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Morning Workshops

A collaborative method for innovation based on citizens ideas

Mr JEF VAN LAER[1], Mr Isaak Vandermaesen[1], Ms Karen Verstraelen, Dr. Annelies Duerinckx
[1]Scivil

Especially in the field of citizen science, there has been a recurring transition of citizens becoming more engaged with scientific endeavors, often via crowdsourcing or classification work. These tasks however do not fully engage citizens in the whole scientific process. The project “Amai!” addresses this, by involving citizens in the development of AI applications through all steps of the research process, from idea generation to co-creation and evaluating proposals.

After gathering citizens’ ideas, we organize co-creation sessions where citizens collaborate with AI and domain experts to develop rough concepts into fully-developed AI solutions. Over the years, the amai!-project has gained extensive experience in engaging several stakeholder groups by developing co-creative workshop methods that help developers innovate and design research, based on previously provided ideas of citizens.

In the workshop participants go through these steps:

They identify specific design challenges faced by citizens within pre-arranged, themed clusters of ideas.

Using a deck of ideation cards, participants explore how AI can address the challenge, then discuss and rank ideas based on feasibility and novelty.

Ultimately participants use "technology tarot" cards to identify gaps in their solution design and prompt further discussion.

The workshop takes approximately 2h to finish and accommodates 8 to 40 participants.

We propose conducting this co-creative workshop with the participants of PCST. The workshop aims to enhance the adaptation of the citizens ideas in the amai! project and offers a model for applying a participatory approach in mission-oriented research and policy development. While this project focuses on AI solutions, the co-creation method has broader potential, allowing others to introduce a participatory shift in their scientific fields, ultimately leading to greater societal impact.

Amai! is a project by Scivil (The Flemish centre for citizen science) and the Knowledge Centre for Data & Society. It is funded by the Flemish government.

AI and science communication teaching

Dr Andy Ridgway[1], Dr Melanie Smallman[2], Dr Frans van Dam[3]
[1]University of the West of England, [2]University College London, [3]Utrecht University

This preconference workshop is one of two proposed by the PCST Teaching Forum. It is proposed to hold this in the morning, followed by another workshop that would address a broader range of themes relevant to science communication educators in the afternoon. The Teaching Forum is an international network of science communication lecturers who teach students at undergraduate, graduate and PhD level.

In general
From writing science news stories, to visualising data and developing podcast scripts, generative AI is transforming the way science is communicated. This raises questions about the skills and ethical considerations of AI use we need to teach students, as well as creating challenges for assessments. The workshop, which will build on two PCST webinars in 2024, will consider how our teaching needs to adapt and how our assessments need to change to ensure they remain effective and relevant.

Format
The workshop will be split into a series of discussions (plenary and group), each introduced by invited speakers with expertise relevant to the different discussion themes. These discussions will use the PCST Conference themes of Transitions, Traditions, and Tensions as lenses through which to view AI and science communication teaching. It is anticipated that these discussions will inform a post-conference paper providing written guidance and ideas on science communication teaching and AI.

Discussion themes
Each theme will start with a 10-minute introduction from each invited speaker:
Theme 1. Expectations for the future of AI (Gemma Milne, science and technology writer)
Theme 2. Student assessments in the AI era (Jason Pridmore, Erasmus University Rotterdam; Sam Illingworth, Edinburgh Napier University)
Theme 3. The AI skills and ethics we should be teaching students (Gema Revuelta, Barcelona School of Management, Subhra Priyadarshini, Nature India).

Audience Personas - A Design Research Tool for Science Engagement

Dr. Guillaume Riesen[1]
[1]Worldview Studio

So you want to engage an audience around science and technology. How should you design your approach?

We believe that design research tools provide a powerful framework for creating good science engagement programs. These tools are flexible, but still rooted in empiricism - they offer rapid insights about your audience that will help you to design something that works.

In this workshop, we will provide a brief overview of design research approaches and walk you through the process of creating an audience persona. Audience personas are semi-fictional characters that help you to imagine a group of stakeholders more concretely. Bring an ongoing or upcoming engagement project and we will help you to create a persona that gives specificity to your conception of its audience. We will also offer take-home materials with additional tips and resources about design research approaches to science engagement.

This workshop is hosted by Worldview Studio, a small collective of scientists and designers who design engaging materials and experiences that connect science to society.

Communicate your research using a Storymap

Mrs Carmen Koessler[1]
[1]CK Communication Services

Storymaps are an engaging digital medium that helps communicators create stories that can inform, inspire positive impact and connect with people in a way that stats or science alone cannot. There is growing recognition of the effectiveness of using maps to support stories and narratives to communicate climate science. Stronger communication of climate science and the impacts of climate change with the public has emerged as a shared goal among scientists and science communicators, but there is no consensus on how to do it effectively, or how to include community voices and knowledge of Indigenous or other equity-seeking groups. In this hands-on workshop I will outline the process used to co-develop stories that weave community voices with research outcomes. Participants of this workshop will walk away with a draft storymap that they can finish and publish to share their stories with a global digital audience.

Participants will be provided with a one-page questionnaire to complete prior to the workshop. This will ask them to outline their ideas for stories ahead of the workshop for initial feedback on storytelling structure and help them to identify and format media to support their story. Story ideas could include abstracts of papers, research stories or reflections that they want to use to create their storymaps. THe workshop will cover narrative development and walk through the different tools that Storymaps provides to engage readers with their content. Participants will also gain access to an instructional Storymap which outlines the various tools that the platform uses to support building out the structure of their Storymaps that they can continue to access after the workshop as they complete and publish their Storymaps.

Big Issues in Ethics and Science Communication: an Interactive Workshop

Professor Joan Leach[1], A/Prof Fabien Medvecky[1]
[1]AUSTRALIAN NATIONAL UNIVERSITY

Big Issues in Ethics and Science Communication: an Interactive Workshop

Ethics is increasingly recognised as a key issue for science communication research, education and practice. But how do we concretely identify and engage with ethical issues in our professional practice? In this collaborative workshop, we start with an outline of traditions of ethical practice in science communication. We then move to 3 interactive parts. The first part will focus on collectively identifying the most challenging and important ethical issues in the field. We will identify the precise points of tension in these issues and collectively define the ethical matter at stake. The second part will be another interactive session drawing on the previous one where we will think through these ethical issues and discuss various ways that the workshop participants have acknowledged and attempted to address them. This will generate a set of cases and worked examples that bring to the surface possible responses to ethical challenges. We know that some of our responses will have been successful, others less so. We will openly discuss what might make a successful ethical response. We will then, in the third interactive part, discuss how these cases and examples (both successful and not) can be used as a basis for further research, as resources for teaching, and as exemplars for professional practice. The objectives of the workshop are to introduce a collective language for talking about ethical issues in science communication, anchor ethical reasoning in science communication research and practice, and provide resources for further engagement including in classrooms, in future research projects and in the field.

Learning outcomes: After this workshop, participants will:

- have a wider perspective on ethical matters
- be familiar with a range of big issues and cases
- have tools for working with ethical issues in research, education and practice.

Cutting through the Bullshit: Rhetorical AI Literacy for Communication Practitioners

Dr Markus Gottschling[1], Dr. Fabian Erhardt[1]
[1]RHET AI Center

"Generative AI is bullshit." (cf. Frankfurt 2005, Gottschling 2023, Hicks, Humphries & Slater 2024). This confrontational statement captures a key challenge in today's science communication landscape: generative AI tools generate content that is plausible but not necessarily true. In a time where generative AI seems inevitable, it is important to deal with this challenge in a productive way. To grasp why, contrary to popular belief, "bullshit" is not inherently negative, and to effectively navigate this complex landscape, a new skill set is essential – what we call rhetorical AI literacy.

Our workshop is based on the research results and practical experience of the German Center for Rhetorical Science Communication Research on Artificial Intelligence (RHET AI) and aligns with the theme of "Transitions," addressing the shift in communication practices brought about by AI.

The workshop is designed for a maximum of four hours and will equip communication practitioners with the rhetorical resources needed to effectively integrate AI into their workflows. We'll begin by examining how AI recontextualizes its training data, often producing content that echoes the challenges faced by science communicators when translating complex information into accessible formats. By drawing these parallels, participants will better understand both the strengths and limitations of communicating through AI.

The core of the workshop will focus on hands-on exercises where participants develop their own AI workflows. This session provides a structured and practical framework for effectively using AI by applying rhetorical principles that have long explained how the plausible becomes persuasive. It begins with an exploration of AI research tools, progresses through text and image generation, and culminates in refining outputs through feedback loops. Participants will leave with actionable strategies for integrating AI into their communication practices, ensuring they can harness AI's capabilities while maintaining control over the accuracy and quality of their work.

Evaluating Science Communication: From Objectives to Measurable Indicators

Julia Panzer[1], Vincent Schmid-Lörtzer[1], Liliann Fischer[1]
[1]Wissenschaft im Dialog

Critical reflection on science communication and its quality is becoming increasingly important. Evaluations play an important role in this reflection, since they can show the extent to which projects have achieved their goals and where there is potential for further development. However, this is easier said than done, as planning an evaluation presents practitioners with many choices.

The interactive workshop is divided into the following sections: At the beginning, goal models will be explained and participants will be able to familiarise themselves with effective goal setting. Defining one's own objectives is fundamental for strategic project planning and impact-oriented science communication, and thus the basis for meaningful evaluation.

A central motive of evaluations is to verify the formulated project objectives. Often it is not immediately obvious whether project objectives have been achieved or not. But indicators can help! In the second part of the workshop, the Impact Unit team will present the tool for developing indicators and explain how it can be used in evaluation projects. In a group phase, participants will learn how to identify well and poorly formulated indicators, using various examples. Participants will then use their own (or fictitious) examples to develop concrete indicators for monitoring the achievement of objectives. These indicators will be presented and discussed in the plenary session, where the challenges of developing indicators will be addressed and discussed. The third and final part of the workshop will focus on developing ideas for measuring the developed indicators. The aim will be to consider both qualitative and quantitative approaches to determining the achievement of objectives.

The workshop will provide participants with a comprehensive and practical insight into the key steps of effective evaluation, the development of appropriate indicators and the setting of relevant objectives for their own science communication projects.

Game On for Climate Action: Hands-on Role-Playing Game Design

Prasad Sandbhor
[1]Intelligent Games and Games Intelligence (iGGi)

This workshop aims to guide its participants through a hands-on game design process to create role-playing games that promote climate actions among players.

Addressing the challenge of the climate crisis that the world is grappling with requires multi-faceted solutions. It also needs citizens to develop new skills to mitigate and adapt to climate change. Although the information on such mitigation and adaptation climate actions is widely available, many people struggle to put these into practice due to various constraints and barriers. Misinformation and a lack of clarity about the impact of individual actions further hinder progress in addressing climate change.

Science communicators have been leveraging various tools, including games, to help people understand the complexities of climate change and encourage them to take appropriate climate actions. Over the past two decades, there has been an increase in the development of climate change-related games across different formats and genres.

In this workshop, participants will work in small groups to ideate, conceptualise, and detail out role-playing game concepts using a game design toolkit developed by the author through the design and evaluation of role-playing games intended for the sensemaking of climate actions. They will also be provided with case studies and examples of previously designed and evaluated games as references. The workshop will conclude with a playtesting session and a reflection activity.

By participating in this workshop, attendees will gain valuable insights into designing effective climate action games and contribute to the growing pool of climate change games.

How do we teach the concept of audience?

A/Prof Will Grant[1], Ms Ella McCarthy
[1]Australian National University

The concept of 'audience' has long been central to the research and practice of science communication. After all, if a scientist asks for help communicating their work, who among us hasn't responded with 'who is your audience?'

Yet as Bucchi and Trench have argued, "audience conceptions in science communication are often under-defined and remain implicit rather than explicit" (2021: 291).

In 2024 we (McCarthy & Grant, forthcoming) sought to explore this issue, documenting and categorising the ways we have conceptualised 'audience' in the science communication literature, and briefly exploring some of the ways science communication educators have taught students about audience.

In this workshop we plan to foster a deeper exploration of the teaching of audience, via a collaborative discussion, dialogue session and a sharing of teaching practices.

We envisage documenting the outcomes of this workshop as a co-authored publication to be submitted to a science communication journal.

References

Bucchi, M. & Trench, B. (2021). Rethinking science communication as the social conversation around science. Journal of Science Communication. 20 (3).

McCarthy & Grant (Forthcoming). What are we talking about when we're talking about the audience? Exploring the concept of audience in science communication research and education. Public Understanding of Science.

Supporting policy makers for a sound societal transition

Alessandra Fornetti[1], Ilda Mannino[1], Emma Weitkamp[2]
[1]Venice International University, [2]UWE Bristol

The workshop aims at promoting a better interaction between policy makers and science communication professionals on the basis of the experience within the PCST community.
In particular, it will explore which science communication actors interact with policy makers and how, what challenges this interaction poses to the science communication community, and policy makers' awareness of the relevance of science communication. We also aim to explore participants' perception of policy makers' science communication needs.
The workshop will engage the participants in sharing their real experiences with policy makers and how their job role (e.g. scholar, professional, journalist, civil society representatives, etc..) affects these experiences. Through this process we aim to identify together key features for supporting policy makers to make use of science communication not only in times of crises but as a fundamental element in building effective dialogue with citizens.
The workshop will thus provide participants with winning strategies and practices to support policy makers to access science communication for a sound societal transition.
This is meant as a first step to build a group of interest to continue exchanging experiences and improving the interaction between policy makers and science communication experts.

Tensions in culture change: insights from research and practice

Dr Ana Faustino[1], Ms Victoria Shennan[1], Dr Jana Wendler[1], Ms Konstanza Jochim[1], Dr Alina Loth[1]
[1]Museum für Naturkunde Berlin

At the Public Engagement and Impact (PE&I) unit of the Museum für Naturkunde Berlin (MfN), we see public engagement (PE) as a pathway for culture change - embedding engagement in research and thus contributing to societal impact. We promote this change through research and practice projects such as the Berlin School for Public Engagement and Open Science (BSoPE) and Impact-oriented Public Engagement (IETI), using training, support, participatory and impact processes.

Through our research efforts and lived experience, we have identified key tensions that hinder PE and consequent culture change: 1) Barriers to researchers involvement in PE, including time constraints (75%) and lack of recognition or funding (34%); 2) Gaps in institutional processes supporting culture change, such as integration with research work or funding; 3) Lack of institutional processes that enable interaction with non-academic actors, which hinders research impact; 4) ongoing need for training that builds skills in public engagement and contributes to professional development; 5) Insufficient spaces for networking and collaboration on public engagement at both institutional and international levels.

This workshop aims to create a reflective space to discuss on the tensions above by:
- Sharing the tensions we (first IETI and BSoPE, then workshop participants) encounter in our public engagement and culture change research and/or practice in our institutions, and how we address them through our activities.
- Facilitating group work to develop short-term research and/or practice projects addressing one of these tensions, focusing on actor mapping methods (e.g. empathy mapping, stakeholder salience model) promoting efficient collaboration and impactful culture change.

Participants will gain diverse international perspectives, inspiring them to develop strategies for addressing public engagement and culture change tensions in their context, drawing on the workshop's methods and outputs grounded in the intersection of research and practice.

The cathartic cardboard construction clinic: convening for creativity and care

Prof Emily Dawson[1], Dr Jo Bailey[2], Dr Rhian Salmon[3], Professor Simon Lock[1]
[1]UCL, [2]Massey University, [3]Victoria University of Wellington Te Herenga Waka

Science communication is a contested space, theorised, practised and researched differently around the world. This contestation also makes its way into our day-to-day science communication work. Who gets to say what counts as science (Rasekoala, 2023)? Who gets to use, access, enjoy, laugh with (or at!) science communication practices (Dawson, 2019)? Why might it be worth spending your time being a science communicator (Rodrigues et al, 2023)?

Reflecting on our practice has been shown to support better, more useful and more enjoyable science communication activities for everyone involved (Bailey, 2024). This 'performance and storytelling' workshop playfully invites participants to consider the tensions in their own science communication or engagement practice in a reflexive, creative and cathartic way. In our 'clinic', we collectively share issues that participants (practitioners or theorists) encounter. These might be big or small, systemic or individual, related to power, resistance, discrimination, bias, logistics, training, expectations and beyond. Through a process of lo-fi cardboard crafting (no skill required!) in a community of care, we set physics aside and co-create whimsical, magical solutions to fix these issues. This process encourages lateral thinking to resolve tensions and improve situations. We present the clinic as a community-building activity, creative performance, and a tool that participants could use in their own engagement.

Technical requirements
This session encompasses elements of storytelling and performance from both facilitators and participants. The outputs are a series of objects created by participants that encapsulate the problems that researchers and practitioners encounter, and suggest speculative ways of resolving these issues. The ideal room set up is a range of tables seating small groups of people, a table for the crafting resources (mostly recycled cardboard, tape, string, pens, etc). The activity format could also work as a conference session without presentations, or a long (60 minute) performance session.

Using ChatGPT to Communicate Science Effectively and Ethically

Mr Mohamed Elsonbaty Ramadan[1]
[1]Arab Forum of Science Media and Communication (AFSMC)
Workshop:

Using ChatGPT to Communicate Science Effectively and Ethically

In today's rapidly evolving world, using ChatGPT is not a question anymore. "Using ChatGPT to Communicate Science" workshop offers science communicators and researchers a transformative journey into the world of ChatGPT, a groundbreaking conversational AI tool with immense potential in the realm of science communication. We promise more than just a surface-level introduction; we delve deep into ChatGPT, ensuring you harness its capabilities both ethically and effectively.
Through this workshop, participants will learn how to guide ChatGPT to produce the desired outputs and tailor its responses, ensuring the AI conveys scientific information in a precise, accurate, and engaging manner. Besides focusing on the craft of prompt engineering and patterns, critical discussions on the validation of information, AI-generated content biases, and ethical considerations are integral components of this training.
Designed and curated especially for science communicators and researchers, this workshop is a perfect blend of theoretical knowledge and practical application. We don't stop at theory; participants will be immersed in hands-on exercises, honing practical skills and actionable approaches that can be implemented in their science communication endeavours immediately. By the end of the workshop, the participants will be equipped with a new set of tools and techniques to revolutionize their way communicating science through Artificial Intelligence.

Duration:
3 hours (2-hour condensed version is possible)

Learning Outcomes:
- Development of skills needed for effective and ethical use of ChatGPT to communicate science
- Understand the fundamentals of ChatGPT and its underlying mechanisms
- Recognize the strengths and limitations of ChatGPT
- Acquire prompt engineering skills to tailor ChatGPT responses
- Master prompt patterns used specifically in science communication
- Develop a strategic approach to incorporate ChatGPT into science communication tasks
- Apply these acquired skills in real-world scenarios through hands-on activities

Welcome to PCST session

A/Prof Fabien Medvecky[1]
[1]ANU

PCST is, first and foremost, a community. Most importantly, it's a very open and welcoming community. We know that for some attendees to the conference, this will be there first PCST event and their first interaction with the PCST community. This welcome session is for them (and for anyone who wants to share in welcoming new comers to PCST).
The session, hosted by members of the PCST scientific committee as well as some past presidents, will first present some background on PCST; its history and aims of PCST as an association as well as who we are and where we come from.
After this brief introduction, we'll get to knowing each other with some fun networking activities. So if you're new to PCST (or not) come join us for a welcome session as we kick off the 18th biannual conference of the global network for the Public Communication of Science and Technology.

Afternoon Workshops

A crash course in transition science combining research and practice

Msc Björk Johannes[1]
[1]Dutch Climate Research Initiative

Workshop theme: Transitions. We will share the science behind transitions and provide tools on how to work on transitions.

Transitions are happening all around us. Climate change demands transitions in how we consume energy, land, water, food, and goods. Such systemic changes involve many actors in a complex interplay, dictated by power structures, finance, and many other factors. Which role do you play in accelerating transitions and system change? Which transitions are affecting you? How can you drive them?

At the Dutch Climate Research Initiative (KIN), we increase the contribution of science to accelerating system transitions. Transitions requires new roles and forms of collaboration from both scientists and science communicators, and even a transition in the way the scientific system itself is organized. Additionally, both an understanding and conceptualization of system-approach and skills in transdisciplinary teamwork are needed for all stakeholders involved.

In this workshop:

- The presenters will share the latest knowledge on transition science and system-approaches based on research and practice
- In smaller groups you will gain confidence in using the x-curve toolkit and select a real-life scenario to work out various exercises
- Plenary we will reflect on the role of science and science communication in transitions and the workshop outcomes

At the end of the workshop, you will have gained skills to work in and for transition. Together, we will gain valuable insights into your thoughts on the role that science communication plays in enabling and accelerating transitions.

Sources

- Dutch Climate Research Initiative (KIN) advisory report. https://www.nwo.nl/en/advisory-report-dutch-climate-research-initiative-kin
- X-curve toolkit: A sense-making tool for system change. https://drift.eur.nl/en/publications/toolkit/
- Flipping the Science Model: A Roadmap to Science Missions for Sustainability. https://council.science/publications/flipping-the-science-model/
- Wegwijzer voor het werken aan transities. https://hetgroenebrein.nl/publicatie/wegwijzer-voor-het-werken-aan-transities/

Climate Communication for Change - How to Communicate Constructively

Anna Gaul[1], Dr. Bernhard Goodwin[1]
[1]LMU

In our interactive workshop on constructive communication, we address, apply, and reflect on basic constructive techniques with a specific focus on climate change. Considering that climate change is one of the most serious threats to humanity, immediate action is essential to ensure a liveable future. As this is a highly complex issue involving multiple factors, laypeople rely on journalistic media to provide information. However, media coverage can either promote or negatively influence people's efficacy beliefs and behavior. In response to traditional, negatively biased journalism, constructive journalism has emerged as a new approach.

In the workshop, we will discuss, evaluate, and rewrite texts according to constructive techniques. After giving a brief input from theories and current findings in psychology and communication science regarding constructive journalism and its effects, we will deepen the practical application of principles of constructive journalism by discussing past work of participants and creating communication projects. The workshop will promote reflection and exchange on constructive communication aiming to create a lively, collaborative atmosphere. We schedule 3.5 hours for the workshop including a 30 minute break.

Constructive journalism is characterized by a solution- and future-oriented focus on social crises and problems. It encourages audiences to take action by highlighting resources, solutions, and opportunities. The inclusion of context and expanded information should provide a more accurate and detailed media representation. Moreover, constructive journalism takes various perspectives into account to represent different social groups in an inclusive way and counteract polarizing dynamics. By using co-creation elements (e.g., enabling participation in the creation of products), journalism can involve both citizens and researchers. Constructive communication techniques are essential for sustainable change, given the prospect of highly negative consequences with limited individual control (and thus learned helplessness), the enormous interdependencies in climate issues, and the increasing politicization and polarization of the issue.

De-mechanizing Our Science Communication Practice: Theatre Games for Reanimating Ourselves

Dr. Nic Bennett[1]
[1]Michigan State University

In the Theatre of the Oppressed tradition, games are for more than just “warming up” or “breaking the ice.” Augusto Boal, the Theatre of the Oppressed creator, designed these games to de-mechanize our bodies from our usual habits and routines.

De-mechanization, a form of 'good confusion,' is a powerful tool for unlearning the existing norms and social structures that oppress our communities. These games, with their use of metaphor and discussion, have the potential to reveal profound truths about our world, inspiring us to take collective action and bring about positive change in science communication.

De-mechanization games can help us explore and challenge our relationship to oppressive norms in a playful and accessible way. These active and participatory games provide social metaphors that inspire conversations about our lived experiences. Each game ends with a dialogue highlighting how identity, power relations, and solidarity play a role in our science communication contexts.

And we can create de-mechanization games! Boal often took familiar games and found ways to use them as social metaphors. We can do the same for our particular science communication contexts.

In this workshop, we will
• Experience a few existing de-mechanization games
• Discuss how de-mechanization might apply to exploring existing oppressive norms in science communication
• Create and play our own de-mechanization games
• Discuss how de-mechanization might apply to our science communication contexts

Designing science communication research methods that support transition

Dr. ir. Marjoleine van der Meij, Prof. dr. Barbara Regeer
[1]VU University Amsterdam

When we do science communication research, we generally ask time from our study participants for our (own) research data collection. We may conduct interviews with our study participants, observe their interactions, facilitate focus group discussions, etc. Asking this time from our study participants 'for sake of doing scientific research' remains a challenging thing to do, especially if your study participants who are doing 'transition' work, e.g. driving system change, which surely already absorbs a lot of their time and energy.

What if we can turn it around? What if we, as researchers, can actually support transitions through and while we are doing our research? How to support, as researcher, for example, our study participants in navigating tensions and integrating experiential knowledge?

In this workshop, we support you in designing a transformative research method for your current research. The workshop is especially suitable for early career science communication researchers who do research into system transformation, or for those who do research while being embedded in a setting where transition is taking place (e.g. in food systems, health systems, science systems, innovation systems, etc.).

During the workshop, we first explore the principles of transformative and transdisciplinary research, before diving into various inspiring methodological examples. Guided by a set of questions and a few individual and small group exercises, we invite you to (re)design your research method, to thereby make it contributive to (further) transition.

The workshop is a snapshot of the Athena Institute (VU University Amsterdam) PhD course on Inter- and Transdisciplinary Research (TDR) - and the book we recently published about it (Transdisciplinarity for Transformation; Responding to Societal Challenges through Multi-actor, Reflexive Practices).

Developing Radio and TV Drama for Effective Science Communication

Mr Luke Destiny Manja
[1]Malawi Liverpool Wellcome Programme

This workshop will delve into the practical challenges and tensions faced when developing radio and TV dramas to communicate complex health research to diverse audiences. Drawing on my experience with Malawi Liverpool Wellcome's SHARE-CM project and the Zathu Pa Wailesi radio drama, we will explore how to balance the accuracy of scientific information with the need to make it relatable and engaging. The workshop will focus on how to address the tension between expert-driven science and lived community experiences, particularly when translating technical content from English into local languages that resonate with the target audience.

Participants will engage in hands-on activities, developing short scripts that tackle real-world health challenges, learning how to effectively simplify complex topics without losing scientific integrity. We will also discuss how communication shifts into engagement when the audience sees their realities reflected in the narratives, creating more meaningful connections between science and society.

This session is ideal for practitioners and researchers looking to bridge the gap between theory and practice in health communication, especially in multilingual and culturally diverse contexts.

Learning Objectives:

- Explore strategies for balancing scientific accuracy with relatability.
- Understand the tensions between expert knowledge and community perspectives.
- Gain practical experience in developing science-based drama scripts.

Envisioning Engaged Futures for Research

Sophie Duncan[1]
[1]NCCPE

What might higher education, research and teaching look like in 2045? How should it look? And how can we proactively ensure that universities meet the needs of society, promote diverse voices, and positively influence the shape of things to come both locally and globally?

The National Coordinating Centre for Public Engagement (NCCPE) is funded by UKRI, Wellcome Trust and the four UK research funding agencies. For 16 years our mission has been to 'open up' how universities engage with society and embed more open and inclusive approaches to knowledge creation. We believe this is central for the continued relevance of higher education in society. Yet, we need to make a step towards a change in mindset and culture. How might we achieve this and what actions lead us towards genuine systems change?

NCCPE has launched an 18-month programme entitled 'Engaged Futures' to work through a three-stage systems change process, 'Three Horizons' to build a movement of people dedicated to stepping outside of current paradigms to reimagine the role and place of universities in knowledge generation. These 'Catalysts' include senior leaders, engaged researchers, public engagement specialists, funders as well as people working alongside universities in government, media, and, community groups. We are keen to extend our exploration by inviting the critical perspectives of our overseas peers. How do the themes and actions emerging from conversations in the UK resonate with people in other national contexts?

In this workshop, led by NCCPE director Sophie Duncan and members of our Catalyst Group, participants will experience the 'Three Horizons' process by applying it to their own situation. We will also present outcomes from our 6-month consultation which participants will critique (in groups) and contrast to their own contexts, before advising on actions that could lead to some of the changes we each hope for.

Exploring and Practicing Science-Policy Interactions

Dr Sabrina Kirschke, Dr Konstantin S. Kiprijanov, Dr Marlit Hayslett, Jakob Meyer

Modern societies face a range of complex, 'wicked' problems, such as climate change, public health emergencies, and social inequalities. Addressing these challenges necessitates a productive, impact-oriented exchange of expertise between the academic and the political-administrative system. However, debates persist regarding the requisite skill sets and the most promising communication formats to achieve this goal.

Two complementary workshops aim to approach these challenges from distinct different perspectives. The first workshop "Mapping Communication Formats for Effective Collaboration" focuses on identifying and mapping communication formats that facilitate effective knowledge exchange between academia and policymakers. Participants will explore these formats based on key criteria, including target groups within the political-administrative system, their roles at various stages of the policy making process, and their functions within these processes. Through brief overviews, group discussions, and a mapping exercise, the workshop reviews science-policy interaction mechanisms and offers practical insights for improving evidence-based collaboration. Leaders for this workshop are Konstantin S. Kiprijanov, Jakob Mayer, and Sabrina Kirschke (Museum für Naturkunde Berlin).

The second workshop on "Do You Want to Influence Public Policy? A Real-World Simulation" equips scientists with practical skills to engage policymakers as a specific audience for science communication. After an introduction to policy-making, participants take part in a scenario-based simulation, during which they assess policy needs and formulate policy recommendations on timely issues such as COVID vaccine distribution, the digital divide, and AI in higher education. By the end, participants will be better equipped to contribute to evidence-based policy development and advocate for science-driven solutions to societal challenges. Both workshops offer researchers unique opportunities to make a meaningful impact on policy through their expertise and knowledge. Marlit Hayslett (Hayslett Consulting) leads this session.

Five Skills for Fostering Justice in SciComm Through Audience Connection

Dr. Melanie Peffer[1]
[1]University of Colorado Boulder

Although there are different ways to consider justice in science communication, at its core, justice is about continual movement towards inclusion. There are many strategies one can use to create inclusive and just science communication. In this workshop, we will discuss how to use five aspects of audience connection as a tool for justice.

First, we will discuss the neurological basis for emotion and how to use emotion in storytelling. After emotion, we will then discuss empathy and authenticity, including empathic listening. These initial topics tie directly into the third topic, non-verbal communication. Since most human communication is non-verbal, the intentional incorporation of non-verbal cues can help present ourselves authentically and work emotionality into our communication strategies. We will then discuss trust, why people are distrustful of science, and how building trust and repairing past wrongs is a just science practice. Given the history of unjust practices in science which contributed to the development of trauma in many communities, the final portion will discuss trauma-informed science communication and how to use strategies like co-design and trigger warnings. Each section will end with an activity, such as playing Charades to practice non-verbal communication.

This workshop will be two hours long with a minimum of 15 or maximum of 35 people. Engagement strategy includes co-design and evidence-based active learning teaching approaches, such as small and large group activities, think-pair-share, and reflective writing. Technical requirements include a projector, screen and associated wires and adaptors. Learning objectives for the workshop include:

1. Explain how audience communication can be used as a tool for justice in science communication.
2. Describe how each of the five strategies individually and collectively contributes to justice in science communication.
3. Apply the five strategies to the attendee's science communication practice.

From pure Scientist to SciComm-Ambassador. How to design efficient Coaching-Programs

Dr Julia Rizzo[1], Jennifer Berger[1]
[1]Laimburg Research Centre

Science Communication has become vital in the global research culture, with researchers increasingly engaging in Public Communication Programs. But unfortunately, communication skills are rarely included in academic training.

Workshop learning objectives:
This workshop aims to investigate and elaborate best practices for crafting an effective SciComm Ambassador Program for a new generation of scientists who are also able communicators, strengthening their SciComm and Public Engagement capabilities. We aim to bring together researchers, media professionals, and science communication practitioners in the occasion of the PCST-Conference for a multidisciplinary approach.

Workflow:

- Introduction Speech: Importance of involving scientists in SciComm in research institutions

- 1st Interactive Part: Exploring scouting methods and identifying attractive incentives for scientists to participate in an Ambassador Program.

- 2nd Interactive Part: Identify the specific communication skills that need to be trained by scientists in order to become able communicators.

- 3rd Interactive Part: Exploring a range of instructional strategies and teaching methods that can be applied to effectively train scientists in communication skills.

For every interactive part, participants will form groups and brainstorm on the different topic. The results of each group will be discussed and clustered on a pin wall. A discussion will follow.

- Wrap-up: Reflection on key learnings, feedback from participants, personal experiences.

How to make most of your national science communication association

Dr Alexandra Borissova Saleh[1], Ms Maria Hagardt, Dr Luisa Massarani, Prof Fabien Medvecky, Dr Jennifer Metcalfe, Dr Kenneth Skeldon
[1]E-Quadrat Science and Education

National (and international) science communication associations are a rich source for professional and personal support for science communicators. Both education and networking can be crucial for ensuring the quality of our profession in the situation when formal educational programmes are not always available and people often enter scicomm from other fields and with different backgrounds. But building one presents a group of challenges of very different character. It is not easy to build the community from scratch reaching out to all potentially interested colleagues. Doing work pro bono is not always viable, and fundraising is not easy. The sole choice to only do networking or expand to educational projects or even do lobbying and policy making, can be hard to do and then shape very much the association and what it offers to its members.
In this workshop experts from different countries will give practical insights based on their experience on association building.

Alexandra Borissova Saleh is the first president of the Russian Association of Science Communication (AKSON) who organised institutional awards, conferences and informal professional education.

Maria Hagardt represents Vetenskap & Allmänhet (VA Public & Science), the Swedish national expert node for scicomm, public engagement and citizen science, and works in international relations and communications.

Luisa Massarani is an ex-director of RedPOP, the Network for Science Popularization in Latin America.

Fabien Medvecky is the secretary of PCST and former president of the Science Communicators' Association of New Zealand with the experience of building the resources and members' benefits that makes an association thrive.

Jennifer Metcalfe is a former president of the Australian Science Communicators (included hosting the World Conference of Science Journalists) and the former president of PCST.

Kenneth Skeldon will share his experience as a president of the Eusea European Science Engagement Association.

ImprovSciComm - improve how you interact through improvisation

Susan Hecker[1]
[1]Museum für Naturkunde Leibniz Institute for Evolution and Biodiversity Science

Communication and interaction are dynamic, creative and complex processes between (human) beings. They allow or hinder transitions, preserve or question traditions and evocate, cement or dissolve tensions.

In this workshop we will work on how you talk about your scientific research – and interact with your audience instead of talking at it. Challenges are manifold: You are supposed to find a common language – and understanding. You are told to envisage your audience, understand their needs and expectations but also consider their values and the things they care for. You are expected to speak their language without losing yours. And: We all need to re-gain the ability to listen – something that rarely seems to get enough attention. Throughout this training, we will trigger your creativity and your ability to interact by using elements of Improvisation Theater. The aim is to cross the boundaries of daily routine, create novel synapses in your brain and thus allow for ideas and refreshing energy. The workshop offers communication and interaction exercises from simple to complex, in pairs to small groups. The theoretical input provides insights into how communication and interaction works (or doesn't) so that participants not only have fun but leave with a deeper cognitive understanding. This understanding is crucial for public engagement as well as scholarly communication amongst peers.

The workshop is aimed at science communicators and communication professionals as well as scientists.

You do not need any experience in Improvisation Theater but you should be ready to talk about things you are passionate about (because they are the most comfortable to talk about), exchange knowledge and participate actively.

Making theory valuable for daily practice – and vice versa

Ir. Stephan Van Duin[1,2,3], Dr. Anne Dijkstra[4], Dr. Caroline Wehrmann[5], Dr. Willemine Willems[6]
[1]The Online Scientist, [2]SciCom NL, [3]UMC Utrecht, [4]University of Twente, [5]TU Delft, [6]VU University

We have noticed a tension between the theory and practice of science communication, and propose a transition to get rid of certain traditions.

In literature, the interaction and potential cross-fertilisation between theory and practice has become a theme (f.i. Han & Stenhouse, 2014; Salmon & Roop, 2019). However, most studies concern specific cases that do not offer broadly applicable principles, or conclude that while intentions were good, the interaction between researchers and practitioners suffered (f.i. Dijkstra & Cormick, 2020). A few studies explored the potential resolve of the theory-practice-divide, but these, too, end with barriers that challenge cross-fertilisation in practice (f.i. Roedema, Van Duin et al (in press)) or mainly offer insights from practice to theory (f.i. Metcalfe, 2022).

In our co-creation workshop, we aim to go beyond these frustrations and come up with concrete action points. For example, ways to make literature more valuable for practitioners or to deal with time and budgetary constraints. What would scholars and practitioners need to actually benefit from each other? And, how can we address this gap in teaching and facilitate a better connection for the next generations of scicom scholars and practitioners?

We start the workshop with reaching a collective understanding of the problems that we distilled from literature previously. Thereupon, we create four thematic groups around these problems. With the participants we explore potential solutions and action points in two rounds of 45 minutes, after which we wrap up with a road map.

The workshop team combines backgrounds as academics, educators and practitioners, and we will leverage our different perspectives to foster dialogue and participation. Outcomes from other sessions before PCST2025 will inform and shape our final design of the workshop.

Mapping Institutional Support Structures Against Science Hostility

Nataliia Sokolovska[1], Prof. Birte Fähnrich, Dr. Clemens Blüml, Victoria Shennan, Dr. Benedikt Fecher, Iris Geigenmüller, Jana Wendler
[1]Alexander von Humboldt Institute for Internet and Society

Learning objectives: As researchers communicate publicly, they may become targets of online harassment, hate speech, trolling, or even physical threats. These hostile encounters not only affect their well-being but also undermine their credibility as experts. How can institutions better support researchers in mitigating these risks? What strategies and structures are most effective in protecting them?

This interactive session provides an opportunity to share insights into effective safeguarding practices within your institution, identify gaps where support is lacking, and learn from other professionals about successful strategies in their organisations. Participant contributions will be compiled to create a snapshot of international best practices for safeguarding researchers against hostility, both online and offline. These findings will be shared with the German community through capacity-building workshops as part of the Capacities and Competencies in Dealing with Hate Speech and Hostility towards Science (KAPAZ) project led by the Alexander von Humboldt Institute for Internet and Society. During the workshop, support strategies that were developed and already deployed within the KAPAZ-project will be presented and refined with international participants.

Ways to engage with participants: Through a guided mapping activity, participants will identify the people, internal networks, guidelines, and policies that form their current institutional support systems. They will evaluate the effectiveness of these measures, collectively identifying best practices and areas that need improvement. Finally, participants will envision their wishes for future institutional measures to help researchers navigate hostility.
This session will build a comprehensive picture of effective strategies to protect researchers. The final map will be shared with participants, along with links to the broader KAPAZ resources for researchers and professionals.

Tackling tensions in transdisciplinary research: assembling and sharing complex data

Dr Gill Black[1], Dr Astrid Treffry-Goatley[2]
[1]Sustainable Livelihoods Foundation, [2]Centre for Epidemic Research Innovation

Transdisciplinary research is an emerging approach to scientific study. It involves the participation of different interest groups in the research process including groups outside academic institutions. This enables co-production and the formulation of more inclusive evidence through generating multiple types of data. For example, evidence can take the form of visual materials created by community members affected by the topic under study. Assembling and presenting different types of data to diverse stakeholders can raise tensions and present a significant challenge for transdisciplinary researchers. The proposed workshop will explore these tensions through a case study approach. This in-person, 2.5-hour workshop will be designed for 10 to 30 people. It will be of interest to established scientists, early career researchers and practitioners with an interest in transdisciplinary research. Participants will work collectively in small teams. Each team will receive a (different) summarized case study of a transdisciplinary research project that generated diverse data types. Through the lens of this case study, each team will be assigned one specific stakeholder group (community members, academic researchers or policy makers) to consider in answering the following questions:

1) Where might tensions emerge in relation to recognizing different forms of knowledge production?
2) What strategies could be applied to effectively manage these tensions? Which ethical considerations should be taken into account?
3) How can the knowledge generated best be assembled and presented to the assigned stakeholder group? Where might tensions lie in scientific communication versus engagement?

Participants will be provided with basic tools to document their discussions. Astrid and Gill will support the workshop teams in presenting their deliberations to each other and facilitate dynamic discussion among all attendees. The workshop will offer needed insight to improve the design and impact of transdisciplinarity, thus contributing to the use of science communication to effect positive change.

Teaching science communication in different contexts: Experiences and challenges

Dr Luisa Massarani, Dr Frans van Dam[2], Dr Brigitte Gschmeidler[3]
[1]Brazilian Institute of Public Communication of Science and Technology; Casa de Oswaldo Cruz,

Fiocruz, [2]Utrecht University, [3]Open Science – Life Sciences in Dialogue

This workshop is organised by the Teaching Forum, an international network of science communication lecturers at undergraduate, graduate and PhD level. Recognised by the PCST Network as a community of practice under the umbrella of the PCST Global Network, the Forum aims to provide a network of support for people involved in teaching science communication. Around 20 people currently take part in the forum's regular online-meetings: participants of the Aberdeen PCST Conference are very welcome to join this workshop.

In this workshop, we aim to create an informal atmosphere to allow participants from different parts of the globe to brainstorm and share experiences and challenges referring to teaching science communication in different contexts.

The conversation will be led by three moderators (Frans van Dam, Utrecht University, The Netherlands; Luisa Massarani, the Brazilian Institute for Public Communication of Science and Technology, Brazil; and Brigitte Gschmeidler, Open Science – Life Sciences in Dialogue, Austria), including the following topics:

- How to evaluate the impact of the programme / modules?
- How to deal with the balance of research and practice in teaching science?
- How to connect global with the local in teaching science communication?
- How to address inclusivity in a programme / a module?
- How do you update the programme considering new issues, such as AI?
- What and how can we collaborate further beyond the Teaching Forum? For example, is it feasible to have internships/scholarships for students and docents? Maybe an online international forum with students and docents?

In the morning, a specific workshop will be organised by the Teaching Forum on AI and teaching science communication; a rapporteur will share the main points discussed for being discussed by the group.

The discussion will help to design future online activities of the Forum.

Tensions and Transitions in Ethics: Building More Collective Ethical Systems

Mr Lewis Hou[1], Professor Clare Wilkinson[2], Dr Alice Bell[3], Dr Jen Grove[4], Ms Victoria Shennan[5], Dr Lucinda Spokes[6], Dr Richard Milne[7], Dr Marina Joubert[8], Dr Steve Scott[4]
[1]Science Ceilidh, [2]University of West England, [3]The Young Foundation, [4]UK Research and Innovation, [5]Berlin School of Public Engagement, [6]University of Cambridge, [7]Kavli Centre for Ethics, Science and the Public, [8]Stellenbosch University

Ethics underlies our work around knowledge production, exchange and dissemination but current systems and processes often centre the institution rather than the communities and practitioners involved.

This workshop explores the complexities of more participatory research methods and approaches, acknowledging power imbalances and advocating for more equitable systems around ethics.

Participants will consider theoretical as well as practical tensions and opportunities around ethics, through four contexts which explore ethics from different (though overlapping) levels and lenses.

Communities: Science Ceilidh will share perspectives supporting community-led research funding and partnerships in the Highlands and Islands of Scotland including their Community Knowledge Matters network. This includes sharing a participatory ethics toolkit co-designed to enable communities to set their own terms of engagement with research

Science Communicators & Public Engagement Practitioners: UWE Bristol will draw from their work on the INSIGHT project that sheds light on ethical dilemmas faced by practitioners, with a focus on co-production, practitioner expertise, and the need for more inclusive perspectives.

Engaged Researchers: Berlin School of Public Engagement and partners in Cambridge UK and Stellenbosh, South Africa, will share lessons from the Collaborative Futures Academy, highlighting the importance of capacity building and addressing the complexities of ethical practice in a diverse international context spanning disciplines and continents.

Funders: UKRI and The Young Foundation will share insights from supporting participatory research. Framed around practices and processes they will share successes, challenges and the systemic barriers across institutions (including funders) to better support ethical community-led approaches.

Each case-study will share provocations which will guide breakout discussions with participants able to dig deeper at different levels and share their own perspectives around ethics internationally. We'll work collaboratively to consolidate and map practice together, draw together resources and tools to share, and discuss how conversations can continue to keep the momentum going and advocate collectively

Using evidence-based pedagogies to create an effective science communication classroom.

DR Mark Sarvary[1], Kitty Gifford[2]
[1]Cornell University, [2]Cornell University

Teaching science communication can happen in many formats: workshops, activities embedded in science classes, or semester-long courses dedicated to communication. Regardless of the format, science communication training must transition from an old-school, lecture-based style to an inclusive, active learning driven learning environment, supported by peer-reviewed publications in education research. Students learn better by doing, and science communication has many applied components that can be taught using creative, evidence-based learning techniques. The presenters will demonstrate the teaching methods they have been using at Cornell University and Shoals Marine Laboratory in the United States. How to create an inclusive classroom, teach information literacy, encourage storytelling, assess audiences, or use social media will be demonstrated. The focus of this workshop will be on hands-on activities: attendees will use Bloom's Taxonomy for curriculum development, think-pair-share, games, role-playing, and more. Attendees are encouraged to bring their teaching techniques to share with others to build an “active learning teaching inventory”, so they walk away with ideas to implement in classes and workshops. The presenters are Mark Sarvary, a discipline-based education researcher, and Kitty Gifford, a communication consultant and instructor. They co-teach a science communication course at Cornell University and are co-founders of the Science Communication and Public Engagement Undergraduate Minor. They look forward to sharing effective teaching tools in this session and gaining new ideas from the workshop attendees. By the end of this workshop, attendees will be able to:

1. Implement evidence-based practices to teach students to critically evaluate media information sources and engage the public and policymakers in a scientific dialogue.
2. Apply pedagogical approaches to teach students to translate dense scientific information into easily consumable content using oral, visual, and written communication skills.
3. Create education-research-driven learning outcomes for a classroom or university program where students can develop their identities as science communicators