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. Valentina Mangano, valentina.mangano@unipi.it, prof. Gianluca Brunori gianluca.brunori@unipi.it

to register to the course: link per l'iscrizione al corso

Detailed program

16 May, 10.00-17.00

Module 1 – What is RRI? Introduction and case studies on RRI.
Aula: Polo Benedettine, aula E

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 Gianluca Brunori	Welcome to participants, presentation of CISP
10:15 Valentina Mangano	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 Erich Griessler	Responsible Research Innovation in the Horizon Europe programme
12:30	Discussion
13:00	Lunch break
14:00 Maria Carmela Agodi	RRI in action: robotic surgery
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	

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 Director of the Interdisciplinary Centre "Sciences for Peace" and coordinator of the RRI PhD course 2025.

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 research interests are the epidemiology and control of poverty associated diseases. She is Vice-Director of the Interdisciplinary Centre "Sciences for Peace".

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.

Erich Griessler

Erich Griessler studied sociology and history at the Universities of Vienna (1983-1990) and Maastricht (PhD 1995). After working at the University of Vienna (1990-1992), the Austrian Research Centre Seibersdorf (1992-1995) and the Ludwig Boltzmann Institute for Medicine and Sociology of Health (1995-1999), he has been a senior researcher at the IHS since 1999. From 2016 to 2023 he was head of the research group "Science, Technology and Societal Transformation", which he founded. From 2003 to 2017 he taught methods of empirical social science at the Vienna University of Economics and Business Administration and from 2006 to 2017 at the Institute of Sociology at the University of Vienna. Since 2015 he teaches at the Department of Political Science at the University of Vienna. His research interests include social studies of science and technology, sociology and ELSA of biomedicine, public engagement in research and innovation (R&I) policy, political regulation of assisted reproductive technologies (ART), biotechnology, political sociology, and responsible research and innovation (RRI). He has worked on and coordinated many projects dealing with the conceptualization, understanding and monitoring of RRI in different areas, such as how to involve the public in debates on ethically controversial areas.

Maria Carmela Agodi - RRI in action: the case of robotic surgery

Maria Carmela Agodi is a distinguished Professor of General Sociology (SPS/07) at the Department of Political Sciences at the University of Naples Federico II.

Professor Agodi has made significant theoretical contributions to the interplay of individual and collective actions, rational choice models, and sociological research methods, focusing on the integration of qualitative and quantitative approaches. Her recent research delves into the relationship between informatics, sociological models, and simulation, emphasizing the role of big data and algorithms in governance. An advocate for gender

studies, she explores the intersection of individual biographies and organizational structures.

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.

23 May, 10.00-17.00

Module 2 – How to do RRI? RRI and European Research
Aula: Aldo Capitini - Via del Collegio Ricci 10

10:00	Francesco di Iacovo, Valentina Mangano	Warming up and synthesis of the first day
10:30	Martina Calamusa	Writing a EU research project: from the topic to the template
11:30		Coffee break
12:00		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 research interests are the epidemiology and control of poverty associated diseases. She is Vice-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.

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.

30 May, 9.00-13.00

Module 3 – How can RRI principles be embodied into university practice?
Aula: Aldo Capitini - Via del Collegio Ricci 10

9:00	Valentina Mangano, Francesco di Iacovo	Welcome and synthesis of the preceding modules
10:30	Anna d'Ambrosio	The economics of dual use
11:00	Alice Saltini	Militarization of information technologies
11:30	Roundtable: Il contributo delle Università italiane alla costruzione della pace (in Italiano)	
	Chair: Francesco di Iacovo	
	Enza Pellecchia (UNIPI)	
	Valentina Mangano	
	Francesco Laio	
	Cristina Cuneo	
	Dino Pedreschi	
	Anna D'Ambrosio	

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Enza Pellecchia

Full Professor of Private Law at the Department of Law of the University of Pisa since 2016. He is a member of the Board of the PhD in Private Law of the University of Pisa. She was Director of the Center for Human Rights (2005-2010) and Director of the Interdisciplinary Center for Peace Sciences (from 2016 to 2022). President of the Master's Degree Course in Law (since 2022). Vice-Rector for the Cohesion of the University Community and the Right to Education of the University of Pisa (since 2022).

Anna D'Ambrosio

Anna D'Ambrosio è Professoressa Associata di Economia Applicata presso il Politecnico di Torino. Ha conseguito un dottorato in Economia dello Sviluppo all'Università di Trento, concentrandosi su migrazione e sistemi produttivi locali. La sua ricerca esplora temi legati all'innovazione, investimenti diretti esteri e valutazione delle politiche pubbliche. Ha esperienza internazionale con istituti di ricerca e organizzazioni come l'ILO e l'IAB.

Dino Pedreschi

Dino Pedreschi è professore di informatica all'Università di Pisa e scienziato pioniere nel campo della data science e dell'intelligenza artificiale. Co-dirige il Knowledge Discovery and Data Mining Laboratory (KDD Lab), un'iniziativa congiunta dell'Università di Pisa e del Consiglio Nazionale delle Ricerche (CNR). La sua ricerca si focalizza su big data analytics, machine learning e il loro impatto sulla società, inclusi la mobilità umana, l'analisi dei social network e l'etica dei dati. È membro del gruppo di esperti in Intelligenza Artificiale del Ministero della Ricerca italiano e direttore del programma di dottorato in Data Science presso la Scuola Normale Superiore di Pisa.

Francesco Laio

Francesco Laio is a water scientist with expertise in hydrology, water resources assessment, environmental modelling, and statistics. He holds a degree in Environmental Engineering (from Politecnico di Torino) and a Ph.D. in Water Engineering (from Politecnico di Milano), and now serves as a Full Professor in Hydrology.

Cristina Cuneo

Cristina Cuneo, PhD, architect, is an associate professor (History of architecture) of Politecnico di Torino; her research focuses on the architecture and urban history of 16th and 17th century; she teaches History of Architecture in Early Modern Age and Environmental History of Architecture. She his scientific coordinator of the project CAMELOT "Heritage lab: loCAl Motion for hEritage-led sustainability in the Industria piLOT" in partnership with Cotsen Institute of Archaeology, UCLA. In 2023 she was visiting researcher at the Departamento de Historia del Arte (Universidad Complutense de Madrid UCM). She is currently member of the Academic Senate at Politecnico di Torino

Alice Saltini

Alice Saltini is a researcher specializing in the impact of AI on nuclear decision-making, advising governments and international organizations on managing AI-related nuclear risks. Her work focuses on mitigating the challenges of integrating advanced AI into military and nuclear weapons systems by translating complex technical concepts into actionable policy insights.