**CEIDEN**

**WORKING GROUP(WG) ON SOCIOTECHNICAL RESEARCH**

**Ana Prades.** PhD in Sociology.Senior Scientist of Public Research Organizations, she works at the Research Centre for Energy, Technology and the Environmental (CIEMAT), where she currently is Director of the Socio-technical Research Centre (CISOT-CIEMAT) in Barcelona. Her research has focused on the field of environmental and technological risk perception and communication, as well as on instruments for citizen engagement in the context of energy technologies. The implications of these processes in the development and implementation of environmental policies is another of her research areas. She has participated in numerous national and international research projects. She has recently been the coordinator of the EU PACHELBEL project (Policy Addressing Climate Change and Learning about Consumer Behaviour and Everyday Life), funded by the 7th Framework Program, and is currently the European Coordinator of Social Studies in Fusion, within the framework of the WPSES (Socioeconomic Studies on Fusion) of EUROfusion.

Areas of research

* Risk perception
* Social acceptance of energy technologies
* Environmental behaviours
* Environmental policies

Interest / expectations for our collaborative work

* Interdisciplinary work
* Stakeholder engagement
* Participatory decision-making processes

**Ernesto Salas** has a Degree in History by the Universidad Complutense de Madrid and a Master in History Research Methods and Techniques by the Universidad Nacional de Educación a Distancia. Speciality: Archaeology. His main fields of interest are the transition from indigenous cultures in southwest peninsula to roman domination, XVIIth century political and social events within the Hispanic monarchy and the history of Madrid. He has work in Spanish Research projects during his stay in Instituto de Arqueología de Mérida (CSIC) 2009-2011. Afterwards (2012) he got a position as Superior Specialized Expert from Spanish National Research Council in Centre for Social Sciences and Humanities in Madrid. There he was assigned to the GIS laboratory where he has developed GIS analysis to Social Sciences and Humanities projects such as Archaeological Data Infrastructure, ForSEAdiscovery (Wood and shipwreck analysis in the Atlantic commerce context during early modern age), EXTERSIAL externalities analysis in local agrarian ecosystems, etc. Since 2019 he has been appointed as Area Manager of Humanities and Social Sciences in the Spanish National Research Agency (Agencia Estatal de Investigación) managing issues related to research projects monitoring.

Main contributions to the group:

* Location of other Social researchers interested in Nuclear Energy and its social implications.
* Dissemination of the conclusions to interested research groups in social sciences.
* Support in grants application.

**Gonzalo Armengol** studied Industrial Engineering at the Polytechnical University of Valencia, finishing his studies in 2004. He coursed the specialty of Energy Technologies and Nuclear Power. After obtaining this Master Degree and being in Austria for a course thanks to the Erasmus program, Gonzalo started his Ph. D. in Nuclear Engineering at the Nuclear and Chemical Engineering Department of the same University, but left after the first year to start working in the nuclear industry, at the beginning in an Spanish engineering company (Empresarios Agrupados) to work in the Safety and Licensing Department to perform Probabilistic Risk Assessment tasks and to participate in new designs. In 2005 Gonzalo was hired by ANAV (Asociación Nuclear Ascó-Vandellós II) to work at the Nuclear Power Plants in Tarragona as Plant Director Staff, going before through the Senior Reactor Operator Training Plan at Tecnatom facilities for a year (classroom sessions + real scope simulator sessions). In that role, Gonzalo participated in activities related to Nuclear Safety Culture, Corrective Action Program, Self-Assessments, Annual Operating Plan, and other cross-organizational matters. Then in 2009 Gonzalo left ANAV to join Westinghouse Electric Company performing several roles, from Safety and Licensing Engineer, Continuous Improvement Lead, Quality Engineer and finally Quality, Environment, Health and Safety Manager at the present time. He finished in 2019 his MBA at the Polytechnical University of Madrid comprising 60 ECTS.

Areas of research

* EH&S
* Safety Culture
* Organizational Culture
* Training and Qualification of personnel

Interest / expectations for our collaborative work

* Organizational effectiveness
* Risk management
* Knowledge retention and transfer
* Leadership and management

**Gonzalo Jimenez** has a PhD in Nuclear Engineering by the Universidad Politécnica de Madrid.  He has worked and researched in nuclear safety since 2005 within engineering companies such as Naturgy and Westinghouse Electric Company in Spain and Belgium. From 2011, he is Associate Professor in the Energy Engineering Department of the UPM. His main fields of research are Nuclear Safety and Thermal Hydraulics, specially spent fuel dry cask simulation and containment analysis. He has work in several European projects such as ESFR, NURISP, NURESAFE, SARGEN-IV. He has also collaborated in education research projects such as ENEN+, ANNETTE and others. Nowadays, he is responsible of 5 research projects with Spanish Nuclear Power Plants and Engineering Companies.

Main interests in sociotechnical areas:

* Ethics of nuclear technology: I teach a seminar to the Master students every year.
* Motivation of young students for the nuclear technology: I have conducted several sessions devoted to high school students via Young Generation in Nuclear and bachelor students via ENEN+ European Project.
* Motivation of women for engineering studies: I’m coordinating an initiative about that in the framework of a Master Thesis.
* Knowledge management in nuclear energy: I teach a subject every year at Master level.

**Isabel Mellado** has PhD in Theoretical Physics by the Universidad Complutense de Madrid. She devoted some years in research in Theoretical Physics and Nuclear Fusion, but most of her professional carrier has been devoted to nuclear safety in the Consejo de Seguridad Nuclear (CSN, the Spanish Regulatory Body). Currently she is retired. As member of CSN she worked in the inspection and assessment of Spanish Nuclear Power Plants, mainly in nuclear system analysis, operating experience and event analysis. In 1989 was a member of the team that inspected the turbine fire incident at Vandellós I NPP and produced the report on the event lessons learned. From 1991 until 2000 she was in charge of the project managers and resident inspectors of the Spanish NPP. From 2000 until 2004, Deputy Director for Nuclear Installations. From June 2004 until April 2013 she was the Technical Director for Nuclear Safety in the CSN. From April 2013 until her retirement (September 2016) she was safety advisor of the CSN President. Currently she is a student of the Degree in History at the Autonomous University of Madrid

Other activities:

* Spanish representative in several international working groups and committees: Principal Working Group N. 2 of the NEA (primary circuit analysis); member of the Nuclear Safety Standard Committee (NUSSC) of the IAEA; member of de Committee of Nuclear Regulatory Activities (CNRA) of NEA and member of WENRA.
* Member of the review team in the IAEA Integrate Regulatory Review Service (IRRS) mission to Germany (2008), U.S.A. (2010) and Belgium (2013).
* Chairperson of the Country Group 6 in the 6th CNS Review Meeting (24 March – 3 April 2014) of the Nuclear Safety Convention.
* Chairperson of the IAEA ITReS mission to Thailand (2015).

Main interest/expectation for our collaborative work:

• Interaction of nuclear energy and society (public perception, public opinion…)

• Stakeholder involvement in decision making process

• Socio-economic aspects of nuclear technology

• Contribute to improving “nuclear world” with social sciences and humanities

**Josep Espluga** PhD in sociology, and Master in Occupational Health. He is currently Associate Professor at the Department of Sociology of the Universitat Autònoma de Barcelona. Senior researcher of the Public Policies and Government Institute (IGOP), member of the Social Policies Analysis Seminar (SAPS), and of the Research Group on Agriculture, Livestock and Food in Globalization (ARAG-UAB). His main research streams are focused on the relationships between health, work, environment, and territory, with particular attention to the social perception of technological risks and to the socioenvironmental conflicts. He has participated in several European research projects related to these topics (e.g. YUSEDER (FP4), SOCOSE (FP5) or PEG-Precautionary Expertise for GM Crops (FP5). He has extensive experience in qualitative methods and in participatory research. He has held visiting posts at the Department of Urbanism of the University of Venice, and at the INNOGEN Centre of the University of Edinburgh.

Areas of research

* Risk perception
* Participatory methods
* Environmental behaviours
* Environmental policies
* Qualitative research

**Mar Rubio-Varas.** Is an energy economist and economic historian. She is the Deputy Director of the Institute for Advanced Research in Business and Economics (INARBE) at the Public University of Navarra (UPNA). PhD from the London School of Economics (UK), supplemented with a year at UC Berkeley (California, USA). Her research focuses on the long-term relationships between energy consumption and the economy, covering also aspects of energy dependence and the transition to a low carbon economy. In addition, over the past ten years, she has been leading a group of scholars undertaking research on the economic and business of history nuclear energy in Spain. She has published extensively and taken part in research consortiums funded by national and international bodies (European Commission, European Science Foundation, Spanish Ministry of Economics, Bank of Spain, etc.). From 2015 to 2019, Dr. Rubio-Varas was the Scientific Secretary of the H2020/Euratom funded consortium HoNESt (History of Nuclear Energy and Society). The dissemination of the research results beyond the university scope transmuted into transfer of knowledge to stakeholders at workshops held, among others, at the ENEA (Italy) and the NEA-OECD (Paris, France).

Interest / expectations:

* bridging the nuclear-social sciences divide
* bringing socio-economic aspects to the nuclear decision making in the challenges ahead
* helping practitioners and policymakers learn from social science and humanities
* contribute to making social sciences and humanities work become more policy relevant

**Marc Poumadère.** Institut Symlog is a small independent organization doing risk research and expertise from a social sciences background. In the nuclear area, my work includes desk studies and field work in operating or closing plants, in projects of future systems developments, in decontamination/rehabilitation contexts, along with studies of social representations. My most recent assignment was in July 2019, as part of a project to assess and renew 5-years cooperation programs between Fukushima Prefecture and the IAEA. At this point, I am interested to better apprehend the numerous and contrasted issues shaping the relation between nuclear and society. As this relation is continuously changing, appears the challenge to redefine research topics. In my experience, interdisciplinary approaches enable the mutual questioning of assumptions and contribute to compartmentalize the field. I see the CEIDEN Grupo Sociotécnico as an opportunity for interdisciplinary exchanges possibly addressing the above-mentioned challenge.

**Markku Lehtonen** is an interdisciplinary social scientist, currently working at the University Pompeu Fabra in Barcelona. As part of this project, he worked from May to September 2019 at the OECD Nuclear Energy Agency, examining the ways in which the NEA addresses problems associated with nuclear-sector megaprojects. Markku holds a PhD in environmental economics (Université de Versailles, 2005) and an MSc in environmental studies (University of Helsinki 1994). He has researched and published widely on the policies of radioactive waste management and nuclear energy especially in France, but also in Finland, Sweden, and the UK. This research has covered topics such as public participation in radioactive waste management and nuclear policies; public acceptance and “Social Licence to Operate”; socioeconomic evaluation of the French radioactive waste disposal project, including the socioeconomic aspects of risk; the history of the French civilian nuclear sector; and the history of fast breeder reactor technology in the UK.

Markku is also adjunct professor at the University of Jyväskylä, an associate researcher at the Groupe de Sociologie Pragmatique et Réflexive (GSPR), Ecole des Hautes Etudes en Sciences Sociales (EHESS) in Paris, and Associate Faculty at the Science Policy Research Unit (SPRU), University of Sussex. He worked as a Research Fellow at the Sussex Energy Group at SPRU in 2005-2015, at the Institute for Research and Innovation in Society – IFRIS, Université Paris-Est Marne-la-Vallée, in 2012-2014, and at the ESSEC Business School in Cergy-Pontoise, France, in 2015-2018.

Interest / expectations for our collaborative work:

* expand my contacts and networks both amongst academics and practitioners working on nuclear energy and radioactive waste management, especially in Spain.
* bring to the community my own contribution and expertise – mostly perhaps my experience from international cooperation and comparative research in social science on nuclear-related matters.

Hopefully CEIDEN will provide a platform for collaboration across the academia-practitioner divide. Possible activities could include:

* exchange of information concerning events of relevance to the group members
* identification of possible funding opportunities
* organisation of seminars and other events to promote interdisciplinary (within academia) and transdisciplinary (academia-practitioner-society) interaction and collaboration

**Roser Sala**. Senior researcher of CISOT at CIEMAT. PhD in psychology from the Autonomous University of Barcelona. She is interested in the psychological and social dimensions of the environment, technology and sustainability. Her research work in recent years focuses on three main lines: (a) public perception and acceptance of energy technologies (b) public attitudes toward environmental risks and (c) sustainable behavior and health behavior.

She has worked in several European projects related with social aspects of radiological protection such as PREPARE, CONFIDENCE and TERRITORIES. She is a member of “communication working group” of the NERIS platform and a member of SHARE platform.

Main interests in sociotechnical areas:

* Public understanding of radiological risks and self-protection behaviors.
* Perception of radiological risks in the medical settings.
* Psychosocial aspects in nuclear emergency management: citizen behavior and its determinants, behavior and assumptions of experts, mental models, ...
* Communication tools in radiological emergencies.
* Stakeholder involvement aimed at improving the governance of nuclear energy.

**Sama Bilbao y León.** Head of the Division of Nuclear Technology Development and Economics at OECD Nuclear Energy Agency. In her role at the NEA, she leads a team of talented analysts that provide Member Countries with authoritative studies in the intersection of technology, innovation and economics in support of their energy policy decision-making. She is also the Head of the Technical Secretariat for the Generation IV International Forum (GIF).

Sama has a very diverse professional experience having worked in the nuclear industry (Nuclear Safety Analysis Engineer, Dominion Energy, USA), in academia (Director of Nuclear Engineering Programs and Associate Professor at the Department of Mechanical and Nuclear Engineering, Virginia Commonwealth University (VCU), USA) and in international organisations (Technical Head of Water Cooled Reactors Technology Development Unit, International Atomic Energy Agency (IAEA). Sama, who is originally from Spain, holds a bachelor’s degree in Mechanical Engineering and a master’s degree in Energy Technologies from the Polytechnic University of Madrid; a master's degree and a PhD in Nuclear Engineering and Engineering Physics from the University of Wisconsin – Madison; and an MBA from Averett University. Sama’s areas of expertise are nuclear thermal-hydraulics for both light water reactors and sodium cooled reactors, nuclear reactor design, nuclear safety, energy and environmental policy, and complex decision making.

Interests:

* Understanding the psycho-social aspects of radiation and nuclear science and technology
* bringing socio-economic aspects to the decision making and policy making
* incorporate lessons learned from social science and humanities into the nuclear sector

**Yolanda Lechón.** Head of the Energy Systems Analysis unit at CIEMAT. PhD in agricultural engineering for the Polytechnic University of Madrid, she is the Head of the Energy System Analysis Unit of Energy since 2013. Her main research activities have been focused in the economic evaluation of the external costs and benefits associated to the production and consumption of energy, the application of the ExternE methodology to the evaluation of externalities of energy and transport, Life Cycle Sustainability Assessment of energy technologies and processes with special focus on biomass, biofuels and solar thermal technologies, environmentally and socially extended economic input output modelling to evaluate socioeconomic and environmental effects of energy technologies and energy system modelling using techno economic partial equilibrium optimization models.

Main interests in sociotechnical areas:

* Analysis of the socioeconomic implications of nuclear technology