



8th AUSTRALIA-SPAIN RESEARCH FORUM “A DIGITAL WORLD” EVENT REPORT



Images: 'Rare Mushrooms' by Jonathan Zawada

25th Nov 2022 @ Macquarie University + Online

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SUMMARY

The association [Spanish Researchers in Australia-Pacific \(SRAP\)](#) organizes annually the "Australia-Spain Research Forum", a multidisciplinary conference aimed at the wider community, to highlight Australia-Spain research and present broad research and cultural topics which are of special interest to the Australian and Spanish societies.

SRAP promotes and supports networking between Australia-Pacific and Spanish research institutes and universities and provides assistance and networking support for Spanish researchers in Australia-Pacific. The Australia-Spain Research Forum is our main networking event, putting together Australian and Spanish researchers in multiple disciplines, as well as between universities, research centers, industries, diplomats and even artists who have an interest in scientific research.

In 2022 SRAP organized the 8th Australia-Spain Research Forum entitled "A Digital World", with the aim of showing "how the digital world is all around us". It was hosted at The [Australian Hearing Hub](#), Macquarie University (Sydney, NSW) on Friday 25th of November 2022 with the option of attending virtually or in-person.

The 2022 edition of the SRAP Forum was sponsored by the [Spanish Embassy in Australia](#), the [Australia-Spain Council Foundation](#), the [Ramón Areces Foundation](#), [Instituto Cervantes Sidney](#) and [Indra Australia](#) - to whom we are extremely grateful for their continuous support.

The [2020 Australia-Spain Research Forum "Big Data"](#) and the [2021 Australia-Spain Research Forum "A Collaborative World"](#) were successful not only because of the expertise of the speakers and the very interesting talks but also because on-line participation was possible, with all the presentations available in the SRAP YouTube Channel.

This 2022 SRAP Australia-Spain Research Forum delivered an exciting program about how the digital world is all around us. We discussed three "Big questions" with key experts speakers:

1. artificial Intelligence,
2. block chain and digital security,
3. and virtual reality,

followed by a series of applied talks with concrete applications of the digital world in Astronomy, soil mapping, education, art and design, and oceans.

We also hosted a roundtable about "is living in a digital world good or bad for humankind?" to trigger the conversations and discussions about what good things have brought the digitalisation... and what bad things!

During the breaks we will have demos of a [Virtual Reality system](#), thanks to "[The Future of Meetings](#)" and CSIRO.

We closed the 2022 SRAP Australia-Spain Research Forum with the announcement of the winner of the new [SRAP-frA Early Career Research Award](#) and the [launching of the PhD Cotutelle Program between Macquarie University, SRAP and Instituto Cervantes](#) with two Spanish universities.

I would like to express my gratitude to all the participants for their exceptional presentations and valuable contributions. Thanks to their efforts, the 8th Australia-Spain Research Forum organized by SRAP has been another success. I extend my sincere appreciation to the Spanish Embassy in Australia, the Australia-Spain Council Foundation, the Ramón Areces Foundation, the Instituto Cervantes Sidney and Indra Australia for their unwavering support. Lastly, I want to express my sincere thanks to the Local Organizing Committee (LOC) for their outstanding work in arranging the 2022 SRAP Forum. It has been a privilege to collaborate with all of you!

Dr Ángel R. López-Sánchez
2022 SRAP Forum Chair



Some of the in-person participants of the 8th Australia-Spain Research Forum "A Digital World"

VENUE



To know more about the research conducted at the AHH, please visit <http://hearinghub.edu.au/about-us/>

IMPACT

The 2022 SRAP Research Forum registered 98 participants from 8 countries, including Australia, New Zealand, Spain, Portugal, Vanuatu, Italy, Germany, and Philippines, with 38 participants attending on-line. Additionally, 49 people followed the event live on our YouTube channel.

We had participants of the most important universities and research centers in Australia (The Australian National University, University of Sydney, UNSW, Macquarie University, University of Technology of Sydney, University of Canberra, CSIRO, University of Melbourne, Monash University) and New Zealand (The University of Auckland, Victoria University of Wellington, Weather Radar New Zealand).

The most prominent Spanish industries in Australia also attended (Ferrovia Australia, Navantia Australia, Indra Australia, TYPESA Australia) and other Australian institutions including National Acoustic Laboratories, Hornsby Shire Council, Dragonfly Environmental, Cochlear, and Westmead Hospital.

Out of the total participants, 52 individuals (53%) were identified as women, 42 individuals (43%) were identified as men, and 4 individuals (4%) identified their gender as other, resulting in an exceptional gender balance at our event.

The 2021 SRAP Research Forum webpage had 686 page views.

All the presentations of the 2022 SRAP Research Forum are compiled in the SRAP YouTube channel, <https://www.youtube.com/playlist?list=PLz1HCLydcUPMjEBceiJMwNSC2-vlFvKp>

10:00 - 10:30 REGISTRATION+WELCOME TEA

10:30 - 11:10 FORMAL OPENING

Chair

Dr Ángel López-Sánchez | Senior Lecturer,
Australian Astronomical Optics, Macquarie University |
8th SRAP Forum Chair and President SRAP

Acknowledgement of Country

HE Ms Alicia Moral-Revilla | Spanish Ambassador
in Australia

HE Miguel Bauzá More | Spanish Ambassador in
New Zealand

Prof David Couto | FSE Dean, Macquarie University

Ms Inmaculada Riera | General Director, Spanish
Chamber of Commerce

Mr Israel Lozano Barragán | Navantia Australia CEO

Opening address from SRAP

11:10 - 12:10 SESSION1: BIG QUESTIONS

Chair

Assoc Prof Marian Vidal-Fernández | School of
Economics, University of Sydney | Assoc. Investigator at
the ARC Centre of Excellence for Children and Families
over the Life Course | SRAP

11:10 - 11:30 Artificial Intelligence: When and how to regulate

AI a comparative view with some personal thoughts

Dr José-Miguel Bello y Villarino | Research Fellow,
University of Sydney | ARC Centre of Excellence for
Automated Decision-Making and Society (ADM+S) Law
School | SRAP

**11:30 - 11:50 Block Chains: Blockchains and fractal
governance: towards a decentralisation roadmap**

Prof Marta Poblet | School of Business and Law,
RMIT | Co-founders of Institute of Law and Technology,
Autonomous University of Barcelona | Research at ICREA

**11:50 - 12:10 Virtual Reality: The connected world of
tomorrow: how VR can take us beyond being there**

Dr Vanessa Moss | Astronomer, CSIRO | Lead of
"The Future of Meetings"

Dr Glen Rees | Senior Data Scientist, BEBR |
Co-founder of The Future of Meetings | TFOM

LUNCH BREAK

Including demonstration of Virtual Reality system

13:45 - 15:00 SESSION2: DIGITAL WORLD APPLIED

Chair

Dr Mariel Familiar López | Biologist, Science
Communicator, Griffith University | SRAP

13:45 - 14:00 Digital Astronomy

Dr Nuria Lorente | Head of Research Data &
Software at Australian Astronomical Optics, Macquarie
University | Astronomical Data Analysis Software &
Systems (ADASS) | SRAP

14:00 - 14:15 Digital Soil Mapping

Dr Mercedes Roman Dobarco | Research Assoc.
Institute of Agriculture, University of Sydney | Contributor
at Australian Research Council's Laureate | SRAP

14:15 - 14:30 Digital Education

Prof Abelardo Pardo | Professor and Dean of
Programs UniSA STEM, University of South Australia |
SRAP

14:30 - 14:45 Digital Art Evolution

Jonathan Zawada | Artist

14:45 - 15:00 Digital Oceans

Dr Marta Ribó | Research at Auckland University
of Technology | Lecturer at Auckland University of
Technology (AUT) | SRAP

15:45 - 16:15 SESSION 3 –FINAL DISCUSSION

Chair

Dr Óscar Pérez-Concha | Senior Lecturer, UNSW |
Centre for Big Data Research in Health | SRAP

**15:45 - 16:15 Is living in a digital world good or bad for
humankind?**

Panel:

Dr José-Miguel Bello y Villarino | UTS

Prof Abelardo Pardo | University of South Australia

Prof Marta Poblet | RMIT

Dr Vanessa Moss | CSIRO

16:15 - 16:55 AWARDS AND ANNOUNCEMENTS

16:15 - 16:35 SRAP-frA Early Career Research Award

Dr Joaquín Valderrama | National Acoustic
Laboratories, Sydney Australia | Honorary President
SRAP

16:35 - 16:40 Medal to Joaquín Valderrama

HE Ms Alicia Moral-Revilla | Ambassador of Spain

**16:40 - 16:55 Launching of the PhD Cotutelle Program
between Macquarie University, SRAP and
Instituto Cervantes**

Prof Tracy Rushmer | Associate Dean Higher
Degree Research, Faculty of Science and Engineering,
Macquarie University

Dr. Ángel López-Sánchez | Senior Lecturer,
Australian Astronomical Optics, Macquarie University |
President SRAP

Ms Coral Martínez | Director of Instituto Cervantes
Sydney

16:55 - 17:00 CONCLUDING REMARKS

Assoc Prof Sergio León-Saval | Director of the
Sydney Astrophotonic Instrumentation Lab, University of
Sydney | Honorary President SRAP

NETWORKING, PHOTOS AND DRINKS

**19:00 - 21:00 SRAP NETWORK DINNER
BY INVITATION ONLY**

Lachlan's Restaurant

* All times are in Australian Eastern Daylight Time (AEDT) UTC+11h

OPENING

The 2022 SRAP Research Forum commenced at 10:00am with registration and a morning tea. Following Macquarie University's Acknowledgment to the Country», the official opening took place at 10:30am by Her Excellency Ms Alicia Moral-Revilla, Ambassador of Spain in Australia, who inaugurated the forum. From his office in Wellington, His Excellency Mr Miguel Bauzá More, Spanish Ambassador in New Zealand, also extended a warm welcome to all participants virtually. Professor David Coutts, Dean of the Faculty of Science and Engineering at Macquarie University, expressed gratitude to SRAP and the Ambassador of Spain in Australia for choosing Macquarie University again as the host venue for the SRAP Forum.



HE Ms Alicia Moral-Revilla, Ambassador of Spain in Australia, opening the 8th SRAP Aus-Spa Research Forum.



HE His Excellency Mr Miguel Bauzá More, Spanish Ambassador in New Zealand, welcomed the participants virtually from his office in Wellington.



Professor David Coutts, Dean of the Faculty of Science and Engineering at Macquarie University.

OPENING

After that, we were honoured to feature a special video recording by Ms Inmaculada Riera, General Director of the Spanish Chamber of Commerce (Madrid). Lastly, Mr. Jenaro Sánchez Villegas, Chief Technology Officer of Navantia Australia, delivered some inspiring welcome words to conclude the opening ceremony.



Special video recording by Ms Inmaculada Riera, General Director of the Spanish Chamber of Commerce (Madrid).



Mr Jenaro Sánchez Villegas, Chief Technology Officer of Navantia Australia.



SRAP President, Dr Ángel R. López-Sánchez (Australian Astronomical Optics, Macquarie University).

After the opening speeches, SRAP President and Chair of the 2022 SRAP Research Forum, Dr Ángel R. López-Sánchez (Australian Astronomical Optics, Macquarie University) presented an overview of our association and shared the new Mission and Objectives identified by the SRAP Board in recent months.

SESSION 1



Assoc Prof Marian Vidal-Fernández (School of Economics, University of Sydney, Assoc Investigator at the ARC Centre of Excellence for Children and Families over the Life Course & SRAP), Chair of Session 1.



Dr José-Miguel Bello y Villariño (University of Sydney Law School & SRAP)

Prof Marta Poblet (RMIT & SRAP) presented «Blockchains and fractal governance: towards a decentralisation roadmap».

The presentation provided an overview of how Decentralised Autonomous Organisations deployed governance mechanisms for progressive decentralization, considering limitations and challenges faced in claiming their space in the Web 3.



Prof Marta Poblet (RMIT & SRAP)

BIG QUESTIONS & VIRTUAL REALITY DEMO

Following the opening ceremony, Session 1 commenced. It was chaired by Associate Professor Marian Vidal-Fernández (School of Economics, University of Sydney, Assoc. Investigator at the ARC Centre of Excellence for Children and Families over the Life Course & SRAP). This session was focused in 3 Big Questions of the Digital World: Artificial Intelligence, Block Chains and Virtual Reality.

Dr José-Miguel Bello y Villariño (University of Sydney Law School & SRAP) presented «When and how to regulate AI: a comparative view with some personal thoughts». AI and automated systems present societal challenges, including responsibility for failures and timing of adoption by public authorities. This presentation provided an overview of the challenges, proposed solutions, and observations in Australia and Spain.

SESSION 1



Dr Vanessa Moss (CSIRO) and Dr Glen Rees (TFOM) presented «The connected world of tomorrow: how Virtual Reality (VR) can take us beyond being there». This talk focused on how VR and Extended Reality (XR) had already changed the way we met, worked, and formed communities, offering interactive shared spaces for work and play, surpassing traditional video calls and envisioning a location-independent future.

Dr Vanessa Moss (CSIRO) and Dr Glen Rees (TFOM)



Discussion with all the speakers of Session 1.

During the breaks, representatives from the «The Future of Meetings» (TFOM) community led by Dr Vanessa Moss (CSIRO) and Dr Glen Rees (TFOM) offered a short virtual reality demonstration using Meta Quest 2 headsets. Participants had the opportunity to join others from Australia and around the world in a virtual space, providing them with valuable insights into the transformative capabilities of VR and XR. Through this immersive experience, they discovered how these technologies could transport them beyond physical limitations and enable a truly immersive presence.



Participants enjoying the virtual reality demonstration using Meta Quest 2 headsets provided by «The Future of Meetings» (TFOM) community.

SESSION 2

DIGITAL WORLD APPLIED

After the lunch, free for all attendants and including chorizo, paella and churros as dessert, the 2022 SRAP Research Forum continued with Session 2, that was chaired by Dr Mariel Familiar López (Griffith University & SRAP). We had 5 short (12-minutes) presentations about diverse topics that showed how the digital world is applied in many aspects of research.

Nuria Lorente (Macquarie University and SRAP) is joint Head of Research Data & Software at Australian Astronomical Optics. She presented «Digital Astronomy». This presentation highlighted the role of AAO in digital astronomy, including instrument control, robotics, and the Data-Central tool-set, and explores the application of their expertise to other research fields in the years ahead. In this photo, Nuria has a copy of an old photographic plate: in that time before the introduction of the digital data, astronomers had to use microscopes to carefully analyse the astronomical information compiled on the photographic plate.



Dr Mariel Familiar López (Griffith University & SRAP) chaired Session 2.



Nuria Lorente (Macquarie University and SRAP)

Dr Mercedes Roman Dobarco (Sydney Institute of Agriculture, University of Sydney, and SRAP) presented «Digital soil mapping as for securing soils. Examples from Australia».

Digital soil mapping (DSM) has witnessed significant growth in the past thirty years. It establishes relationships between soil properties and environmental factors to predict their spatial distribution. This presentation showcased examples from Australia, highlighting the practical applications of DSM for decision-making, including climate change mitigation and mapping soil security.



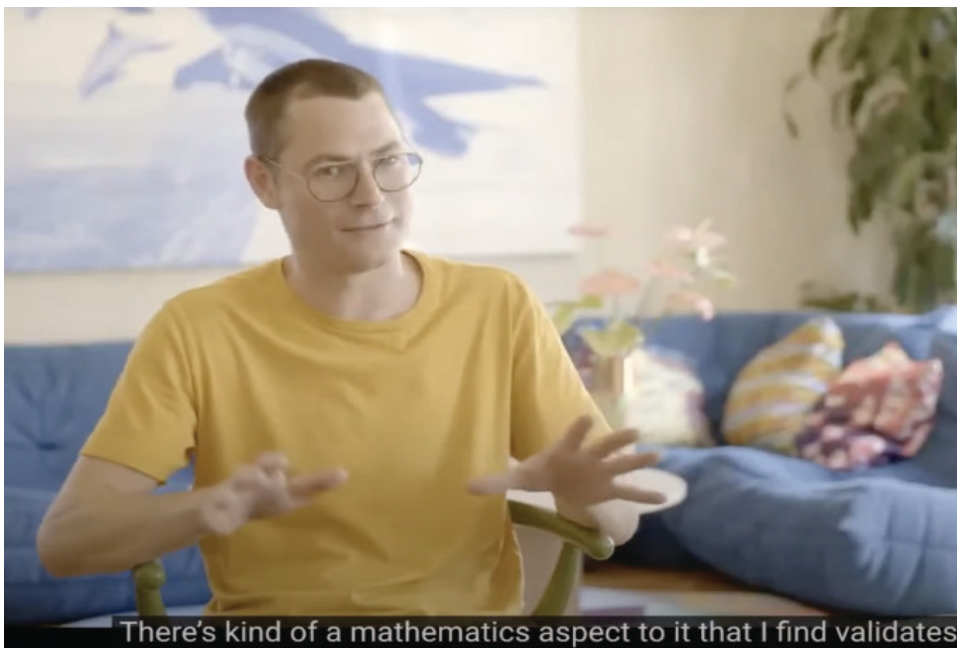
Dr Mercedes Roman Dobarco (Sydney Institute of Agriculture, University of Sydney, and SRAP)

SESSION 2

Prof Abelardo Pardo (University of South Australia and SRAP) is the Dean of Programs (Engineering) UniSA STEM. His talk was entitled «Technology in Education: Where are we heading?» Technology has pervaded various domains, including education, bringing both disruption and challenges for stakeholders. This presentation explored trends and directions in technology's impact on education, addressing its benefits, social interaction, and considerations for specific educational aspects.



Prof Abelardo Pardo (University of South Australia and SRAP)



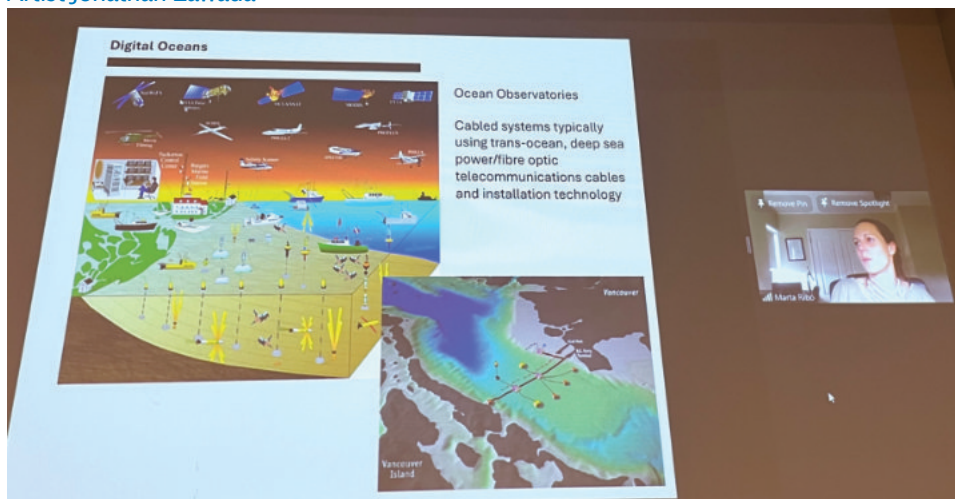
Artist Jonathan Zawada

Artist Jonathan Zawada presented «Digital Art Evolution», where he provided some videos about his work. In particular, he presented the Rare Mushrooms and Fisherian Runaway projects.

He also discussed how these moved through the evolution of digital art, from the pre- NFT environment to an NFT-based project. Exploring ideas of audience participation, generative and procedural (programmed) art, and the interaction between the manual and the automatic.

Dr Marta Ribó (Auckland University of Technology & SRAP) presented her research in the talk «Digital Oceans».

In the realm of oceanographic and environmental research, the integration of non-traditional data sources like citizen science and earth observation has become crucial. Scientists grapple with vast datasets and real-time big data when studying the ocean. This presentation showcased diverse datasets, combining in-situ measurements with global datasets and models, highlighting the importance of scientific collaboration to comprehend our planet's dynamics in the face of climate change.



Dr Marta Ribó (Auckland University of Technology & SRAP)

SESSION 3



Discussion and Q&A with the speakers of Session 2

After the coffee break (and more fun with the VR demo) we had a final discussion, chaired by Dr Óscar Pérez-Concha (UNSW & SRAP). We tried to answer the question «is living in a digital world good or bad for humankind?». Our panelists were Dr José-Miguel Bello y Villariño (University of Sydney & SRAP), Prof Marta Poblet (RMIT & SRAP), Prof Abelardo Pardo (University of South Australia & SRAP) and Dr Vanessa Moss (CSIRO), who had plenty of interaction with the audience.



Panelists of the final discussion

Panelists of the final discussion: «is living in a digital world good or bad for humankind?». From left to right: Dr Vanessa Moss (CSIRO), Dr José-Miguel Bello y Villariño (University of Sydney & SRAP), Prof Marta Poblet (RMIT & SRAP), Prof Abelardo Pardo (University of South Australia & SRAP) and Dr Óscar Pérez-Concha (UNSW & SRAP).



Some of the in-person attendees to the 2022 SRAP Research Forum

1st SRAP-frA EARLY-CAREER RESEARCHER AWARD

Our member Dr Sara Marrero Hernández has been awarded the [1st SRAP-frA Early-Career Researcher Award](#). This award was organised by SRAP and was sponsored by the Ramón Areces Foundation (frA). The Award aimed to boost the career perspectives of early-career SRAP members with less than 3 years of postdoctoral experience. The Award comes with a Diploma and a monetary prize of \$1,000.

The call for applications was very successful, receiving up to seven highly competitive applications. These applications were evaluated by the Organising Committee, which was chaired by Dr Joaquín T. Valderrama Valenzuela (SRAP Honorary President), taking into account the research impact of the applicant's trajectory, the applicant's CV, and SRAP engagement – i.e., activities already performed in collaboration with SRAP and proposed activities to be carried out in the future.

Following independent evaluations of all applicants, the Organising Committee selected Dr Sara Marrero as the Awardee. The Committee positively valued her 5 publications, one as a leading author; her demonstrated engagement with SRAP; and the exciting proposed activities for the future, including the creation of a new SRAP group in Perth.

The award ceremony was part of the [8th SRAP Research Forum](#) on Friday 25th Nov at Macquarie University.

Following receiving the [1st SRAP-frA Early-Career Researcher Award](#), Dr Sara Marrero was interviewed in a full page of the newspaper "El Día" de Tenerife, published on 27th Dec 2022.

Currently, Dr Sara Marrero is a member of the Organising Committee of the 2nd edition of the SRAP-frA Early-Career Researcher Award (led by Dr Marta Ribó, Auckland, New Zealand) and is leading the SRAP network in Perth (Australia).



From left to right: Dr Ángel R. López-Sánchez (SRAP President and Macquarie University), Dr Joaquín Valderrama (SRAP Honorary President & Chair of the [SRAP-frA Early-Career Researcher Award](#)), Dr Sara Marrero Hernández (winner of the [1st SRAP-frA Early-Career Researcher Award](#)) & H.E. Alicia Moral-Revilla (Ambassador of Spain in Australia).

AWARDS, ANNOUNCEMENTS AND CLOSURE



SRAP Honorary President Dr Joaquín Valderrama (NAL) received from H.E. Alicia Moral-Revilla (Ambassador of Spain in Australia) the Officer Cross of the Royal Order of Isabel la Católica. Photo credit: Ronny Kurniawan Ibrahim.

In addition to hosting the Award Ceremony of our [1st SRAP-frA Early-Career Researcher Award](#), in the 2022 SRAP Research Forum was also awarded the Officer [Cross of the Royal Order of Isabel la Católica](#) to SRAP Honorary President [Dr Joaquín Valderrama](#).



Also, our 2022 SRAP Research Forum included the official launching of the [PhD Cotutelle Program](#) between Macquarie University, SRAP and Instituto Cervantes, where the 2 first Spanish Universities to participate in this program: the University of Valencia and the University of La Laguna (agreement in astronomy and astronomical instrumentation with the Instituto de Astrofísica de Canarias).



Ms Coral Martínez Íscar (Director of Instituto Cervantes Sydney), Prof Tracy Rushmer (Associate Dean Higher Degree Research, Faculty of Science and Engineering, Macquarie University) and Dr Ángel R. López-Sánchez (Macquarie University & President SRAP)

Assoc Prof Sergio León-Saval (University of Sydney and SRAP Honorary President) closes the 2022 SRAP Research Forum «A digital World».

Finally, before moving to the networking and the farewell cocktail, Assoc Prof Sergio León-Saval (University of Sydney and SRAP Honorary President) closed the 2022 SRAP Research Forum «A digital World».

SPONSORS

SRAP expresses its sincere gratitude to its sponsors, whose invaluable support was officially recognized during the opening and closing ceremonies of the event, as well as prominently displayed on marketing materials (both in print and online), including the event program.



FUNDACIÓN
RAMÓN ARECES



ORGANISING COMMITTEE

We extend our sincere appreciation to the entire organizing committee (LOC) of the 8th Australia-Spain Research Forum "A Digital World" for their exceptional efforts and meticulous organization: Inés Benavente, Inmaculada Conde, Dr Mariel Familiar-López, Eladio Hernando, María Jones Caballero, Eva Millares, Assoc Prof Sergio León-Saval, Dr Ángel R. López-Sánchez (Chair), Dr Paula Llull, Dr Jorge Pinilla, Sergio Pinilla, Dr Ana Rubio, Prof Luis Salvador-Carulla, Dr Carmen Salvador Palomeque (co-Chair), Dr Joaquín Valderrama and Assoc Prof Marian Vidal-Fernández.



Inés Benavente Molina



Inmaculada Conde



Dr Mariel Familiar López



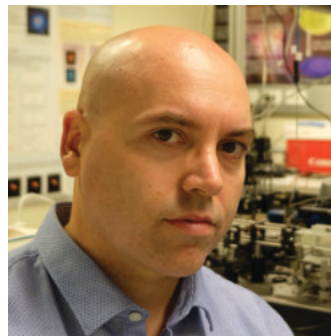
Eladio Hernando



María Jones Caballero



Eva Millares



Assoc. Prof. Sergio León-Saval



Dr Ángel R. López-Sánchez



Dr Paula Llull



Dr. Jorge Pinilla



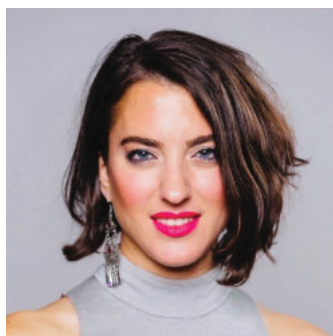
Sergio Pinilla



Dr Ana Rubio



Prof Luis Salvador-Carulla



Dr Carmen Salvador Palomeque



Dr Joaquín Valderrama



Assoc Prof Marian Vidal-Fernández



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