



CISP – RRI group

Responsible Research and Innovation for PhD students

Course Programme

Overview

Responsible Research and Innovation is one of the guiding principles of European Research Policy, that considering research as one of the most important drivers of change in relation to the societal challenges that Europe faces.

The course Responsible Research and Innovation, now in its 6th edition, aims at familiarizing PhD students with the concept, with the purpose to embody it into their research practices. The course will encompass a theoretical background of RRI, examples of application of RRI to different disciplines, and will provide tools for designing research projects based on the RRI approach. Students will be actively involved in the course activities. They will be encouraged to share their thesis topic with other PhD students, to participate to the discussion with guided questions. A practical session on Horizon Europe will allow them to acquire the basic skills for project design.

Contact: prof. Gianluca Brunori, gianluca.brunori@unipi.it.

Detailed program

13 May, 10.00-17.00

Module 1 – What is RRI? Introduction and case studies on RRI.

Aula: Aldo Capitini - Via del Collegio Ricci 10

This module will introduce the theory of RRI, an overview of the use of RRI in the European Research and will encompass cases studies on the application of RRI in different disciplines. A structured discussion with the students will follow, based on a pre-defined grid of questions.

10:00	Valentina Mangano	Welcome to participants, presentation of CISP
10:15	Gianluca Brunori	Introduction to the course
10:30	Simone van Der Burg	The theoretical basis for the Responsible Research and Innovation
11:00		Discussion
11:30		Coffee break
12:00	Daniela Lüth	Responsible Research Innovation in the Horizon Europe programme
12:30		Discussion
13:00		Lunch break
14:00	Eleonora Sirsi	RRI in action: the case of New Breeding Techniques
14:30		Discussion
15:00	Maria Luisa Chiofalo	RRI in action: the case of Quantum Physics
15:30		Discussion
16:00		Students' pitch of the topic of their thesis
17:00		End of first day

Valentina Mangano

Valentina Mangano is Professor of Parasitology at the Department of Translational Research and New Technologies in Medicine and Surgery at the University of Pisa. Her main interests are the epidemiology and control of poverty associated diseases. She is Director of the Interdisciplinary Centre "Sciences for Peace".

Gianluca Brunori

Gianluca Brunori is Professor of Food Policy at the Department of Agriculture, Food, and Environment at the University of Pisa. His main areas of interest are sustainable food systems and transformative innovation. He is coordinator of the RRI PhD course 2024.

Simone van der Burg

Simone van der Burg is Head of Programme at Waag, a "Future Lab" for technology and society operating at the intersection of technology, art and science with the aim of reinforcing critical reflection on technology, developing technological and social design skills, and encouraging social innovation (<https://waag.org/en/>).

The lecture will give an introduction into the basic ideas about the relationship between science, technology and society that underlie RRI, as well as its goals and principles. Furthermore, it will illustrate how science and society can innovate together, based on a case study about the development of digital commons carried out in Waag Future Lab.

Daniela Lüth - European Commission

Daniela Lüth, Policy Officer at the European Commission, DG Research and Innovation, Unit "Bioeconomy and Food Systems", passionate about data-driven decision-making and driving change by using R&I.

The lecture will give an overview and outlook of European R&I in the area of Horizon Europe, its mechanisms, and its principles, such as responsible research and innovation.

Eleonora Sirsi - RRI and biotechnologies

Eleonora Sirsi is an agricultural and food lawyer. Her main areas of research are the regulation of new technologies in agriculture with particular reference to new genomic biotechnologies, the role of law in the sustainable transition in the agri-food system, and the protection of the food consumer.

Her talk will be focused on the development of the regulation of new genomic technologies and will describe how research in this field is the object of extensive public discussion and it appears to be oriented according to the protection of different interests. Particular attention will be paid to: the legislation being drawn up on new genomic techniques and issues related to the patenting of NGT1 organisms; the development of food production "without agriculture"; (cellular meat and precision fermentation). Both of these innovations will be analysed in the light of the RRI approach

Maria Luisa Chiofalo - RRI in action: the case of Quantum Physics

Marilù Chiofalo is a quantum physicist specialized in the design of quantum technologies for condensed matter, fundamental physics, neuroscience and biology applications, in fact a cross-discipline more recently engendered by encounters with inspiring women-scientist colleagues. She has introduced the physics outreach research, i.e. of methods and tools to educate and outreach citizens to quantum science, while coordinating the European QUTE4E pilot of the QTedu initiative.

Exploiting the culture-scientific storytelling framework, the intervention will preliminarily build a compact understanding of the essential quantum mechanics concepts underlying

current quantum technologies (QT), so to ease the sharing of a comprehensive and aware overview of the horizon where the field is moving to. Then, the potential impact of the QTs on everyday life will be highlighted along the six RRI dimensions, with examples from multiple perspectives, that include information, communication, juridical, economical, hard and life sciences.

17 May, 09.00-17.00

Module 2 – How to do RRI? RRI and European Research

Aula: Aldo Capitini - Via del Collegio Ricci 10

10:00	Valentina Mangano, Francesco di Iacovo	Warming up and synthesis of the first day
10:30	Mascha Strooband	Writing a EU research project: from the topic to the template
11:30		Coffee break
12:00	Martina Calamusa	Writing a EU research project: the impact section
13:00		Lunch break
14:00		Students prepare the impact section of their project
16:00		Students' presentation
17:00		end second day

This comprehensive course provides PhD students with an in-depth understanding of Horizon Europe's framework, focusing on the development of competitive research projects. Special emphasis is placed on the "Impact" section, critical for demonstrating the project's potential to address societal challenges, foster innovation, and contribute to the EU's strategic priorities. Participants will learn how to articulate the expected impacts, disseminate results, and engage stakeholders.

Valentina Mangano

Valentina Mangano is Professor of Parasitology at the Department of Translational Research and New Technologies in Medicine and Surgery at the University of Pisa. Her main interests are the epidemiology and control of poverty associated diseases. She is Director of the Interdisciplinary Centre "Sciences for Peace".

Francesco di Iacovo

Francesco di Iacovo is the Director of the Department of Veterinary Science at the University of Pisa. He is professor of Agricultural Economics and Rural Development. His main areas of research are

multifunctional agriculture, social farming and social innovation. He has 30+ years experience in coordinating and managing European Projects.

Mascha Stroobant

Since 2011 he has been working in European research, dissemination and planning with a focus on climate change and the environment. He studied Marine Environmental Sciences at the University of Pisa, specializing in botany and marine ecology in the Canary Islands. She is a volunteer of Wikimedia Italia and organizer of the Wiki Science Competition. She won the "DonnAmbiente" award and collaborated with the DG MARE of the European Commission on Ocean Literacy.

Martina Calamusa

Martina Calamusa is Research facilitator in International Research programmes since 2014. She has a Master Degree in Biological Sciences and PhD in Neuroscience. She has national and international experience in the field of scientific research in the Life Science sector.

24 May, 10.00-13.00

Module 3 – How can RRI principles be embodied into university practice?

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10:00	Valentina Mangano	Welcome and synthesis of the preceding modules
10:10	Francesco di Iacovo	RRI and social innovation
10:30	Corrado Priami	Innovation policy of UNIPI and RRI
11:00	Benedetta Mennucci	Research policy of UNIPI and RRI
11:30	Coffee break	
12:30	Karel Haegeman	The concept of transformative innovation into European policies

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Benedetta Mennucci

Benedetta Mennucci is Full Professor of Physical Chemistry at the Department of Chemistry and Industrial Chemistry and Vice-Rector for Research Promotion. His research concerns the development of multiscale computational approaches that combine a description of quantum chemistry with classical models and their application to the study of molecular processes in complex systems.

Corrado Priami

Corrado Priami is Full Professor of Computer Science at the Department of Computer Science of the University of Pisa and Vice-Rector for the Enhancement of Knowledge and its Impact. His research interests include programming languages, bioinformatics, computational biology and systems biology.

Karel Haegeman

Karel Haegeman has been working as scientific officer at the European Commission's Joint Research Centre for over 15 years in the area of research and innovation, with particular interest in R&I governance and funding models and stakeholder engagement, transformative place-based

innovation, the territorial impacts of higher education, transnational R&I cooperation, innovation in less favoured regions, and anticipatory intelligence. He is currently coordinating the smart specialisation platform at JRC.