.21027.

Jacques-Aviñó, C., Pons-Vigués, M., Mcghie, J. E., Rodríguez-Giralt, I., Medina-Perucha, L., Mahtani-Chugani, V., Berenguera Ossó, A. (2020). **Public participation in research projects: Ways of creating collective knowledge in health.** *Gaceta Sanitaria*, vol. 34, no. 2, pp. 200-203. DOI: 10.1016/j.gaceta.2019.08.010. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q3.

Martínez-Hernáez, Á., Pié-Balaguer, A., Serrano-Miguel, M., Morales-Sáez, N., García-Santesmases, A., Bekele, D., Alegre-Agís, E. (2020) **The collaborative management of antipsychotic medication and its obstacles: A qualitative study.** *Social Science & Medicine*, vol. 247, pp 1-9. DOI: 10.1016/j.socscimed.2020.112811. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Planella, J., Pié Balaguer, A., Gil Rodríguez, E. (2020). **Technology and queer education: subversions and educational resistances.** *Indian Journal of Gender Studies*, vol. 27, no. 2, pp. 226-241. DOI: 10.1177/0971521520910965. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q2.

Books

Farré, L., Can 70, López, D., Suara SCCL, Sostre Cívic (2020). ***Cures en la convivència de persones grans. CoHecció Construïm habitatge cooperatiu.*** Barcelona: Sostre Cívic.

Mort, M., Rodríguez-Giralt, I., Delicado, A. (2020). **Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience.** Bristol: Bristol University Press.

Pié, A., Planella, J. (Coords), Allué, M., Arenas, M., Canalies, N., García-Santesmases, A., Salas, M., Tobos, M., Maestres, B. (2020). ***Corpografías de la discapacidad. ¿Puede la pedagogía escapar del cuerpo?.*** Buenos Aires: Lugar Editorial S.A.

Pié, A., Correa Urquiza, M., Martinez, A. (2020). ***Salud mental colectiva: miradas, encuentros, diálogos.*** Barcelona: Editorial UOC.

Appendix 1 : Scientific Publications

Care and Preparedness in the Network Society (CareNet)

Serrano, M., Pié, A., Martínez, A. (2020). ***Guía para la gestión colaborativa de la medicación en salud mental.*** Tarragona: Publicacions URV.

Book Chapters

Beneito-Montagut, R., Begueria, A. (2020). **Send me a WhatsApp when you arrive home". Mediated practices of caring about.** En: Peine, A., Marshall, B. L., Martin, W., Neven, L. *Socio-gerontechnology: Interdisciplinary Critical Studies of Ageing and Technology.* London: Routledge.

Delicado, A., Arenas, M., Nikolaraizi, M., Kanari, C., Grisi, A., Cordani, F., Keir, S. (2020). **Rights, information, needs and active involvement in disaster risk management.** En: Delicado A., Mort, M., Rodríguez-Giralt, I. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience,* pp. 63-92. Bristol: Bristol University Press.

Grisi, Anna; Cordani, Flaminia; Ribeiro, Sofia; Kanari, Charikleia; Argyropoulos,-Vassilios; Arenas, Míriam & Delicado, A. (2020). **Dialogues with Children, Mutual Learning Exercises and National Policy Debates.** En: Delicado A., Mort M., & Rodríguez-Giralt I. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience,* pp. 37-62. Bristol: Bristol University Press.

López Gómez, D. (2020) **What if ANT wouldn't pursue agnosticism but care?.** En: Farías, I., Roberts , C., Blok , A. (Eds). *The Routledge Companion to Actor-Network Theory,* pp. 4-13. London: Routledge.

López Gómez, D., Estrada Canal, M., & Farré Montalà, L. (2020). **Havens and Heavens of Ageing-in-Community: Home, Care and Age in Senior Co-housing.** En: B. Pasveer, O. Synnes, I. Moser (Eds). *Ways of Home Making in Care for Later Life*, pp. 159-181. Singapur: Springer.

Martínez Hernáez, A., Pie Balaguer, A., Serrano Miguel, M., Alegre Agís, E., Morales Sáez, N., Cela Bertrán, X., Bekele, D., García-Santesmases Fernández, A., Correa Urquiza Vidal Freyre, M. (2020). **Crónica de un desencuentro: la medicalización de la psicosis y sus laberintos en la Catalunya urbana.** En: Epele , María E. (Eds). *Políticas terapéuticas y economías de sufrimiento: Perspectivas y debates contemporáneos sobre las tecnologías psi,* pp. 79-102. Buenos Aires: Instituto de Investigaciones Gino Germani.

Mort, M., Rodríguez-Giralt, I., Delicado, A. (2020). **Introducing CUIDAR: A child-centred approach to disasters.** En: Mort M., Rodríguez-Giralt I., Delicado, A. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience,* pp. 1-14. Bristol: Bristol University Press.

Appendix 1 : Scientific Publications

Care and Preparedness in the Network Society (CareNet)

Pié-Balaguer A., Planella-Ribera J. (2020) **Queer, Crip and Social Pedagogy. A Critical Hermeneutic Perspective.** En: Pérez M., Trujillo-Barbadillo G. (Eds). *Queer Epistemologies in Education. Queer Studies and Education,* pp. 65-80. Cham: Palgrave Macmillan.

Pie Balaguer, A., Salas Soneira, M. (2020). **The edges of the transmission. Re-presentacions and learnings of madness.** En: Sánchez-Valverde Visus, C., Montané López, A. (Eds). *La educación social en los extremos: justicia social y paradojas de la práctica,* pp. 101-124. London: Routledge.

Pié, A., Arenas, M. (2020). **Activismo(s) de la discapacidad en España: alianzas y transversalidades del 15M.** En: Razquin, A., Betancor, G. *Activismo de la discapacidad: 10 años después de las comisiones de diversidad funcional del 15M.* Barcelona: Ediciones Bellaterra.

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Rodríguez-Giralt, I., Arenas, M., López, D. (2020). **Children, participation and disasters in Europe: A poor record.** En: Rodríguez-Giralt, I., Mort, M., Delicado, A. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience* pp. 15-36. Bristol: Bristol University Press.

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Rodríguez-Giralt, I., Mort, M., Delicado, A. (2020). **Concluding remarks: Reimagining children's place in disaster risk management.** En: Rodríguez-Giralt, I., Mort, M., Delicado, A. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience,* pp. 151-160. Bristol: Bristol University Press.

Rodríguez-Giralt, I., Tironi, Manuel (2020). **Coreografías del abandono: Cuidado y toxicidad en zonas de sacrificio.** En: Guillem-Llobat, X., Nieto-Galan, A. *Tóxicos Invisibles. La Construcción De La Ignorancia Ambiental,* pp. 237-256. Barcelona: Icaria.

Rowland, J., Arenas, M., Cordani, F., Grisi, A., Nikolaraizi, M., Papazafiri M., Williams, A. L., Goto, A., Bingley, A. (2020). **Participatory tools for disaster risk management with children and young people.** En: Mort, M., Rodríguez-Giralt, I., Delicado, A. (Eds.), *Children and Young People's Participation in Disaster Risk Reduction: Agency and Resilience,* pp. 117-150. Bristol: Bristol University Press.

Thovar, R. (2020). **El movimiento animalista y la producción de carne in vitro.** En: Álvarez, A., Fernández, F., Sribman, A., Castillo, A. E. (Ed). *Acción colectiva, movilización y resistencias en el siglo XXI*, 1ª ed., vol 1: Teoría, pp. 131-142. Fundación Betiko.

Appendix 1 : Scientific Publications

Care and Preparedness in the Network Society (CareNet)

Conferences

Östlund, B., Fischer, B., Marshall, B., Dalmer, N., Fernández-Ardèvol, M., García-Santesmases Fernández, A., López Gómez, D., Loos, E., Chang, F., Chen, X., Neven, L., Peine, A., Rosales Climent, A., Kuoppamäki, S (2020). **Using Academic Work Places to Involve Older People in the Design of Digital Applications. Presentation of a Methodological Framework to Advance Co-design in Later Life.** En: Gao Q., Zhou J. (eds) Human Aspects of IT for the Aged Population. Technologies, Design and User Experience. HCII 2020. Lecture Notes in Computer Science, vol 12207. Springer, Cham. DOI: 10.1007/978-3-030-50252-2_4. (In collaboration with the research group Communication Networks & Social Change (CNSC)).

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Hannah, Bethany; Ottolini, Isabeau; Uyttewaal, Kathleen., Rodríguez-Giralt, Israel; Arenas, Miriam & Prat Guitart, Núria (2020). **Incidents within Incidents: social perspectives on the global pandemic and wildfire.** *Wildfire Magazine,* 29.3. Retrieved from: https://www.iawfonline.org/article/incidents-within-incidents-social-perspectives-on-the-global-pandemic-and-wildfire/.

Press publications

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Appendix 1 : Scientific Publications

Communication Networks & Social Change (CNSC)

Articles

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Castells, M., Ziccardi, A. (2020). **Ciudades latinoamericanas: la cuestión social y la gobernanza local.** *Espacio Abierto: Cuaderno Venezolano de Sociología*, vol. 29, no. 2, pp. 245-246.

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Fernández-Ardèvol, M., Belotti, F., Ieracitano, F., Mulargia, S., Rosales, A., Comunello, F. (2020). **"I do it my way": Idioms of practice and digital media ideologies of adolescents and older adults.** *New Media & Society*, vol. 11, pp. 1-19. DOI: 10.1177/1461444820959298. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Fernández-Ardèvol, M., Rosales, A., Morey, F. (2020). **Methods matter: Assessment of the characteristics of a sample to analyze digital practices and social connectedness in later life.** *Human aspects of IT for the aged population: Technologies, design and user experience,* vol. 12209, pp. 58–68. DOI: 10.1007/978-3-030-50232-4_5.

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Rosales, A., Fernández-Ardèvol, M. (2020). **Ageism in the era of digital platforms. Convergence.** *The International Journal of Research into New Media Technologies*, vol. 26, pp. 1074-1087. DOI: 10.1177/1354856520930905. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Wagner, S., Fernández-Ardèvol, M. (2020). **Decolonizing mobile media: Mobile Internet appropriation in a Guaraní community.** *Mobile Media & Communication*, vol. 8, no.1, pp. 83–103. DOI: 10.1177/2050157918822163. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Appendix 1 : Scientific Publications

Communication Networks & Social Change (CNSC)

Book Chapters

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Pérez-Altable, L., Pérez-Arozamena, R., Linares-Lanzman, J., Odriozola-Chéné, J., Fernández-Planells, A., Serrano-Tellería, A., Díaz-Noci, J. (2020). **The crisis, the people and the media: How digital public opinion debates on income inequality.** En: S. Peña-Fernández, K. Meso-Ayerdi, A. Larrondo-Ureta (Eds.), Active audiences: *Empowering citizens' discourse in the hybrid media system,* pp. 131–143. McGraw Hill.

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Articles

D. Rhoads, I. Serrano, J. Borge-Holthoefer, A. Solé-Ribalta (2020). **Measuring and mitigating behavioural segregation using Call Detail Records.** *EPJ Data Sci,* 9:5. DOI: 10.1140/epjds/s13688-020-00222-1. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1. (*In collaboration with the research group Urban Transformation and Global Change Laboratory (TURBA Lab)*).

Digital Commons (DIMMONS)

Articles

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Appendix 1 : Scientific Publications

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Moreira, S., Fuster Morell, M. (2020). **Food Networks as Urban Commons: Case Study of a Portuguese "Prosumers" Group.** *Ecological Economics,* vol. 177, pp. DOI: 10.1016/j.ecolecon.2020.106777. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

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Moreira, S., Almeida, F. (2020). **O Som é a Enxada»: promover a agricultura de proximidade atraves de uma rádio comunitária.** En: Amaro da Costa, C. (Coord). *Pontes entes a Agricultura Familiar e Agricultura Biológica. Iberografias: 37,* pp. 101-104. Lisboa: Guarda: Centro de Estudos Ibéricos. Lisboa. Ncora Editora.

Internet Computing & Systems Optimization (ICSO)

Articles

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Almouhanna, A., Quintero Araujo, C.L., Panadero, J., Juan, A.A., Khosravi, B., Ouelhadj, D. (2020). **The location routing problem using electric vehicles with constrained distance.** *Computers & Operations Research*, vol. 115, pp. 1-16. DOI: 10.1016/j.cor.2019.104864. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

A. Bala, I. Ismail, R. Ibrahim, S. M. Sait and D. Oliva. (2020). **An Improved Grasshopper Optimization Algorithm Based Echo State Network for Predicting Faults in Airplane Engines.** *IEEE Access*, vol. 8, pp. 159773-159789. DOI: 10.1109/ACCESS.2020.3020356. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

Barrios, B.; Juan, A.; Altendorfer, K.; Peirleitner, A.; Estrada, A.; Panadero, J. (2020). **On the use of Simheuristics to Optimize Safety-Stock Levels in Material Requirements Planning with Random Demands.** *Proceedings – Winter Simulation Conference,* pp. 1539-1550.

Bayliss, C., De Maere, G., Atkin, J. A. D., Paelink, M. (2019). **Scheduling airline reserve crew using a probabilistic crew absence and recovery model.** *Journal of the Operational Research Society*, vol. 71 (4), pp. 543-565. DOI: 10.1080/01605682.2019.1567649. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

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Calvet-Mir, L., de la Torre, R., Goyal, A., Marmol, M., Juan, A.A. (2020). **Modern Optimization and Simulation Methods in Managerial and Business Economics: A Review.** Administrative Sciences, vol. 10 (3), pp.1-23. DOI: 10.3390/admsci10030047.

Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

Campos, N., Nogal, M., Caliz, C., Juan, A.A. (2020). **Simulation-based education involving online and on-campus models in different European universities.** *International Journal of Educational Technology in Higher Education*, vol. 17, pp. 1-15. DOI: 10.1186/s41239-020-0181-y. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Corlu, C., de la Torre, R., Serrano-Hernández, A., Juan, A.A., Faulín, F. (2020). **Optimizing energy consumption in transportation: Literature review, insights, and research opportunities.** *Energies*, vol. 13 (5), pp. 1-33. DOI: 10.3390/en13051115. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

Corlu, C., Panadero, J., Onggo, S., Juan, A. (2020). **On the Scarcity of Observations when Modelling Random Inputs and the Quality of Solutions to Stochastic Optimisation Problems.** *Proceedings – Winter Simulation Conference*, pp. 2105-2113.

Daradoumis, T. & Arguedas, M. (2020). **Cultivating students' reflective learning in metacognitive activities through an affective pedagogical agent.** *Journal of Educational Technology & Society*, vol. 23 (2), pp.19-31. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Do Carmo Martins, L., Bayliss, C., Juan, A.A., Panadero, J., Marmol, M. (2020). **A Savings-Based Heuristic for Solving the Omnichannel Vehicle Routing Problem with Pick-up and Delivery.** *Transportation Research Procedia*, vol. 47, pp. 83-90. DOI: 10.1016/j.trpro.2020.03.082.

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Estrada-Moreno, A. (2020). **On the k-partition dimension of graphs.** *Theoretical Computer Science*, 806, pp. 42-52. DOI: 10.1016/j.tcs.2018.09.022. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q1.

Estrada-Moreno, A., Ferrer Biosca, A., Juan, A.A., Bagirov, A. & Panadero, J. (2019). **A biased-randomised algorithm for the capacitated facility location problem with soft constraints.** *Journal of the Operational Research Society*, vol. 71 (11), pp. 1799-1815. DOI: 10.1080/01605682.2019.1639478. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Estrada-Moreno, A., Ferrer Biosca, A., Juan, A.A., Panadero, J., Bagirov, A. (2020). **The non-smooth and bi-objective team orienteering problem with soft constraints.** *Mathematics*, vol. 8 (9), pp. 1-16. DOI: 10.3390/math8091461. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q3.

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Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

Gruler, A.C., Pérez Navarro, A., Calvet-Liñan, L., Juan, A.A. (2020). **A simheuristic algorithm for time-dependent waste collection management with stochastic travel times.** *SORT: Statistics and Operations Research Transactions*, vol. 44 (2), pp. 285-310. DOI: 10.2436/20.8080.02.103. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q3.

Gutiérrez Carreón, G., Daradoumis, T., Jorba, J., Peña-Gomar, M.C. (2020). **A Study on the Effectiveness of an Undergraduate Online Teaching Laboratory With Semantic Mechanism From a Student Perspective.** *Journal of Information Technology Education: Innovations in Practice*, vol. 19, pp. 137-155. DOI: 10.28945/4624. Quartile: SCOPUS SJR: Q2. (*In collaboration with the research group Wireless Networks (WiNE)*).

Hatami, S., Eskandarpour, M., Chica-Serrano, M., Juan, A.A., Ouelhadj, D. (2020). **Green hybrid fleets using electric vehicles: solving the heterogeneous vehicle routing problem with multiple driving ranges and loading capacities.** *SORT: Statistics and Operations Research Transactions*, vol. 44 (1), pp. 141-170. DOI: 10.2436/20.8080.02.98. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q3.

Houssein, E., Hosney, M., Elhoseny, M., Oliva, D., Mohamed, W., Hassaballah, M. (2020). **Hybrid Harris hawks optimization with cuckoo search for drug design and discovery in chemoinformatics.** *Scientific Reports*, vol. 10 (1), pp. 1-22. DOI: 10.1038/s41598-020-71502-z. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Hussien, A., Oliva, D., Houssein, E., Juan, A.A., Yu, X. (2020). **Binary whale optimization algorithm for dimensionality reduction.** *Mathematics*, vol. 8 (10), pp. 1-24. DOI: 10.3390/math8101821. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q3.

Juan, A.A., Freixes, A., Panadero, J., Serrat, C., Estrada-Moreno, A. (2020). **Routing Drones in Smart Cities: A Biased-Randomized Algorithm for Solving the Team Orienteering Problem in Real Time.** *Transportation Research Procedia*, vol. 47, pp. 243-250. DOI: 10.1016/j.trpro.2020.03.095.

Juan, A.A., Copado, P. Panadero, J., Laroque, C. , de la Torre, R. (2020). **A Discrete-Event Heuristic for Makespan Optimization in Multi-Server Flow-Shop Problems with Machine re-entering.** *Winter Simulation Conference (WSC)*, pp. 1492-1502. DOI: 10.1109/WSC48552.2020.9383895.

Juan, A.A., Corlu, C., Tordecilla, R.D., de la Torre, R., Ferrer Biosca, A. (2020). **On the use of biased-randomized algorithms for solving non-smooth optimization problems**. *Algorithms*, vol. 13 (1). DOI: 10.3390/a13010008. Quartile: SCOPUS SJR: Q3.

Juan, A.A., Juan, A.A., Bayliss, C., Cordón, O., Kelton, W.D. (2020). **Why simheuristics? Benefits, limitations, and best practices when combining metaheuristics with simulation**. *SORT: Statistics and Operations Research Transactions*, vol. 44 (2), pp. 311-334. DOI: 10.2436/20.8080.02.104. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q3.

Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

López-López, I.; Sosa-Gómez, G.; Segura, C.; Oliva, D.; Rojas, O. (2020). **Metaheuristics in the Optimization of Cryptographic Boolean Functions.** *Entropy*, vol 22, no. 9 (1052), pp. 1-25. DOI: 10.3390/e22091052. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Malegiannaki, I., Daradoumis, T., Retalis, S. (2020). **Teaching Cultural Heritage through a Narrative-based Game. ACM Journal on Computing and Cultural Heritage,** vol. 13 (4), pp. 1-28. DOI: 10.1145/3414833. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q1.

Marquès, J., Daradoumis, T., Calvet-Liñan, L., Arguedas, M. (2020). **Fruitful student interactions and perceived learning improvement in DSLab: A dynamic assessment tool for distributed programming.** *British Journal of Educational Technology,* vol. 51 (1), pp. 53-70. DOI: 10.1111/bjet.12756. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Marmol, M., Do Carmo Martins, L., Hatami, S., Juan, A.A., Fernández, V. (2020). **Using Biased-Randomized Algorithms for the Multi-Period Product Display Problem with Dynamic Attractiveness.** *Algorithms,* vol. 13 (2), pp. 1-22. DOI: 10.3390/a13020034. Quartile: SCOPUS SJR: Q2.

Mavrelos, M., Daradoumis, T. (2020). **Exploring multiple intelligence theory prospects as a vehicle for discovering the relationship of neuroeducation with imaginative/Waldorf pedagogy: A systematic literature review.** *Education Sciences*, vol. 10 (11), pp. 1-26. DOI: 10.3390/educsci10110334. Quartile: SCOPUS SJR: Q3.

Micev, M., Ćalasan, M., Oliva, D. (2020). **Fractional order PID controller design for an AVR system using Chaotic Yellow Saddle Goatfish Algorithm.** *Mathematics*, vol. 8 (7), 1182. DOI: 10.3390/math8071182. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q3.

Nataraj, S., Álvarez Ruiz, C., Sada, L., Juan, A.A., Panadero, J., Bayliss, C. (2020). **Applying Statistical Learning Methods for Forecasting Prices and Enhancing the Probability of Success in Logistics Tenders.** *Transportation Research Procedia*, vol. 47, pp. 529-536. DOI: 10.1016/j.trpro.2020.03.128.

Oliva, D., Copado, P., Hinojosa, S., Panadero, J., Riera-Terrén, D., Juan, A.A. (2020). **Fuzzy Simheuristics: Solving Optimization Problems under Stochastic and Uncertainty Scenarios.** *Mathematics*, vol. 8 (12), pp, 1-19. DOI: 10.3390/math8122240. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q3.

Onggo, B. S., Corlu, C., Juan, A.A., Monks, T., de la Torre, R. (2020). **Combining symbiotic simulation systems with enterprise data storage systems for real-time decision-making.** *Enterprise Information Systems*, vol. 15 (2), pp. 1-18. DOI: 10.1080/17517575.2020.1777587. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

Ortega-Sánchez, N., Oliva, D., Cuevas, E., Pérez-Cisneros, M., Juan, A.A. (2020). **An evolutionary approach to improve the halftoning process.** *Mathematics*, vol. 8 (9), pp. 1-23. DOI: 10.3390/MATH8091636. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q3.

Panadero, J., Doering, J., Kizys, R., Juan, A.A. & Fitó Bertran, A. (2020). **A variable neighborhood search simheuristic for project portfolio selection under uncertainty.** *Journal of Heuristics*, vol. 26 (3), pp. 353-375. DOI: 10.1007/s10732-018-9367-z. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

Panadero, J., Juan, A., Grifoll, M., Dehghani M., Freixes, A., Serrat, C. (2020). **A Simheuristic Algorithm for the Persistent Surveillance Vehicle Routing Problem with Stochastic Travel Times.** *Proceedings* – Winter Simulation Conference, pp. 1324-1335.

Panadero, J., Juan, A.A., Bayliss, C., Currie, C. (2020). **Maximising reward from a team of surveillance drones: a simheuristic approach to the stochastic team orienteering problem.** *European Journal of Industrial Engineering,* vol. 14 (4), pp. 485-516. DOI: 10.1504/EJIE.2020.108581. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q1.

Potorti, F., Park, S., Crivello, A., Palumbo, F., Girolami, M., Barsocchi, P., Lee, S., Torres Sospedra, J., Jiménez, A., Pérez Navarro, A., Martín Mendoza-Silva, G., Seco, F., Ortiz, M., Perul, J., Renaudin, V., Kang, H., Park, S.Y., Lee, J.H., Park, C.G., Ha, J., Han, J., Park, C., Kim, K., Lee, Y., Gye, S., Lee, K., Kim, E., Choi, J.-S., Choi, Y.-S., Talwar, S., Cho, S.Y., Ben-Moshe, B., Scherbakov, A., Antsfeld, L., Sansano-Sansano, E., Chidlovskii, B., Kronenwett, N., Prophet, S., Landay, Y., Marbel, R., Zheng, L., Peng, A., Lin, Z., Wu, B., Ma, C., Poslad, S., Selviah, D., Wu, W., Ma, Z., Zhang, W., Wei, D., Yuan, H.

Jiang, J.-B., Huang, S.-Y., Liu, J.-W., Su, K.-W., Leu, J.-S., Nishiguchi, K., Bousselham, W., Uchiyama, H., Thomas, D., Shimada, A., Taniguchi, R.-I., Cortés Puschel, V., Lungenstrass, T., Ashraf, I., Lee, C., Ali, M.U., Im, Y., Kim, G., Eom, J., Hur, S., Park, Y., Opiela, M., Moreira, A., Nicolau, M.J., Pendão, C., Silva, I., Meneses, F., Costa, A., Trogh, J., Plets, D., Chien, Y.-R., Chang, T.-Y., Fang, S.-H., Tsao, Y. (2020). **The IPIN 2019 Indoor Localisation Competition-Description and Results.** *IEEE Access*, 8, pp. 206674-206718. DOI: 10.1109/ACCESS.2020.3037221. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Quiroga Pérez, J., Daradoumis, T., Marquès, J. (2020). **Rediscovering the use of chatbots in education: A systematic literature review.** *Computer Applications in Engineering Education*, vol 28 (6), pp. 1-17. DOI: 10.1002/cae.22326. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q1.

Raba, D., Estrada-Moreno, A., Panadero, J., Juan, A.A. (2020). **A reactive simheuristic using online data for a real-life inventory routing problem with stochastic demands.** *International Transactions in Operational Research,* vol. 27 (6), pp. 2785-2816. DOI: 10.1111/itor.12776. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Rabe, M., Chicaiza, J., Tordecilla, R., Juan, A. (2020). **Simheuristics for Multi-Period Facility Location Problems with Forecasted and Random Demands.** *Proceedings* – Winter Simulation Conference, pp. 1230-1241.

Rabe, M., Deininger, M., Juan, A.A. (2020). **Speeding up computational times in simheuristics combining genetic algorithms with discrete-Event simulation.** *Simulation Modelling Practice and Theory*, vol. 103, pp. 1-17. DOI: 10.1016/j.simpat.2020.102089. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q1.

Reyes-Rubiano, L., Calvet-Liñan, L., Juan, A.A., Faulín, F., Bové, L. (2020). **A biased-randomized variable neighborhood search for sustainable multi-depot vehicle routing problems.** *Journal of Heuristics*, vol. 26 (3), pp. 401-422. DOI: 10.1007/s10732-018-9366-0. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Reyes-Rubiano, L., Juan, A.A., Bayliss, C., Panadero, J., Faulín, F., Copado, P. (2020). **A Biased-Randomized Learnheuristic for Solving the Team Orienteering Problem with Dynamic Rewards.** *Transportation Research Procedia*, vol. 47, pp. 680-687. DOI: 10.1016/j.trpro.2020.03.147.

Appendix 1 : Scientific Publications

Internet Computing & Systems Optimization (ICSO)

Ribeiro, C., Maniezzo, V., Stützle, T., Blum, C., Juan, A.A., Ramalhinho, H., Mladenovic, N., Sifaleras, A., Sörensen, K., Souza, M. (2019). **Preface to the Special Issue on Matheuristics and Metaheuristics.** *International Transactions in Operational Research*, vol. 27 (1), pp. 5-8. DOI: 10.1111/itor.12702. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Saiz, M., Lostumbo, M., Juan, A., Lopez-Lopez, D. (2020). **Using Simulation-Optimization for Stochastic Project Portfolio Management with Sustainability Criteria.** *Proceedings – Winter Simulation Conference*, pp. 2493-2504.

Tordecilla, R, D., Panadero, J., Juan, A.A., Quintero-Araújo, C.L., Montoya-Torres, J.R. (2020). **A Simheuristic Algorithm for the Location Routing Problem with Facility Sizing Decisions and Stochastic Demands.** *Winter Simulation Conference (WSC)*, pp. 1265-1275. DOI: 10.1109/WSC48552.2020.9384053.

Yousri, D., Abd Elaziz, M., Oliva, D., Abualigah, L., Al-qaness, M. A., & Ewees, A. A. (2020). **Reliable applied objective for identifying simple and detailed photovoltaic models using modern metaheuristics: Comparative study.** *Energy Conversion and Management*, vol. 223, 113279. DOI: 10.1016/j.enconman.2020.113279. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q2.

Book Chapters

Dellatola, E., Daradoumis Haralabus, A., Dimitriadis, Y. (2020). **Exploring students' engagement within a collaborative inquiry-based language learning activity in a blended environment.** En: Ally, M., Tsinakos, A., Yu, S. *Emerging Technologies and Pedagogies in the Curriculum*, pp. 355-375. Singapore: Springer.

Articles

Batet-Sanromà, M., Sánchez Ruenes, D. (2020). **Leveraging synonymy and polysemy to improve semantic similarity assessments based on intrinsic information content.** *Artificial Intelligence Review*, vol. 53 (3), pp. 2023-2041. DOI: 10.1007/s10462-019-09725-4. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Casas-Roma, J. (2020). **DUEF-GA: data utility and privacy evaluation framework for graph anonymization.** *International Journal of Information Security*, vol. 19 (4), pp. 465-478. DOI: 10.1007/s10207-019-00469-4. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Faraj, O., Megías, D., Mehsen Ahmad, A., Garcia-Alfaro, J. (2020). **Taxonomy and challenges in machine learning-based approaches to detect attacks in the internet of things.** En: *ARES '20: Proceedings of the 15th International Conference on Availability, Reliability and Security*, Article 79, pp. 1-10. DOI: 10.1145/3407023.3407048.

Appendix 1 : Scientific Publications

K-ryptography and Information Security for Open Networks (KISON)

Garcia-Font, V. (2020). **SocialBlock: An architecture for decentralized user-centric data management applications for communications in smart cities.** *Journal of Parallel and Distributed Computing*, vol. 145, pp. 13-23. DOI: 10.1016/j.jpdc.2020.06.004. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Guerrero-Roldán, A.E., Rodríguez, M.E., Bañeres, D., Pérez, C., Panadero, J., Karadeniz, A. (2020). **Hacia un sistema de detección temprana de estudiantes en riesgo en entornos de enseñanza-aprendizaje en línea.** Actas de las Jornadas sobre Enseñanza Universitaria de la Informática, vol. 5. (*In collaboration with the Systems, Software and Models (SOM Research Lab) and the Internet Computing & Systems Optimization (ICSO) research groups and the Technology-Enhanced knowledge and interaction group*).

Megías, D. (2020). **Data hiding: New opportunities for security and privacy?** Proceedings of the European Interdisciplinary Cybersecurity Conference (EICC 2020). *Association for Czomputing Machinery*, Article 15, pp. 1–6. DOI: 10.1145/3424954.3425511.

Megías, D., Kuribayashi, M., Qureshi, A. (2020). **Survey on Decentralized Fingerprinting Solutions: Copyright Protection through Piracy Tracing.** *Computers*, vol. 9 (2), pp. 1-19. DOI: 10.3390/computers9020026. Quartile: SCOPUS SJR: Q2.

Nanni, M., Andrienko, G., Barabási, A.-L., Boldrini, C., Bonchi, F., Cattuto, C., Chiaromonte, F., Comandé, G., Conti, M., Coté, M., Dignum, F., Dignum, V., Domingo Ferrer, J., Ferragina, P., Giannoti, F., Guidotti, R., Helbing, D., Kaski, K., Kertesz, J., Lehmann, S., Lepri, B., Lukowicz, P., Matwin, S., Megías, D., Monreale, A., Morik, K., Oliver, N., Passarella, A., Passerini, A., Pedreschi, D., Pentland, A., Pianesi, F., Pratesi, F., Rinzivillo, S., Ruggieri, S., Siebes, A., Torra, V., Trasarti, R., van den Hoven, J. & Vespignani, A. (2020). **Give more data, awareness and control to individual citizens, and they will help COVID-19 containment.** *Transactions on Data Privacy*, vol. 13 (1), pp. 61-66. Quartile: SCOPUS SJR: Q3.

Pérez Solà, C., Herrera-Joancomartí, J. (2020). **BArt: Trading digital contents through digital assets.** Concurrency and Computation: Practice and Experience, vol. 32 (12), pp. 1-19. DOI: 10.1002/cpe.5490. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

Pérez-Solà C., Ranchal-Pedrosa A., Herrera-Joancomartí J., Navarro-Arribas G., Garcia-Alfaro J. (2020). **LockDown: Balance Availability Attack Against Lightning Network Channels.** In: Bonneau J., Heninger N. (Eds). Financial Cryptography and Data Security. FC 2020. Lecture Notes in Computer Science, vol 12059. Springer, Cham. DOI: 10.1007/978-3-030-51280-4_14.

Prieto-Blázquez, J., Gañán-Jimenez, D. (2020). **A Methodology Approach to Evaluate Cloud-Based Infrastructures in Support for e-Assessment.** Lecture Notes in Networks and Systems, vol. 96, pp. 525-536. DOI: 10.1007/978-3-030-33509-0_49. Quartile: SCOPUS SJR: Q4. (*In collaboration with the research group SmartLearn*).

K-ryptography and Information Security for Open Networks (KISON)

Salas-Piñón, J., Megías, D., Torra, V., Toger, M., Dahne, J., Sainudiin, R. (2020). **Swapping trajectories with a sufficient sanitizer**. Pattern Recognition Letters, vol. 131, pp. 474-480. DOI: 10.1016/j.patrec.2020.02.011. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Salas, J. and Torra, V. (2020). **Differentially Private Graph Publishing and Randomized Response for Collaborative Filtering**. Proceedings of the 17th International Joint Conference on e-Business and Telecommunications - SECRYPT, pp. 415-422. DOI: 10.5220/0009833804150422.

Salas J., Nunez-del-Prado M. (2020). **Privacy Preservation and Inference with Minimal Mobility Information**. En: Lossio-Ventura J., Condori-Fernandez N., Valverde-Rebaza J. (Eds). Information Management and Big Data. SIMBig 2019. Communications in Computer and Information Science, vol 1070. Springer, Cham. DOI: 10.1007/978-3-030-46140-9_13.

Salas J., González-Zelaya V. (2020). **FairMDAV: An Algorithm for Fair Privacy by Microaggregation**. En: Torra V., Narukawa Y., Nin J., Agell N. (eds) Modeling Decisions for Artificial Intelligence. MDAI 2020. Lecture Notes in Computer Science, vol 12256. Springer, Cham. DOI: 10.1007/978-3-030-57524-3_24.

Books

Nasarre Aznar, S., Perez Sola, C., Rivas Nieto, E., Simón Moreno, H. (2020). ***La tokenización de bienes en blockchain***. Madrid: Aranzadi.

Book Chapters

Garcia Font, V.. (2020). **Blockchain: Opportunities and Challenges in the Educational Context**. En: Bañeres , D.; Guerrero-Roldán, A-E; Rodríguez, M. El. (Eds). *Engineering Data-Driven Adaptive Trust-based e-Assessment Systems: Challenges and Infrastructure Solutions*, pp. 133-157. Cham: Springer. DOI: 10.1007/978-3-030-29326-0_7.

Prieto Blázquez, J. Gañán Jiménez, D. (2020). **Engineering Cloud-Based Technological Infrastructure.** En: Bañeres , D.; Guerrero-Roldán, A-E; Rodríguez, M. El. (Eds). *Engineering Data-Driven Adaptive Trust-based e-Assessment Systems*, pp. 67-83. Cham: Springer. DOI: 10.1007/978-981-15-0618-5_21.

Gender and ICT (GenTIC)

Articles

Arroyo, L. (2020). **Implications of Digital Inclusion: Digitalization in Terms of Time Use from a Gender Perspective.** *Social Inclusion*, vol. 8 (2), pp. 180-189. DOI: 10.17645/si.v8i2.2546. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Escalante-Barrios, E.L., Fàbregues, S., Meneses, J., García-Vita, M.M., Jabba, D., Ricardo-Barreto, C., Ferreira-Pérez, S.P. (2020). **Male-on-male child and adolescent sexual abuse in the Caribbean region of Colombia: A secondary analysis of medico-legal reports.** *International Journal of Environmental Research and Public Health*, vol. 17 (21), pp. -19. DOI: 10.3390/ijerph17218248. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q2.

Appendix 1 : Scientific Publications

Gender and ICT (GenTIC)

Fàbregues, S., Hong, Q.N., Escalante-Barrios, E.L., Guetterman, T., Meneses, J., Fetters, M. D. (2020). **A methodological review of mixed methods research in palliative and end-of-life care (2014-2019).** *International Journal of Environmental Research and Public Health*, vol. 17 (11), pp. 1-16. DOI: 10.3390/ijerph17113853. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q2.

González-Pérez, S., Mateos de Cabo, R., Sáinz, M. (2020). **Girls in STEM: Is It a Female Role-Model Thing?.** *Front. Psychol.*, vol. 11 (2204), pp. 1-21. DOI: 10.3389/fpsyg.2020.02204. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Martínez-Cantos, J.L., Rodó de Zárate, M. (2020). **El efecto Merlí: Televisión y elección de grados universitarios relacionados con la filosofía.** *Athenea Digital: Revista de Pensamiento e Investigación Social*, vol. 20 (1), pp. 1-24. DOI: 10.5565/rev/athenea.2453. Quartile: SCOPUS SJR:Q3.

Palmén, R., Arroyo, L., Müller, J., Reidl, S., Caprile, M. & Unger, M. (2020). **Integrating the gender dimension in teaching, research content & knowledge and technology transfer: Validating the EFFORTI evaluation framework through three case studies in Europe.** *Evaluation and Program Planning*, vol. 79, pp. 1-10. DOI: 10.1016/j.evalprogplan.2019.101751. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Parella, S. & Petroff, A. (2020). **Planning to go back home because of the economic crisis? Evidence from the short-term return intentions of bolivian migrants in Spain.** *Latin American Research Review*, vol. 55 (2), pp. 242-253. DOI: 10.25222/larr.182. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Pujol-Busquets, G., Smith, J., Larmuth, K., Fàbregues, S., Bach Faig, A. (2020). **Exploring the Perceptions of Women from Under-Resourced South African Communities about Participating in a Low-Carbohydrate High-Fat Nutrition and Health Education Program: A Qualitative Focus Group Study.** *Nutrients*, vol. 12 (4), pp.1-14. DOI: 10.3390/nu12040894. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1. (*In collaboration with the interdisciplinary research group on food, nutrition, society and health*).

Rodó de Zárate, M. (2020). **Gender, Nation, and Situated Intersectionality: the case of Catalan pro-independence feminism.** *Politics & Gender*, vol. 16 (2), pp. 608-636. DOI: 10.1017/S1743923X19000035. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Appendix 1 : Scientific Publications

Gender and ICT (GenTIC)

Sáinz Ibáñez, M., Martínez-Cantos, J.L. & Meneses, J. (2020). **Gendered patterns of coping responses with academic sexism in a group of Spanish secondary students (Diferencias de género en las respuestas de afrontamiento del sexismo académico en un grupo de estudiantes españoles de secundaria)**. *Revista de Psicología Social. International Journal of Social Psychology*, vol. 35 (2), pp. 246-281. DOI: 10.1080/02134748.2020.1721049. Quartile: ISI JCR: Q4 | SCOPUS SJR: Q3.

Sáinz Ibáñez, M., Fàbregues, S., Rodó de Zárate, M., Martínez-Cantos, J.L., Arroyo, L. Romano Serrano, M.J. (2020). **Gendered Motivations to Pursue Male-Dominated STEM Careers Among Spanish Young People: A Qualitative Study.** *Journal of Career Development*, vol. 47 (4), pp. 408-423. DOI: 10.1177/0894845318801101. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

Sáinz Ibáñez, M., Fàbregues, S., Solé Blanch, J. (2020). **Parent and Teacher Depictions of Gender Gaps in Secondary Student Appraisals of Their Academic Competences.** *Frontiers in Psychology*, vol. 11, pp. 1-12. DOI: 10.3389/fpsyg.2020.573752. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1. (In collaboration with the Social Education Laboratory).

Striebing, C., Kalpazidou Schmidt, E., Palmén, R., Holzinger, F., Nagy, B. (2020). **Women Underrepresentation in R&I: A Sector Program Assessment of the Contribution of Gender Equality Policies in Research and Innovation.** *Evaluation and Program Planning*, 79, pp. 1-14. DOI: 10.1016/j.evalprogplan.2019.101749. Quartile: ISI JCR: Q | SCOPUS SJR: Q2.

Books

Álvarez, Á., Arroyo, L., Avila, R., Cruselllas, E., de la Fuente, M., Martínez, L., Mata, M., Ruiz, T., Ruiz, M., & Torras, C. (2020). ***Les dades obertes i la intel·ligència artificial, eines per a la igualtat de gènere.*** Barcelona: Generalitat de Catalunya. Departament d'Acció Exterior, Relacions Institucionals i Transparència.

Aranda, D., Sánchez-Navarro, J., Martínez-Martínez, S., Navarro, V., Lalueza, F., Estanyol, E., Creus, A. S., Montaña Casals, M., Sanz Martos, S., Meneses, J. Planells de la Maza, A. J., Clares Gavilán, J. (2020). ***Ludoliteracy. Videojuegos, competencia digital y aprendizajes.*** Universitat Oberta de Catalunya. (*In collaboration with the Faculty of Information and Communication Sciences - GAME research group*).

Sáinz Ibáñez, M. Arroyo Prieto, L., Castaño Collado, C. (2020). ***Mujeres y digitalización. De las brechas a los algoritmos.*** Madrid: Instituto de la Mujer y para la Igualdad de Oportunidades. Ministerio de Igualdad.

Sáinz Ibáñez, M. (2020). ***Brechas y sesgos de género en la elección de estudios STEM. ¿Por qué ocurren y cómo actuar para eliminarlas?*** Sevilla: Centro de estudios andaluces.

Xavier, M., Meneses, J. (2020). ***Dropout in online higher education: A scoping review from 2014 to 2018.*** Barcelona: eLearn Center, Universitat Oberta de Catalunya.

Book Chapters

Rodó-Zárate, M. (2020). **Nationhood: feminist approaches, emancipatory processes and intersecting identities.** En: Datta, A., Hopkins, P., Johnston, L., Olson, E., Silva, J. M. (Eds). *Routledge Handbook of Gender and Feminist Geographies*, pp. 212-222. Londres: Routledge.

Appendix 1 : Scientific Publications

Gender and ICT (GenTIC)

Roqueta-Fernàndez, M. (2020). **Desmontando el privilegio masculino blanco en los medios catalanes: #OnSónLesDones.** En: Hernández Martínez, E. (Coord.), Panarese, P., Martínez Pérez, N., Suárez Villegas, J. C. (Eds). *Cartografía de los micromachismos: Dinámicas y violencia simbólica*, pp. 661-678. Madrid: Dykinson.

Conferences

Garrido, N. (2020). **El ecosistema organizacional de la economía social y solidaria en Barcelona.** En: *XVIII Congreso Internacional de Investigadores en Economía Social y Cooperativa. La Economía Social: herramienta para el fomento del desarrollo sostenible y la reducción de las desigualdades.* CIRIEC.

González, Loles, A., Jordi, C, A., Minguillón, J., Meneses, J. (2020). **Evaluando el proceso para asegurar los resultados: Experiencia de una intervención institucional orientada a la retención de los estudiantes de primer año.** En: C. Lindín, M. B. Esteban, J. C. F. Bergmann, N. Castells., P. Rivera-Vargas (Eds). *Llibre d'Actes de la I Conferència Internacional de Recerca en Educació (IRED'19): Reptes, Tendències i Compromisos*, Institut de Recerca en Educació (Universitat de Barcelona), pp. 1016-1024.

Xavier, M., Meneses, J. (2020). **A literature review on the definitions of dropout in Online Higher Education.** En: S. K. Softic, D. Andone, & A. Szucs (Eds.), European Distance and E-Learning Network (EDEN) *Proceedings of the 2020 Annual Conference: Human and artificial intelligence for the society of the future. Inspiring digital education for the next STE(A)M student generation*, pp. 73-80. European Distance and E-Learning Network.

Xavier, M., Meneses, J. (2020). **Fostering retention in Online Higher Education: Students' perceptions of an intervention addressing their first-year experience.** En: S. K. Softic, D. Andone, & A. Szucs (Eds.), *European Distance and E-Learning Network (EDEN) Proceedings of the 2020 Annual Conference: Human and artificial intelligence for the society of the future. Inspiring digital education for the next STE(A)M student generation* (pp. 389-397). European Distance and E-Learning Network.

Press publications

Rodó-Zárate, M. D. (Abril 24, 2020). ***La infància i el (des)confinament: apunts per superar la perspectiva adultocèntrica.*** *La Directa*. URL: https://directa.cat/la-infancia-i-el-desconfinament-apunts-per-superar-la-perspectiva-adultocentrica/.

Palmén, R. (Septiembre 17, 2020). ***No hay duda: los programas para lograr la igualdad de género en ciencia funcionan.*** The Conversation. URL: https://theconversation.com/no-hay-duda-los-programas-para-lograr-la-igualdad-de-genero-en-ciencia-funcionan-146348.

Blog Posts

Fàbregues, S. (Octubre 6, 2020). ***Género, producción académica y COVID-19 [Post en Blog].*** Blog de los Estudios de Psicología y Ciencias de la Educación de la Universitat Oberta de Catalunya. Retrieved from: http://epce.blogs.uoc.edu/es/2020/10/06/genero-produccion-academica-covid/.

Gender and ICT (GenTIC)

Müller, Jörg (Septiembre 29, 2020). ***Thinking Critically about Gender Equality Certification and Award Systems [Post en Blog].*** CASPER Blog. https://www.caspergender.eu/blog/thinking-critically-about-gender-equality-certification-and-award-systems.

Articles

Kvirikashvili, A. (2020). **State Cultural Policies in Georgia's Small Book Market. Case of the Translation Grant Programme 'Georgian Literature in Translation' (2010-2018).** *Knygotyra,* vol. 75, pp. 92-113. DOI: 10.15388/Knygotyra.2020.75.61. Quartile: SCOPUS SJR: Q3.

Roig, D. (2020). **Specialisation and Institutionalisation: The Transnational Professionalisation of European Literary Criticism during the Interwar Period.** *Cultural and Social History,* vol. 17 (1), pp. 29-48. DOI: 10.1080/14780038.2020.1723308. Quartile: SCOPUS SJR: Q2.

Books

Roig Sanz, D., Subirana Ortín, J (Eds). (2020). ***Cultural Organizations, Networks and Mediators in Contemporary Ibero-America*.** Londres: Routledge.

Fólica, L., Roig Sanz, D., Caristia, S. (2020). ***Literary Translation in Periodicals. Methodological challenges for a transnational approach.*** Amsterdam: John Benjamins Publishing Company.

Guerrero, G., J. Locane, J., Loy, B., Müller, G. (2020). ***Literatura latinoamericana mundial. Dispositivos y disidencias.*** Berlin: DeGruyter.

Book Chapters

Puxan Oliva, M. (2020). **Crime Fiction and the Environment.** En: Allan, J., Pepper, A., King, S., Gulddal, J. *The Routledge Companion to Crime Fiction. Abingdon:* John Benjamins.

Fólica, L., Ventsislav, I. (2020). **Between the local and the international: Enrique Gómez Carrillo and Antonio Aita at the International Institute of Intellectual Cooperation.** En: Subirana Ortín, J. Roig Sanz, D. (Eds). *Cultural Organizations, Networks and Mediators in Contemporary Ibero-America,* pp. 247-271. New York: Springer.

Ventsislav, I. (2020). **Quantitative analysis of translations in Spanish-language periodical publications (1900-1945). A methodological proposal.** En: Fólica, L., Roig Sanz, D., Caristia, S. (2020). ***Literary Translation in Periodicals. Methodological challenges for a transnational approach,*** pp. 313-324. Amsterdam: John Benjamins Publishing Company.

Roig Sanz, D., Subirana Ortín, J (Eds). (2020). **Cultural Organizations, Networks and Mediators: An Introduction.** En: *Cultural Organizations, Networks and Mediators in Contemporary Ibero-America,* pp. 3-23. Londres: Routledge.

Fólica, L., Roig Sanz, D., Caristia, S. (2020). **Towards a transnational and large-scale approach to literary translation in periodicals.** En: **Literary Translation in Periodicals. Methodological challenges for a transnational approach,** pp. 1-20. Amsterdam: John Benjamins Publishing Company.

Appendix 1 : Scientific Publications

Systems, Software and Models (SOM Research Lab)

Articles

D. Bañeres, A. Karadeniz, A.E. Guerrero-Roldan, M.E. Rodriguez (2020). **Data legibility and meaningful visualization through a learning intelligent system dashboard.** INTED2020 Proceedings, pp. 5991-5995.

Bañeres, D., Rodríguez González, M.E., Guerrero-Roldán, A.E., Karadeniz, A. (2020). **An Early Warning System to Detect At-Risk Students in Online Higher Education.** *Applied Sciences,* vol. 10 (13), pp. 1-28. DOI: 10.3390/app10134427. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Bañeres, D., Karadeeniz, A., Guerrero Roldán, A. E., Rodríguez, M.E. (2020). **Data legibility and meaningful visualization through a learning intelligent systems dashboard.** *Intend2020 Proceedings,* pp. 5991-5995. DOI: 10.21125/inted.2020.1619.

Bertoa, M.F., Burgueño, L., Moreno, N., Vallecillo, A. (2020). **Incorporating measurement uncertainty into OCL/UML primitive datatypes.** *Software and Systems Modeling,* vol. 19 (5), pp. 1163-1189. DOI: 10.1007/s10270-019-00741-0. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Bordeleau F., Cabot J., Dingel J., Rabil B.S., Renaud P. (2020). **Towards Modeling Framework for DevOps: Requirements Derived from Industry Use Case.** En: Bruel JM., Mazzara M., Meyer B. (Eds). Software Engineering Aspects of Continuous Development and New Paradigms of Software Production and Deployment. *DEVOPS 2019. Lecture Notes in Computer Science,* vol. 12055. Springer, Cham. DOI: 10.1007/978-3-030-39306-9_10.

Bruneliere, H., de Kerchove, F.M., Daniel, G., Madani, S., Kolovos, D., Cabot, J. (2020). **Scalable model views over heterogeneous modeling technologies and resources.** *Software and Systems Modeling,* vol. 19 (4), pp. 827-851. DOI: 10.1007/s10270-020-00794-6. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Bucaille S., Cánovas Izquierdo J.L., Ed-Douibi H., Cabot J. (2020). **An OpenAPI-Based Testing Framework to Monitor Non-functional Properties of REST APIs.** En: Bielikova M., Mikkonen T., Pautasso C. (Eds). *Web Engineering. ICWE 2020. Lecture Notes in Computer Science,* vol 12128. Springer, Cham. DOI: 10.1007/978-3-030-50578-3_39.

Bucchiarone, A., Cabot, J., F. Paige, R., Pierantonio, A. (2020). **Grand challenges in model-driven engineering: an analysis of the state of the research.** *Softw. Syst. Model,* vol. 19 (1): pp. 5-13 DOI: 10.1007/s10270-019-00773-6. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Bucchiarone, A., Savary-Leblanc, M., Le Pallec, X., Bruel, J-M., Cicchetti, A., Cabot, J., Gerard, S., Aslam, H., Marconi, A., Perillo, M. (2020). **Papyrus for gamers, let's play modeling.** En: Proceedings of the 23rd ACM/IEEE International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings (MODELS '20). *Association for Computing Machinery,* Article 5, pp. 1–5. DOI: 10.1145/3417990.3422002.

Cabot, J. (2020). **Positioning of the low-code movement within the field of model-driven engineering.** En: Proceedings of the 23rd ACM/IEEE International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings (MODELS '20). *Association for Computing Machinery,* Article 76, pp. 1–3. MODELS Companion. DOI: 10.1145/3417990.3420210.

Appendix 1 : Scientific Publications

Systems, Software and Models (SOM Research Lab)

Clarisó R., Cabot J. (2020). **Diverse Scenario Exploration in Model Finders Using Graph Kernels and Clustering.** En: Raschke A., Méry D., Houdek F. (Eds). Rigorous State-Based Methods. ABZ 2020. *Lecture Notes in Computer Science, vol. 12071. Springer, Cham. Rigorous State-Based Methods: 7th International Conference*, ABZ 2020, Ulm, Germany, May 27-29. DOI: 10.1007/978-3-030-48077-6_3.

Clarisó, R., González, C.A., Cabot, J. (2020). **Incremental Verification of UML/OCL Models.** *Journal of Object Technology,* vol. 19 (3), pp. 1-16. DOI: 10.5381/jot.2020.19.3.a7. Quartile: SCOPUS SJR: Q3.

Conesa, J., Batalla Busquets, J.M., Bañeres, D., Carrión, C., Conejero, I., Cruz Gil, M.C., Garcia Alsina, M., Gómez Zúñiga, B., Martínez Argüelles, M.J., Mas Garcia, X., Monjo, A., Mor, E. (2020). **Towards an Educational Model for Lifelong Learning.** *Lecture Notes in Networks and Systems*, vol. 96, pp. 537-546. DOI: 10.1007/978-3-030-33509-0_50. Quartile: SCOPUS SJR: Q4. (*In collaboration with eHealth and SmartLearn*).

Conesa, J; Cobarsí, J; Santamaria, E; Adelantado, F. (2020). **Innovation in STEM teaching in a virtual university: a visual history through analytics of internal recognition process related data over time.** En: Candel, I; Gómez, L; López, A. INTED2020 Proceedings: 14th International Technology, Education and Development Conference. Valencia: The International Association for Technology, Education and Development (IATED), pp.. 3622 - 3631.

Ed-Douibi H., Daniel G., Cabot J. (2020). **OpenAPI Bot: A Chatbot to Help You Understand REST APIs.** En: Bielikova M., Mikkonen T., Pautasso C. (Eds). Web Engineering. ICWE 2020. *Lecture Notes in Computer Science,* vol 12128. Springer, Cham. DOI: 10.1007/978-3-030-50578-3_40.

Gasparini, M., Clarisó, R., Brambilla, M., Cabot. J. (2020). **Participation Inequality and the 90-9-1 Principle in Open Source.** En: Proceedings of the 16th International Symposium on Open Collaboration (OpenSym 2020). *Association for Computing Machinery,* Article 6, pp. 1–7. DOI: 10.1145/3412569.3412582.

Gómez, A., Mendialdua, X., Barmpis, K., Bergmann, G., Cabot, J., de Carlos, X., Debreceni, C., Garmendia, A., Kolovos, D., de Lara Jaramillo, J. (2020). **Scalable modeling technologies in the wild: an experience report on wind turbines control applications development.** *Software and Systems Modeling,* vol. 19 (5), pp. 1229-1261. DOI: 10.1007/s10270-020-00776-8. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Gómez, A., Iglesias-Urkia, M., Urbieta, A., Cabot, J. (2020). **A model-based approach for developing event-driven architectures with AsyncAPI.** En: Proceedings of the 23rd ACM/IEEE International Conference on Model Driven Engineering Languages and Systems (MODELS '20). *Association for Computing Machinery,* pp. 121–131. DOI: 10.1145/3365438.3410948.

Gwendal Daniel, Jordi Cabot, Laurent Deruelle, Mustapha Derras (2020). **Xatkit: A Multimodal Low-Code Chatbot Development Framework.** *IEEE Access*, vol. 8: pp. 15332-15346. DOI: 10.1109/ACCESS.2020.2966919. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Appendix 1 : Scientific Publications

Systems, Software and Models (SOM Research Lab)

Martínez, S., Wimmer, M., Cabot, J. (2020). **Efficient plagiarism detection for software modeling assignments.** *Computer Science Education*, vol. 30 (2), pp. 187-215. DOI: 10.1080/08993408.2020.1711495. Quartile: SCOPUS SJR: Q1.

Mazak, A., Wolny, S., Gómez, A., Cabot, J., Wimmer, M., Kappel, G. (2020). **Temporal Models on Time Series Databases.** *Journal of Object Technology,* vol. 19 (3), pp. 1-15. DOI: 10.5381/jot.2020.19.3.a14. Quartile: SCOPUS SJR: Q3.

Muñoz, P., Burgueño, L., Ortiz, V.,Vallecillo, A. (2020). **Extending OCL with Subjective Logic.** *Journal of Object Technology,* vol. 19 (3), pp. 1-15. DOI: 10.5381/jot.2020.19.3.a1. Quartile: SCOPUS SJR: Q3.

Mussbacher, G., Combemale, B., Kienzle, J., Abrahão, S., Ali, H., Bencomo, N., Búr, M., Burgueño, L., Engels, G., Jeanjean, P., Jézéquel, J.-M., Kühn, T., Mosser, S., Sahraoui, H., Syriani, E., Varró, D., Weyssow, M. (2020). **Opportunities in intelligent modeling assistance.** *Software and Systems Modeling,* vol. 19 (5), pp. 1045-1053. DOI: 10.1007/s10270-020-00814-5. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Mussbacher, G., Combemale, B., Abrahão, S., Bencomo, N., Burgueño, L., Engels, G., Kienzle, J., Kühn, T., Mosser, S., Sahraoui, H., Weyssow, M. (2020). **Towards an assessment grid for intelligent modeling assistance.** In Proceedings of the 23rd ACM/IEEE International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings (MODELS '20). *Association for Computing Machinery,* Article 48, pp. 1–10. DOI: 10.1145/3417990.3421396.

Planas, E., Cabot, J. (2020). **How are UML class diagrams built in practice? A usability study of two UML tools: Magicdraw and Papyrus.** *Computer Standards & Interfaces*, 67. DOI: 10.1016/j.csi.2019.103363. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Pérez-Soler S., Daniel G., Cabot J., Guerra E., de Lara J. (2020). **Towards Automating the Synthesis of Chatbots for Conversational Model Query.** En: Nurcan S., Reinhartz-Berger I., Soffer P., Zdravkovic J. (Eds). Enterprise, Business-Process and Information Systems Modeling. BPMDS 2020, EMMSAD 2020. *Lecture Notes in Business Information Processing*, vol 387. Springer, Cham. DOI: 10.1007/978-3-030-49418-6_17.

Perianez-Pascual, J., Rodriguez-Echeverria, R., Burgueño, L., Cabot, J. (2020). **Towards the optical character recognition of DSLs.** En: Proceedings of the 13th ACM SIGPLAN International Conference on Software Language Engineering (SLE 2020). *Association for Computing Machinery,* pp. 126–132. DOI: 10.1145/3426425.3426937.

Sadovykh, A., Bagnato, A., Truscan, D., Pierini, P., Bruneliere, H., Gómez, A., Cabot, J., Avila-Garcia, O., Afzal, W. (2020). **A Tool-Supported Approach for Building the Architecture and Roadmap in MegaM@Rt2 Project.** *Advances in Intelligent Systems and Computing,* vol. 925, pp. 265-274. DOI: 10.1007/978-3-030-14687-0_24. Quartile: SCOPUS SJR: Q3.

Appendix 1 : Scientific Publications

Systems, Software and Models (SOM Research Lab)

Books

Bañeres Besora, D., Rodríguez González, M. E., Guerrero Roldán, A. E. (2020). ***Engineering Data-Driven Adaptive Trust-based e-Assessment Systems: Challenges and Infrastructure Solutions.*** Cham: Springer Nature.

Wehrheim, H., Cabot, J. (2020). ***Fundamental Approaches to Software Engineering.*** Springer.

Book Chapters

Baró Solé, X., Muñoz Bernaus, R., Bañeres Besora, D., Guerrero Roldán, A. E. (2020). **Biometric tools for learner identity in e-assessment.** En: Bañeres, D., Guerrero Roldán, A. E., Rodríguez, M. E. *Engineering Data-Driven Adaptive Trust-based e-Assessment Systems: Challenges and Infrastructure Solutions*, pp. 41-65. Cham: Springer Nature. (*In collaboration with the Scene understanding and artificial intelligence lab and the Technology-Enhanced knowledge and interaction group*).

Urban Transformation and Global Change Laboratory (TURBA Lab)

Articles

Anguelovski, I., Brand, A.L., Connolly, J., Corbera, E., Kotsila, P., Steil, J., Garcia-Lamarca, M., Triguero-Mas, M., Cole, H., Baró, F., Langemeyer, J., Pérez del Pulgar, C., Shokry, G., Sekulova, F., Argüelles, L. (2020). **Expanding the Boundaries of Justice in Urban Greening Scholarship: Toward an Emancipatory, Antisubordination, Intersectional, and Relational Approach.** *Annals of the American Association of Geographers,* vol. 110 (6), pp. 1743-1769. DOI: 10.1080/24694452.2020.1740579. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Antunes, B., March, H. & Connolly, J. (2020). **Spatializing gentrification in situ: A critical cartography of resident perceptions of neighbourhood change in Vallcarca, Barcelona.** *Cities*, vol. 97, DOI: 10.1016/j.cities.2019.102521. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Argüelles L., (2020). **Entangled alternatives: political-economic conditions constructing farmer training programs as solutions to the farming crisis.** *Journal of Political Ecology*, vol. 27 (1). pp.1148-1165. DOI: 10.2458/v27i1.23241. Quartile: SCOPUS SJR: Q1.

Cebrián-Piqueras, M.A., Filyushkina, A., Johnson, D., Lo, V.B., López-Rodríguez, M.D., March, H., Oteros Rozas, E., Peppler-Lisbach, C., Quintas-Soriano, C., Raymond, C., Ruiz-Mallen, I., van Riper, C.J., Zinngrebe, Y., Plieninger, T. (2020). **Scientific and local ecological knowledge, shaping perceptions towards protected areas and related ecosystem services.** *Landscape Ecology,* vol. 35 (11), pp. 2549-2567. DOI: 10.1007/s10980-020-01107-4. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Corbera, E., Anguelovski, I., Honey-Roses, J., Ruiz-Mallen, I. (2020). **Academia in the Time of COVID-19: Towards an Ethics of Care.** *Planning, Theory & Practice,* vol. 21 (2), pp. 191-199. DOI: 10.1080/14649357.2020.1757891. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Corres, A., Rieckmann, M., Espasa Roca, A., Ruiz-Mallen, I. (2020). **Educator Competences in Sustainability Education: A Systematic Review of Frameworks.** *Sustainability,* vol. 12 (23), pp. 1-24. DOI: 10.3390/su12239858. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Appendix 1 : Scientific Publications

Urban Transformation and Global Change Laboratory (TURBA Lab)

Erol, A. (2020). **Freedom and control in the digital age.** *Human Affairs*, vol. 30 (4), pp. 570-576. DOI: 10.1515/humaff-2020-0050. Quartile: SCOPUS SJR: Q3.

Galais-González, C., Serrano-Balaguer, I. (2020). **The effects of regional attachment on ideological self-placement: a comparative approach.** *Comparative European Politics*, vol. 18 (4), pp. 487-509. DOI: 10.1057/s41295-019-00196-z. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q1.

Heras, M., Ruiz-Mallen, I., Gallois, S. (2020). **Staging science with young people: bringing science closer to students through stand-up comedy.** *International Journal of Science Education*, vol. 42 (12), pp. 1968-1987. DOI: 10.1080/09500693.2020.1807071. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q1.

López-Rodríguez, M.D., Ruiz-Mallen, I., Oteros Rozas, E., March, H., Keller, R., Lo, V.B., Cebrián-Piqueras, M.A., Andrade, R. (2020). **Delineating participation in conservation governance: Insights from the Sierra de Guadarrama National Park (Spain).** *Environmental Science & Policy*, vol. 114, pp. 486-496. DOI: 10.1016/j.envsci.2020.09.019. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

López-Rodríguez, M.D., Ametzaga-Arregi, I., Viota, M., Cabello, J. (2020). **Interfaz ciencia-gestión-sociedad en el ámbito de la conservación: avances conceptuales y metodológicos.** *Ecosistemas: Revista Científica de Ecología y Medio Ambiente,* vol. 29 (1), pp. 1-3 DOI: 10.7818/ECOS.1965. Quartile: SCOPUS SJR: Q3.

López-Rodríguez, M.D., Chamizo, S., Cantón, Y., Rodríguez-Caballero, E. (2020). **Identifying social-ecological gaps to promote biocrust conservation actions.** *Web Ecology,* vol. 20, pp. 117-132. DOI: 10.5194/we-20-117-2020. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

López-Rodríguez, M.D., Salinas-Bonillo, M.J., Torres, M.T., Pacheco-Romero, M., Guirado, E., Castro, H., Cabello, J. (2020). **Impulsando estrategias colectivas ciencia-gestión-sociedad para conservar el hábitat de Ziziphus lotus (Hábitat Prioritario 5220).** *Ecosistemas: Revista Científica de Ecología y Medio Ambiente,* vol. 29(1), pp. 1-17. DOI: 10.7818/ECOS.1890. Quartile: SCOPUS SJR: Q3.

March, H., Garcia, X., Domene, E., Saurí, D. (2020). **Tap water, bottled water or in-home water treatment systems: Insights on household perceptions and choices.** *Water*, vol. 12 (5), pp. 1-13. DOI: 10.3390/W12051310. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Nóblega Carriquiry, A., Saurí, D., March, H. (2020). **Community Involvement in the Implementation of Sustainable Urban Drainage Systems (SUDSs): The Case of Bon Pastor, Barcelona.** *Sustainability,* 12(2), 1-19. DOI: 10.3390/su12020510. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Pinker, A., Argüelles, L., Fischer, A., Becker, S. (2020). **Between straitjacket and possibility: Energy initiatives and the politics of regulation.** *Geoforum,* vol. 113, pp. 14-25. DOI: 10.1016/j.geoforum.2020.04.016. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Purcell, T., Loftus, A., March, H. (2020). **Value-rent-finance.** *Progress in Human Geography*, vol. 44 (3), pp. 437-456. DOI: 10.1177/0309132519838064. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Urban Transformation and Global Change Laboratory (TURBA Lab)

Ruiz-Mallen, I., Heras, M. (2020). **What sustainability? Higher Education Institutions' pathways to reach the Agenda 2030.** *Sustainability,* vol. 12 (4), pp. 1-18. DOI: 10.3390/su12041290. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Ruiz Mallén, I., Heras, M. (2020). **Re-Discovering STEM Education through Arts.** *Science*. DOI: 10.1126/science.1194998.

Satorras, M., Ruiz-Mallen, I., Monterde, A., March, H. (2020). **Co-production of urban climate planning: Insights from the Barcelona Climate Plan.** *Cities*, vol. 106, pp. 1-11 DOI: 10.1016/j.cities.2020.102887. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1. (*In collaboration with the research group Communication Networks & Social Change (CNSC)*).

Schismenos, A.; Niaros, V.; Lemos, L. (2020). **Cosmolocalism: Understanding the Transitional Dynamics Towards Post-Capitalism.** *Triple-C*, vol. 18 (2) pp. 670-684. DOI: 10.31269/triplec.v18i2.1188. Quartile: SCOPUS SJR: Q2.

Serrano-Balaguer, I., Calvet-Mir, L., Ribera Fumaz, R., Díaz-Reviriego, I., March, H. (2020). **A social network analysis of the Spanish network of smart cities.** *Sustainability*, vol. 12 (12), pp. 1-13. DOI: 10.3390/su12125219. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q2.

Serrano-Balaguer, I. (2020). **Ethnic alignment in divided regions: individual and contextual factors.** *Territory, Politics, Governance,* vol. 8 (4), pp. 532-552. DOI: 10.1080/21622671.2019.1582357. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Books

Cardullo, P. (2020). ***Citizens in the 'Smart City': Participation, Co-Production, Governance.*** Londres: Routledge.

Book Chapters

Luz, A. C., Ruiz Mallén, I. (2020). **Community-Based Management and Research to Forest Conservation.** En: Leal Filho, W., Wall, T., Lange Salvia, A., Brandli, L., Azul, A. M. *Life on Land: Encyclopedia of the UN Sustainable Development Goals,* pp. 1-14. New York: Springer.

Ruiz Mallen, I. (2020). Co-production and resilient cities to climate change. En: Nared, J., Bole, D. Participatory *Research and Planning in Practice*, pp. 1-11. Cham: Springer.

Satorras, M., Sauri, D., March, H. (2020). **Reinventing public water amid Covid-19 in Terrassa.** En: McDonald, D.A., Spronk, S., Chavez, D. *Public Water and Covid-19: Dark Clouds and Silver Linings*, pp. 61-84. Municipal Service Project (Kingston), Transnational Institute (Amsterdam) and Latin American Council of Social Sciences (CLACSO) (Buenos Aires).

Wireless Networks (WiNE)

Articles

Gindullina, E., Badia, L., Vilajosana, X. (2020). **Energy modeling and adaptive sampling algorithms for energy-harvesting powered nodes with sampling rate limitations.** *Transactions on Emerging Telecommunications Technologies*, vol. 31 (3), pp. 1-15. DOI: 10.1002/ett.3754. Quartile: ISI JCR: Q3 | SCOPUS SJR: Q2.

Vázquez Gallego, F., Tuset-Peiró, P., Alonso, L., Alonso Zarate, J. (2020). **Delay and energy consumption analysis of frame slotted ALOHA variants for massive data collection in internet-of-things scenarios.** *Applied Sciences,* vol. 10 (1), pp. 1-16. DOI: 10.3390/app10010327. Quartile: ISI JCR: Q2 | SCOPUS SJR: Q1.

Vilajosana, X., Watteyne, T., Chang, T., Vucinic, M., Duquennoy, S., Thubert, P. (2020). **IETF 6TiSCH: A Tutorial.** *IEEE Communications Surveys and Tutorials,* vol. 22 (1), pp. 595-615. DOI: 10.1109/COMST.2019.2939407. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Wilhelmi, F., Barrachina-Muñoz, S., Bellalta, B., Cano Bastidas, C., Jonsson, A., Ram, V. (2020). **A Flexible Machine-Learning-Aware Architecture for Future WLANs.** *IEEE Communications Magazine,* vol. 58 (3), pp. 25-31 DOI: 10.1109/MCOM.001.1900637. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Papadopoulos, G.Z., Theoleyre, F., Vilajosana, X. (2020). **Industrial Internet of Things: Specificities and challenges.** *Internet Technology Letters*, vol. 3 (4), pp. 1-5. DOI: 10.1002/itl2.172.

Chang, T., Vucinic, M., Vilajosana, X., Dujovne, D., Watteyne, T. (2020). **6TiSCHminimal scheduling function: Performance evaluation.** *Internet Technology Letters,* vol. 3 (4), pp. 1-6. DOI: 10.1002/itl2.170.

Chang, T., Watteyne, T., Wheeler, B., Maksimovic, F., Khan, O., Mesri, S., Lee, L., Suciu, I., Burnett, D., Vilajosana, X., Pister, K. (2020). **6TiSCH on SCuM: Running a Synchronized Protocol Stack without Crystals.** *Sensors*, vol. 20 (7), pp. 1-15. DOI: 10.3390/s20071912. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Gregoratti, D., Mestre, X., Vilajosana, X. (2020). **Model-Aware Collision Resolution for High-Order Orthogonal Modulations.** *IEEE Wireless Communications Letters*, vol. 9 (7), pp. 957-961. DOI: 10.1109/LWC.2020.2975794. Quartile: ISI JCR: Q1 | SCOPUS SJR: Q1.

Richardson Ansah, M., Sowah, R.A., Melià Seguí, J., Katsriku, F.A., Vilajosana, X., Owusu-Banahene, W. (2020). **Characterising foliage influence on LoRaWAN pathloss in a tropical vegetative environment.** *IET Wireless Sensor Systems,* vol. 10 (5), pp. 198-207. DOI: 10.1049/iet-wss.2019.0201. Quartile: SCOPUS SJR: Q2.

Tuset-Peiró, P., Gomes, R.D., Thubert, P., Cuerva, E., Egusquiza, E. & Vilajosana, X. (2020). **A dataset to evaluate ieee 802.15.4g sun for dependable low-power wireless communications in industrial scenarios.** *Data*, vol. 5 (3), pp. 1-19. DOI: 10.3390/data5030064. Quartile: SCOPUS SJR: Q2.

Kousaridas, A., Schimpe, A., Sebastian, E., Vilajosana, X., Fallgren, M., Landi, G., Moscatelli, F., Barmpounakis, S., Gallego, F., Sedar, R., Silva, R., Dizambourg, L., Wendt, S., Eckert, K., Jesus, A. (2020). **5G Cross-Border Operation for Connected and Automated Mobility: Challenges and Solutions.** *Future Internet*, vol. 12 (1), pp. 5. DOI: 10.3390/fi12010005.

Appendix 1 : Scientific Publications

Wireless Networks (WiNE)

Boquet, G., Tuset, P., Adelantado, F., Watteyne, T., Vilajosana, X. **LoRa-E: Overview and Performance Analysis.** *CoRR.*

Famitafreshi G., Cano C. (2020) **Achieving Proportional Fairness in WiFi Networks via Bandit Convex Optimization.** En: Boumerdassi S., Renault É., Mühlethaler P. (eds) Machine Learning for Networking. MLN 2019. *Lecture Notes in Computer Science*, vol 12081. Springer, Cham. DOI: 10.1007/978-3-030-45778-5_7.

T. Chang et al. (2020). **Industrial IoT with Crystal-Free Mote-on-Chip.** *2020 IEEE Symposium on VLSI Circuits,* pp. 1-2, DOI: 10.1109/VLSICircuits18222.2020.9162981.

R. D. Gomes, P. Tuset-Peiró and X. Vilajosana (2020). **Improving Link Reliability of IEEE 802.15.4g SUN with Adaptive Modulation Diversity.** 2020 IEEE 31st Annual International Symposium on Personal, *Indoor and Mobile Radio Communications,* pp. 1-7. DOI 10.1109/PIMRC48278.2020.9217301.

P. Tuset-Peiró, F. Adelantado, X. Vilajosana and R. D. Gomes (2020). **Reliability through modulation diversity: can combining multiple IEEE 802.15.4-2015 SUN modulations improve PDR?**. 2020 *IEEE Symposium on Computers and Communications (ISCC)*, pp. 1-6. DOI: 10.1109/ISCC50000.2020.9219719.

Solimini, D., Tuset-Peiró, P., Boquet, G., Vilajosana, X. Vázquez-Gallego, F. (2020). **Improving Link Reliability of IEEE 802.15.4g SUN with Re-Transmission Shaping.** En: Proceedings of the 17th ACM Symposium on Performance Evaluation of Wireless Ad Hoc, Sensor, & Ubiquitous Networks (PE-WASUN '20). *Association for Computing Machinery,* pp. 25–32. DOI: 10.1145/3416011.3424750.

Martinez, B., X. Vilajosana, X. (2020). **Exploiting the Solar Energy Surplus for Edge Computing.** En: *IEEE Transactions on Sustainable Computing.*

Í Borja, M. Cano, C., Vilajosana, X. (2020). **Debunking Wireless Sensor Networks.** arXiv - CS - *Networking and Internet Architecture.*

Tuset-Peiró, P., Gomes, R.D., Thubert, P., Cuerva, E., Egusquiza, E. & Vilajosana, X. (2020). **A dataset to evaluate ieee 802.15.4g sun for dependable low-power wireless communications in industrial scenarios.** *Data*, vol. 5 (3), pp. 1-19. DOI:: 10.3390/data5030064. Quartile: SCOPUS SJR: Q2.

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Appendix 2
Doctoral Theses

Appendix 2 : Doctoral Theses

This appendix lists the doctoral theses read in 2020 that were directed by at least one director of an IN3 research group.

Appendix 2 : Doctoral Theses

Communication Networks & Social Change (CNSC)

Wagner, S. (2020). ***A multi-sited ethnography of the decolonization of mobile media among Guaraní.*** Director: **Mireia Fernández-Ardèvol** (Universitat Oberta de Catalunya - CNSC). **Doctoral programme in Information and Knowledge Society** of the Universitat Oberta de Catalunya.

Marichal Baráibar, S. (2020). ***Exploring through prototyping embodied interaction design developing systems for mathematics learning for children with visual impairments and without.*** Directors: **Josep Blat** (Universitat Pompeu Fabra) and **Andrea Rosales** (Universitat Oberta de Catalunya). Doctoral programme in Information and Communication Technologies of Pompeu Fabra University.

Complex Systems @ IN3 (CoSIN3)

Palazzi, M. J. (2020). ***Structural and dynamical interdependencies in complex networks at meso- and macroscale: nestedness, modularity, and in-block nestedness. Directores: Albert Solé-Ribalta*** and ***Javier Borge Holthoefer*** (Universitat Oberta de Catalunya). **UOC doctoral programme in Network and Information Technologies.**

Internet Computing & Systems Optimization (ICSO) and Wireless Networks Research Lab (WiNE)

Juan Ferrer, A. (2020). ***Ad-hoc Formation of Edge Clouds over Heterogeneous Non-dedicated Resources.*** Directors: **Joan M. Marquès** (Universitat Oberta de Catalunya - ICSO) and **Josep Jorba** (Universitat Oberta de Catalunya - WiNE). **UOC doctoral programme in Network and Information Technologies**.

Appendix 2 : Doctoral Theses

Wireless Networks Research Lab (WiNE)

Suciu, I. (2020). ***Energy Aware Optimization for Low Power Radio Technologies.*** Directors: **Xavier Vilajosana** (Universitat Oberta de Catalunya) and **Andrea Bartoli** (Worldsesning). Doctoral programme in Telematics Engineering of the Universitat Politècnica de Catalunya.

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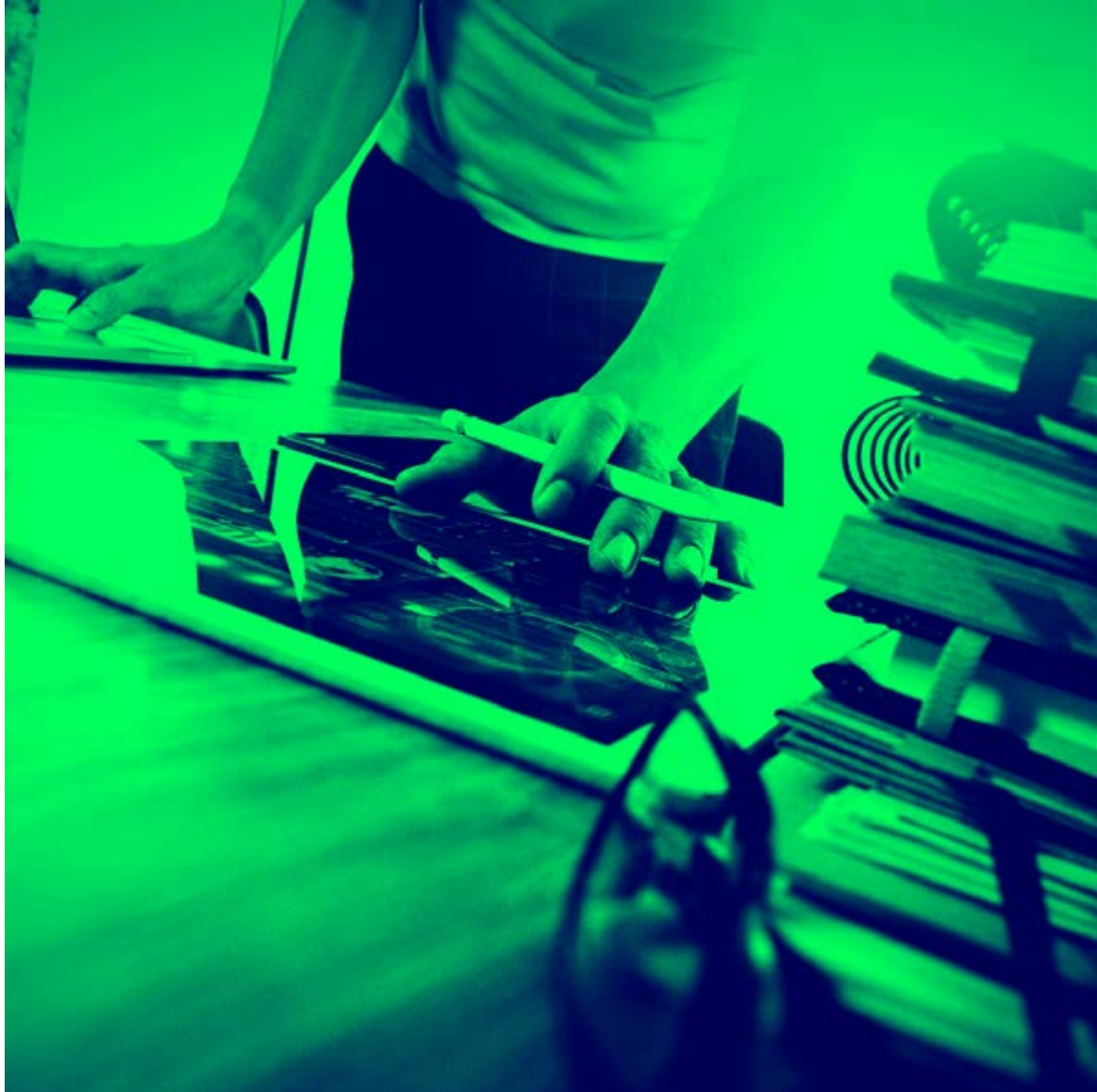
Appendix 3
Projects



Appendix 3 : Projects

International Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Ageing + Communication + Technologies (ACT): Experiencing a digital world in later life	Communication Networks & Social Change (CNSC) (*In collaboration with research groups from other centres and universities*)	Mireia Fernández-Ardèvol	2014 - 2021	Social Science and Humanities Research Council of Canada (SSHRC)
Exploiting dual-band LPWAN for opportunistic low-cost communications	Wireless Networks (WINE)	David Megías (KISON)	2019 - 2021	Cisco Systems Inc
Rhenus Sponsorship agreement: Applications of Intelligent Algorithms & Analytics in Smart Transportation & Logistics	Internet Computing & Systems Optimization (ICSO)	Cristina Cano Bastidas	2019 - 2022	Rhenus Logistics, S.A.U.
Smart Cities in Global Comparative Perspective: Worlding and Provincializing Relationships	Urban Transformation and Global Change Laboratory (TURBA Lab)	Ramon Ribera Fumaz	2020-2022	Sciences and Humanities Research Council of Canada

Annex 3 : Projects

European Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
MegaModelling at Runtime - scalable model-based framework for continuous development and runtime validation of complex system	Systems, Software and Models (SOM Research)	Jordi Cabot Sagrera	2017 - 2020	European Union's Horizon 2020 Research and Innovation Programme
Single Point Of aTtachment communications empowered by cLoud computing and bIG data analytics running on-top of massively distributed and loosely-coupled Heterogeneous mobile data neTworks	Wireless Networks (WINE)	Ferran Adelantado Freixer	2017 - 2021	European Commission
Communities of PrACTice for Accelerating Gender Equality and Institutional Change in Research and Innovation across Europe	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Jörg Müller	2018 - 2022	European Union's Horizon 2020 Research and Innovation Programme
Mediterranean Open Resources for Social Innovation of Socially Responsive Enterprises	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Jörg Müller	2018 - 2022	Interreg MED Programme co-financed by the European Regional Development Fund

Annex 3 : Projects

European Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Social Networks of the Past. Mapping Hispanic and Lusophone Literary Modernity, 1898-1959	Global Literary Studies	Diana Roig Sanz	2018 - 2023	European Research Council (ERC) under the European Union's Horizon 2020 Research and Innovation Programme
Platform Labour in Urban Spaces: Fairness, Welfare, Development	Digital Commons (DIMMONS) (*In collaboration with research groups from other centres and universities*)	Mayo Fuster Morell	2019 - 2021	European Union's Horizon 2020 Research and Innovation Programme
PyroLife – Formando una nueva generación de expertos/as en la gestión integrada de incendios forestales	Care and Preparedness in the Network Society (CareNet) (*In collaboration with research groups from other centres and universities*)	Miriam Arenasi	2019 - 2023	European Union's Horizon 2020 Research and Innovation Programme

Annex 3 : Projects

European Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Certification-Award Systems to Promote Gender Equality in Research	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Jörg Müller	2020 - 2021	European Union's Horizon 2020 Research and Innovation Programme
STEM education and Practices are Not Only about the cONtent	Urban Transformation and Global Change Laboratory (TURBA Lab)	Isabel Ruiz Mallen	2018 - 2021	European Commission
A Rounder Sense of Purpose II	Urban Transformation and Global Change Laboratory (TURBA Lab)	Isabel Ruiz Mallen	2018 - 2021	European Commission
IoT Supply Chain Platform for Animal Feed Industry	Internet Computing & Systems Optimization (ICSO)	Angel Alejandro Juan Perez	2019 - 2020	European Commission
Unleashing future-facing urban hubs through culture and creativity-led strategies of transformative time	Urban Transformation and Global Change Laboratory (TURBA Lab)	Ramon Ribera Fumaz	2020-2024	European Commission

Annex 3 : Projects

National Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Open Data para todos: Una infraestructura basada en APIs para la explotación de fuentes de datos online	Systems, Software and Models (SOM Research)	Jordi Cabot Sagrera	2016 - 2021	Ministry of Science, Innovation and Universities
MegaModelado en tiempo de ejecución un framework escalable y basado en modelos para la validación y el desarrollo continuo de sistemas complejos	Systems, Software and Models (SOM Research)	Jordi Cabot Sagrera	2018 - 2020	"La Caixa" Foundation - RecerCaixa Programme
"Being Connected" at Home: Making use of digital devices in later life (BCONNECT@HOME)	Care and Preparedness in the Network Society (CareNet) and Communication Networks & Social Change (CNSC) (*In collaboration with research groups from other centres and universities*)	Daniel López Gómez (CareNet) y Mireia Fernández-Ardèvol (CNSC)	2018 - 2021	Ministry of Economy, Industry, and Competitiveness (MINECO), National R&D&I Plan
Effects and effectiveness of interventions aimed at increasing young women's interest in science and technology	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Milagros Sáinz	2018 - 2021	Spanish Ministry of Economy, Industry and Competitiveness (MINECO), Spanish State Research Agency (AEI), and European Regional Development Fund (ERDF)

Annex 3 : Projects

National Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
REPNIN+: Red de Posicionamiento y Navegación en Interiores y Exteriores Delimitados	Internet Computing & Systems Optimization (ICSO)	Antoni Pérez Navarro	2018 - 2020	Ministry of Science, Innovation and Universities
Red de Investigación sobre la Pobreza Hídrica	Urban Transformation and Global Change Laboratory (TURBA Lab)	Hug March Corbella	2018 - 2020	Ministry of Science, Innovation and Universities
Hybrid patterns in uni- and multi-layer complex networks: theory and applications	Complex Systems @ IN3 (CoSIN3)	Javier Borge Holthoefer	2019 - 2021	Ministry of Science, Innovation and Universities
Allocation Methods to Improve the quality of service in Community-owned Systems	Internet Computing & Systems Optimization (ICSO)	Joan Manuel Marquès Puig	2019 - 2021	Ministry of Science, Innovation and Universities
FPI-IOT Orientado al consumidor conforme con el GDOR/IOT Doméstica	K-ryptography and Information Security for Open Networks (KISON)	David Megías Jímenez, Helena Rifà Pous	2019 - 2021	Ministry of Science, Innovation and Universities

Annex 3 : Projects

National Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
The political ecology of urban resilience to hydro-climatic events in Spain	Urban Transformation and Global Change Laboratory (TURBA Lab)	Hug March Corbella, Isabel Ruiz Mallen	2019 - 2021	Ministry of Science, Innovation and Universities
An inclusive approach to assessing integrative scenarios and visions for protected area management	Urban Transformation and Global Change Laboratory (TURBA Lab)	Isabel Ruiz Mallen	2019 - 2021	Ministry of Science, Innovation and Universities
Shaping 5G technologies and beyond to support the digitalization of the industry	Wireless Networks (WINE)	Xavier Vilajosana Guillén	2019 - 2021	Ministry of Science, Innovation and Universities
Ocean +: Sea Crime in Contemporary Literature and Film /Océanos +: Crímenes en el mar en la literatura y el cine contemporáneos	Global Literary Studies	Diana Roig Sanz	2019 - 2021	"Europe Research" Dynamization Actions 2019, State R&D Program Oriented to the Challenges of the Society by the Spanish Ministry of Science, Innovation and Universities
Spanish Network in Intelligent and Sustainable Transportation	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2020-2021	Ministry of Science, Innovation and Universities

Annex 3 : Projects

National Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Low-cost, UHF RFID sensor for fabric material detection and on-body sensing	Wireless Networks (WINE)	Joan Melià Seguí	2020 - 2021	"La Caixa" Foundation
Sistemas de Transporte Eficientes y Sostenibles en Ciudades Inteligentes: Internet de las Cosas, Analítica del Transporte, y Algoritmos Ágiles	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2019 - 2023	Ministry of Science, Innovation and Universities
Analytics Research en Deportes y Salud bajo una Perspectiva de Género	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2020	Supreme Council for Sports
FPI-IOT geared towards the consumer in accordance with the GDPR/Domestic IOT	K-ryptography and Information Security for Open Networks (KISON)	Farzana Kabir	2020 - 2023	Ministry of Science, Innovation and Universities
FPI - Adaptación de las tecnologías 5G y alternativas para soportar la digitalización de la industria	Wireless Networks (WINE)	Jon Lejarreta Andrés	2020 - 2024	Ministry of Science, Innovation and Universities

Annex 3 : Projects

Regional Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Collaborative Medication Management: A research and participatory action project in mental health	Care and Preparedness in the Network Society (CareNet)(*In collaboration with research groups from other centres and universities*)	Assumpció Pié Balaguer	2017 - 2020	"La Caixa" Foundation - RecerCaixa Programme
Aplicaciones de aprendizaje automático, simulación, y metaheurísticas para resolver problemas del mundo real	Internet Computing & Systems Optimization (ICSO)	Daniel Riera Terrén	2018 - 2021	Government of Catalonia
Aplicacions de l'Analítica a Ciutats Intel·ligents i Sostenibles	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2018 - 2021	Government of Catalonia
Polyhedral Views on Gender Violence	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Milagros Sáinz Ibáñez	2018 - 2020	"La Caixa" Foundation - RecerCaixa Programme
Applications of Data Analytics and Metaheuristic Algorithms to Optimize Real-Life Logistics and Transportation Activities	Internet Computing & Systems Optimization (ICSO)	Daniel Riera Terrén	2018 - 2020	Agency for Management of University and Research Grants (AGAUR) and Government of Catalonia

Annex 3 : Projects

Regional Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Share Barcelona: Acord de col·laboració en matèria d'economia col·laborativa	Digital Commons (DIMMONS)	Mayo Fuster Morell	2019 - 2020	Barcelona City Council
Hi, my name is LIS. May I help you	Systems, Software and Models (SOM Research)	David Bañeres Besora	2019 - 2020	Universitat Oberta de Catalunya
Looming Factory	Wireless Networks (WINE)	Pere Tuset Peiró	2019 - 2021	Government of Catalonia
Predictive maintenance of industrial cooling systems	Wireless Networks (WINE)	Xavier Vilajosana Guillén	2019 - 2022	Agency for Management of University and Research Grants (AGAUR)
Aqüicultura Digital Oberta	Wireless Networks (WINE)	Xavier Vilajosana Guillén	2019 - 2021	Department of Climate Action, Food and Rural Agenda
Finding the right moment and quantity to restock silos, in order to optimize the delivery routes and silo's inventories	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2019 - 2020	Government of Catalonia

Annex 3 : Projects

Regional Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
Fem IOT	Wireless Networks (WINE)	Xavier Vilajosana Guillén	2019 - 2022	Government of Catalonia
Open data portal and research on the incidence of occupational segregation in the prevalence of COVID-19 from a gender intersectional approach	Gender and ICT (GenTIC) (*In collaboration with research groups from other centres and universities*)	Lídia Arroyo	2020 - 2021	Agency for Management of University and Research Grants (AGAUR) and Government of Catalonia
WiLD: sistema sense fils de detecció de fugues a línies de producció de vehicles	Wireless Networks (WINE)	Joan Melià Seguí	2020 - 2021	Agency for Management of University and Research Grants (AGAUR) and Government of Catalonia
Generació massiva de xatbots sota demanda. Xatkit	Systems, Software and Models (SOM Research)	Jordi Cabot Sagrera	2020 - 2022	Agency for Health Quality and Assessment of Catalonia (AQuAS), Government of Catalonia

Annex 3 : Projects

Regional Projects

Name	Research Group	IN3-UOC Principal Investigators	Period	Funding Entity
EFC: A tool for the assessment of the energetic footprint of cloud computing	Wireless Networks (WINE)	Xavier Vilajosana Guillén	2020 - 2021	Barcelona Mobile World Capital Foundation
Metodologia integral i circular per la presa de decisions comercials	Internet Computing & Systems Optimization (ICSO)	Ángel Alejandro Juan Perez	2020 - 2022	Department of Climate Action, Food and Rural Agenda

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