Signals from the future: Emerging technologies in science journalism

Date: November 4th & 5th, 2020

Location: Online

Target regions: Europe

Target groups: Science communicators, journalists, artificial intelligence and FET researchers, policy stakeholders

Future technologies elicit great fascination among broad audiences. Artificial intelligence (AI) is but one example that captivates technologists and the lay person. But while journalists and science communicators have identified it as a current topic of interest to the general public, researchers are often unhappy with the way in which AI is presented in the media. Future and Emerging Technologies (FETs) can prove challenging for journalists in that their potential future impact may be massive, but their precise workings and the pathways to innovation are not very clear.

This event aims to shed light on this issue for science communication. We will take a close look at how emerging technologies have been presented to date, what new and promising ways to communicate them to broader audiences exist, and what the journalistic barriers are. We will be examining artificial intelligence as one example, but also include other FETs supported under the European Innovation Council Pathfinder and Accelerator actions and previous FET programme under Horizon 2020.

Experienced science communicators will investigate potential ways and test new tools for going beyond traditional storytelling - which can often slant towards the utopian or dystopian - with leading technology experts identified in high-risk high-gain research projects. The event will address both the simplifications often necessary for effective communication as well as the concerns of technologists that their research will be fundamentally mis-portrayed.

This two-day, online workshop will be divided into four sessions, which will include three expert panels as well as the demonstration of an exciting new research tool for journalists utilising AI currently under development by QUEST.

The workshop is organised by the **FETFX** project, in collaboration with the **QUEST** project. The FETFX project is a Coordination and Support Action funded under the H2020 FET programme. The project supports all FET projects in increasing their influence and impact among science, industry, policy makers and society. Acting as a communications hub across various media, FETFX fosters the communication, dissemination and exploitation of FET funded projects through easy-to-access tools and techniques and FET/ EIC Pathfinder dedicated events.

This event is associated with the Trieste European City of Science 2020 initiative.

Agenda: *(*changes reserved)*

Day 1 - Wednesday, November 4th, 2020

10:00- 10:05	Welcome and introduction to workshop (FETFX & QUEST)
10:05 - 11:05	***Panel #1: High Risk Research: Assessing FET science communication attitudes and paths to innovation*** Discussion plus audience Q&A (1 hour) **Description**: Representatives from policy and science communication will examine the common gaps, obstacles and constraints in high-risk, FET and Pathfinder research communication. This panel will also discuss the challenges identified in the communication regarding the transition of FET to the European Innovation Council (EIC) and its new Pathfinder model, highlighting why continued support for FET projects remains relevant and important. It will also address barriers on the pathway to innovation. **Moderator***:* • *Helga Nowotny-* Founding Member & Former President of the European Research Council; Professor Emerita of Science & Technology Studies, ETH Zurich **Speakers:** • *Valeria delle Cave-* Istituto Italiano di Tecnologia - Communication of Competitive Projects & Foreign Press Office; Graphene Flagship • *Iordanis Arzimanoglou-* European Innovation Council - Programme Manager, Health & Biotechnology • *Eva García Muntión-* PREFET Project Coordinator; Founder & Managing Partner RTDI-Research, Technology, Development and Innovation • *István Palugyai-* Science Journalist
11:05 - 11:15	-Intermission-
11:15 - 12:15	***Panel #2: New Tools for Communicating: New approaches and mechanisms for communicating about Future and Emerging Technologies*** Discussion plus audience Q&A (1 hour) **Description:** An examination of new approaches and mechanisms for communicating about future and emerging technologies such as AI. As a second step, the development of KPIs and good practices to enhance outreach measures will then be discussed. Expert speakers will include representatives from FET projects, researchers and science communicators. **Moderator:** • *Alessandra Fornetti-* QUEST Project Coordinator; Executive Director of the TEN Program on Sustainability of Venice International University; H2020 MUHAI Project **Speakers***:* • *Alexander Gerber-* Chair of Science Communication at Rhein-Waal University; Research Director at INSCICO • *Carl-Gustav Linden-* Associate Professor of Data Journalism at University of Bergen; Docent, Media and Journalism Development at University of Helsinki • *Anna Dumitriu-* Award-Winning International Artist • *Daniela Ovadia-* Science Journalist; Scientific Director of the Center for Ethics in Science and Journalism (CESJ); Co-director of the Neuroscience and Society Lab at University of Pavia

Day 2 - Thursday, November 5th, 2020

10:00 - 10:05	Welcome and introduction to workshop (FETFX & QUEST)
10:05 - 11:05	***Panel #3: The Mis-portrayal of AI in the Media: What to do about it? Researchers & journalists weigh in*** Discussion plus audience Q&A (1 hour) **Description**: Well-known AI and FET AI researchers as well as science communicators/ journalists will discuss different, multi-disciplinary perspectives on how AI is presented in the media. **Moderator:** • *Erich Prem*- Founder & CEO eutema GmbH; FETFX **Speakers*:*** • *Luc Steels*- Professor Emeritus VUB Artificial Intelligence Research Group; ICREA Research Professor, Institute of Evolutionary Biology; Scientific coordinator, H2020 MUHAI project • *Renata Dacinger*- Journalist, Editor and Presenter of 'Let's Bite into the Science' on RTV Slovenia • *Scott Brennan*- Postdoctoral Research Fellow, Reuters Institute for the Study of Journalism and the Oxford Internet Institute • *Dunja Mladenić*- Senior Researcher, Project Leader & Head of the Artificial Intelligence Laboratory at Jožef Stefan Institute • *Fausto Giunchiglia*- Full Professor of Computer Science at University of Trento; WeNet Project Coordinator
11:05 - 11:15	Intermission
11:15 - 12:00	***QUEST introduction and demonstration of new AI tool*** Demonstration plus audience Q&A (45 minutes) Description: Neil Maiden from CASS Business School (City, University London) will demonstrate a new and innovative tool currently under development by QUEST: a non-commercial software which incorporates AI and will aid journalists researching complex scientific topics (for example future and emerging technologies and AI).

Signals from the Future: Speaker Biographies

Panel 1

Moderator: Helga Nowotny- Founding Member & Former President of the European Research Council; Professor Emerita of Science & Technology Studies, ETH Zurich

Helga Nowotny is Professor emerita of Social Studies of Science, ETH Zurich, and a founding member, former Vice President and President of the European Research Council (ERC). Among others, she is currently a member of the Austrian Council for Research and Technology Development and Visiting Professor at Nanyang Technological University, Singapore; member of the Board of Trustees of the Falling Walls Foundation, Berlin; and Vice-President of the Lindau Nobel Laureate Meetings. Professor Nowotny holds a PhD in Sociology and a doctorate in Jurisprudence, as well as having received doctorates honoris causae from several European universities and the Weizmann Institute of Science in Israel. Among other positions, she is a foreign member of the Royal Swedish Academy of Sciences and serves on many international advisory boards throughout Europe.

Valeria delle Cave- Communication of Competitive Projects & Foreign Press Office, Istituto Italiano di Tecnologia

Valeria delle Cave works in the Communication and External Relations Directorate at the Istituto Italiano di Tecnologia, where she is in charge of the communication activities related to research projects funded by external bodies on a competitive basis, such as the European Commission, European Research Council, Italian entities and international foundations; she is also in charge of the Foreign Press Office. She is currently one of the Italian National Press Officers of the EU Future and Emerging Technologies Flagship project "Graphene". Ms delle Cave holds a Physics degree and a PhD in Science and Society, for which her research studies focused on the communication of nanotechnology in the public sphere. She is a member of the Italian association SWIM - Science Writers in Milan.

Iordanis Arzimanoglou- European Innovation Council Programme Manager, Health & Biotechnology

Iordanis Arzimanoglou has vast experience in innovation in the areas of medical genetics, cancer research, molecular diagnostics, biotechnology, and AI-based medicine from both research and management sides. He directed cancer genetic research groups at Cornell University Medical College, NY and Lennox Hill Hospital, NY. Also, he was the CEO of the Aarhus biocluster and the Thessaloniki Innovation Zone managing companies. He was Assistant Professor at Cornell University Medical College, NY and Adjunct Associate Professor at the Aarhus University/Dept. of Biomedicine. He has numerous publications in the fields of medical genetics as well as innovation strategy and management.

Eva García Muntión- coordinator PREFET; founder of RTDI

Eva García Muntión is the coordinator of the H2020 Future and Emerging Technologies project PREFET, which focuses on evidence-based detection of emerging technology trends with high-impact potential. In 2008, she founded RTDI, a consultancy firm specialized in Research & Innovation project ideation and development towards commercialization of new products, processes or services based on deep technologies. Ms García Muntión has participated as coordinator, Technological Manager and Exploitation Leader of R&D projects from the 6th European Framework Programme in R&D to the current Horizon 2020 (equivalent to the 8th Framework Programme, which agglutinates the European policy of R&D and Innovation). She has also leaded numerous national R&D projects, as well as carried out ex-post analysis of programmes for the Spanish government.

István Paluyagi- Science Journalist

István Palugyai, is a science journalist; until 2016 he was the senior science editor of Népszabadság which was a leading daily paper in Hungary. István is the Honorary Lifelong President of the Club of Hungarian Science Journalists. He served as President of the European Union of Science Journalist's Associations

(EUSJA), Vice President (2003-2007) of the World Federation of Science Journalists and he organised the Second World Conference of Science Journalists in Budapest (1999). Until 2018 he was elected twice as a Governing Board member of Euroscience and from 2008 until 2018 he taught science journalism for the Science communication MSc of Eotvos Lorand University in Budapest.

Panel 2

Moderator: Alessandra Fornetti- coordinator QUEST; Executive Director of the TEN Program on Sustainability of the Venice International University

Alessandra Fornetti is Executive Director of the TEN Program on Sustainability of the Venice International University (VIU) and Coordinator of the H2020 Project QUEST on Science Communication. She is also the Work Package Leader of Communication and Dissemination in the H2020 MUHAI project on Human-Centred AI. She has over 15-year experience in managing international cooperation programs on research, capacity building, communication and dissemination, with EU and non-EU countries, engaging with the different stakeholders from public authorities to the business sector. She was VIU Head of Communications in 2011-2014. She is part of the Leonardo's Group of Science Gallery Venice and member of PCST. She also acts as referent for the participation of the VIU in national and international networks on sustainability (e.g. UN Global Compact, ASviS).

Alexander Gerber- Chair of Science Communication at Rhein-Waal University; Research Director at INSCICO

Alexander Gerber is a Full Professor of Science Communication at Rhine-Waal University (Germany) and Research Director at the Institute for Science and Innovation Communication (INSCICO). The spectrum of his work crosses what is often seen as the divide between scholarship and practice, working towards science communication as an agent of social innovation (see "Evidence-based Science Communication"). Regarding AI, he advocates a more anticipatory governance of technology by means of an open science communication about the ethical, legal and social implications of the technology. Professor Gerber is an elected member of the Scientific Committee of the global science communication association PCST and is involved in other associations such as EASST and iSMA.

Carl-Gustav Linden- Associate Professor of Data Journalism at University of Bergen; Docent, Media and Journalism Development at University of Helsinki

PhD Carl-Gustav Linden is Associate Professor of Data Journalism, University of Bergen, Norway, and docent, Media and Journalism Development, University of Helsinki, Finland. His main research interests are data-driven media and journalism as well as media business models. Previously, he was a Senior Communications Specialist at UNU-WIDER, a development research institute within the United Nations University. He has a background as a business journalist and opinion writer in print and television.

Anna Dumitriu- Artist

Anna Dumitriu is an award winning internationally renowned British artist who works with BioArt, installation, and digital media to explore our relationship to infectious diseases, synthetic biology, and robotics. She has an extensive international exhibition profile, and her art is held in several major public collections, including the Science Museum London and Eden Project. Ms Dumitriu was the 2018 President of the Science and the Arts section of the British Science Association, and has collaborated with several Horizon 2020 and FET EU projects, including FEAT, MRG-GRammar, BeyondSeq, MARA, CAPABLE, CHIC, and STARTS. https://annadumitriu.co.uk/

Daniela Ovadia- Science Journalist; Scientific Director of the Center for Ethics in Science and Journalism (CESJ); Co-director of the Neuroscience and Society Lab at University of Pavia

Daniela Ovadia is an Italian science journalist, with a background in medicine and neuroscience. She is scientific director of the Center for Ethics in Science and Journalism (CESJ), and the co-director of the Neuroscience and Society Lab at University of Pavia, where she teaches neuroethics and ethics for researchers. She writes mainly for Mind (the Italian edition of Mind-Scientific American) and blogs on psychology and neuroscience on their website. She teaches Communication strategies for EU projects at University La Sapienza in Rome. She is a former board member of the professional association SWIM-Science Writers in Italy.

Panel 3:

Moderator: Erich Prem- CEO eutema GmbH; FETFX

Erich Prem is the CEO of eutema GmbH. He is a graduate engineer in computer science and holds a PhD in computer science from the Technical University of Vienna. DDr Prem also graduated in managerial economics and received an MBA in General Management from Donau University. He is an experienced co-ordinator of many international projects in ICT research and technology management. For the last 10 years, he has worked in research management and policy with a focus on ICT research strategy. DDr Prem has a scientific background in Artificial Intelligence and epistemology. He was a researcher at the Austrian Research Institute for Artificial Intelligence and a guest researcher at the Massachusetts Institute of Technology. He is also a lecturer at the University of Vienna and has published more than 45 scientific articles.

Luc Steels- Professor Emeritus VUB Artificial Intelligence Research Group; ICREA Research Professor, Institute of Evolutionary Biology; Scientific Coordinator, H2020 MUHAI Project

Luc Steels studied linguistics at the University of Antwerp and computer science at the Massachusetts Institute of Technology. His main research field is Artificial Intelligence covering a wide range of intelligent abilities, including vision, robotic behaviour, conceptual representations and language. In 1983 he became a professor of computer science at the University of Brussels. He has been co-founder and chairman (from 1990 until 1995) of the VUB Computer Science Department, and founded the Sony Computer Science Laboratory in Paris in 1996, becoming its first director. Currently he is ICREA Research Professor at the Institute for Evolutionary Biology, and he recently started the H2020 FET MUHAI project on meaning and understanding in human-centric AI with the Venice International University (VIU) as one of the key partners. Steels has participated in dozens of large-scale European projects. During the past decade he has focused on theories for the origins and evolution of language using computer simulations and robotic experiments to discover and test them.

Fausto Giunchiglia- Full Professor of Computer Science, University of Trento; Coordinator WeNet

Fausto Giunchiglia is a Full Professor of Computer Science at the University of Trento, an ECCAI fellow, and a member of the Academia Europaea. He studied or held positions at the Universities of Genoa, Stanford and Edinburgh. His research is on managing diversity, how it appears in language, knowledge and human behaviour. He holds around 10 Best Paper Awards, has given more than 50 invited talks in international events and chaired more than 10 international events. Fausto is or has been an editor or on the editorial board member of around 10 journals, including: Journal of Data Semantics, Journal of Software Tools for Technology Transfer, and the Journal of Artificial Intelligence Research. He is also the coordinator of the current Future and Emerging Technologies (FET) Proactive project WeNet, and in the past coordinated the FET projects Smart Society, Living Knowledge and WhiteRabbit.

Scott Brennan- Postdoctoral Research Fellow, Reuters Institute for the Study of Journalism and the Oxford Internet Institute

Dr J. Scott Brennen is a communication scholar and a postdoctoral research fellow at the Reuters Institute for the Study of Journalism and the Oxford Internet Institute. His work investigates how changing media structures, cultures, and technologies are shaping the production and circulation of scientific information. He currently works on the Oxford Martin programme on Misinformation, Science, and Media, which examines the interplay between scientific misinformation, news coverage, and social media platforms for the public understanding of science and technological information.

Dunja Mladenić- Senior Researcher, Project Leader & Head of the Artificial Intelligence Laboratory, Jožef Stefan Institute

Dunja Mladenić works as a senior researcher and a project leader at Jožef Stefan Institute, Slovenia, leading the Artificial Intelligence Laboratory and teaching at Jožef Stefan International Postgraduate School, University of Ljubljana and University of Zagreb. She has extensive research experience in the study and development of Machine Learning, Big Data/Text Mining, Sensor Data Analysis, Internet of Things, Data Science, Semantic Technology techniques and their application on real-world problems. In 1996/97, 2000/01 she was a visiting researcher at Carnegie Mellon University, USA. She has published papers in refereed journals and conferences, co-edited several books, served on program committees of international conferences and organised international events. She serves as a project evaluator for European Commission, Finish Science Academy, Swedish Research Council, Science Foundation Ireland and USA National Science Foundation. From 2013-2017 she served on the Institute's Scientific Council, as a vice president (2015-2017). She serves one the Executive Board of Slovenian Artificial Intelligence Society SLAIS (as a president of SLAIS (2010-2014)) and on the Advisory board of ACM Slovenija.

Renata Dacinger- Journalist, Editor and Presenter of 'Let's Bite into the Science', Slovenian Public Television

Renata Dacinger is the editor and presenter of a weekly science program Let's Bite into The Science. She graduated as journalist at the Faculty of Social Sciences at the University Ljubljana. For nearly 20 years she has been active as journalist, scriptwriter, editor, and host within the educational programme at the Slovenian Public Television (RTVS). She is strongly involved in various activities which promote science to the interested public. Among them, she moderates various public presentations and talks on scientific achievements and developments, and acts as guest lecturer at the Jožef Stefan International Postgraduate School. She has received several awards for her work. In 2019, Asociation of British Science Writers awarded her the Science Writer of the Year award.

Session 4:

Neil Maiden- Professor of Digital Creativity, CASS Business School, City, University of London

Neil Maiden is Professor of Digital Creativity at the Business School of City, University of London, where he teaches creativity and design thinking to MBA and Masters-level students. He is also Director of the UK's new National Centre for Creativity enabled by AI based at City, University of London. He is and has been a principal and co-investigator on numerous EPSRC- and EU-funded research projects with a total value of €35million. He has published over 200 peer-reviewed papers in academic journals, conferences and workshops proceedings. He was Program Chair for the 12th IEEE International Conference on Requirements Engineering in Kyoto in 2004 and is Editor of the IEEE Software's Requirements column from 2005-2013.