

Conference schedule

I, Expert: Media competence for science through linguistics

(7-8 October 2024, Altes Heizhaus, Chemnitz University of Technology)

Time	Monday, 7.10
9:30	Conference opening and introduction – Marina Ivanova
10:00	Rosa Lorés – The SciDis perspective: Corpus studies of digital scientific discourse for dissemination purposes
10:30	Ana Sancho – Science dissemination and knowledge transfer in the digital medium: A description of the SciDis Database
11:00	Coffee break
	<i>Chair: Rosa Lorés</i>
11:30	Pilar Mur Dueñas – Forging comprehensibility, credibility and interactivity in recontextualised knowledge: High frequency language traits
12:00	Silvia Murillo – Uses of emoji as engagement devices in Twitter/X for research dissemination purposes
12:30	Lunch break
	<i>Chair: Marina Ivanova</i>
14:00	Josef Schmied – Developments in digital science communication: Looking back at the last 20 years of new genres and new research questions
14:30	Christina Sanchez-Stockhammer – Press releases as the missing link between linguistic research and the public
15:00	Sasha Coelho & Cansu Akan – Positivity bias in science communication: A sentiment and corpus linguistics analysis of the Science Media Centre
15:30	Conference Day 1 closing and coffee
16:30	City tour 16:30h–18:00h (Start: Tourist information (Markt 1))
19:30	Conference dinner at Neue Chinas Welt (Straße der Nationen 120)

Time	Tuesday, 8.10
9:00	Conference day 2 opening
	<i>Chair: Christina Sanchez-Stockhammer</i>
9:00	Veronika Karnowski – Social media, news, and science communication: A media and communication studies perspective
9:30	Jana Bressemer & Ellen Fricke – Engaging minds, moving hands: Science communication in gesture studies
10:00	Rabea Kleymann – Data picnics: A participatory format for mapping civic discourses
10:30	Coffee break
11:00	Lauren Gawne – The use of linguistic terminology in lingcomm (online talk)
	<i>Chair: Pilar Mur Dueñas</i>
11:30	Daniel Pascual – Users ask, experts respond: Typology, structure and engagement in <i>Ask an Expert</i> practices
12:00	Alba Ansó – Analysing podcast discourse: A study of proximity in <i>The Psychology Podcast</i>
12:30	Lunch break
14:00	Discussion on science communication genres
15:00	Conference closing
15:30	Visit of the local newspaper <i>Freie Presse</i> and Q&A with Johanna Schöbel

The conference is organized in cooperation with the University of Zaragoza and funded by the German Academic Exchange Service (DAAD) as part of the program "Higher Education Dialogue with Southern Europe".

For more information, visit <https://www.mytuc.org/xlqs>

Abstracts

Rosa Lorés (University of Zaragoza) – The SciDis perspective: Corpus studies of digital scientific discourse for dissemination purposes

Contemporary expectations demand raising public awareness of the societal implications of scientific research. It also requires making complex disciplinary knowledge accessible to diverse audiences with varying levels of expertise. Allowing access to specialized knowledge calls for the recontextualization of such knowledge to ensure comprehension by audiences that are diverse, multiple, and heterogeneous.

In this presentation, the SciDis project will be introduced. The project's core concept (recontextualization) and its rationale will be explored, its objectives defined, and the corpus and database built for the project will be described. The methodological and theoretical frameworks used in the study will also be presented.

For illustration, a study on the use of intertextual patterns as recontextualizing resources will be briefly discussed. The study, based on a corpus of 30 online feature articles, revealed that both offline and online resources were combined in these digital practices to different degrees. However, digital and "analogue" intertextual resources seem to serve different recontextualization purposes, concerning the level of expertise and specialization they bring into the text.

Ana Sancho (University of Zaragoza) – Science dissemination and knowledge transfer in the digital medium: A description of the SciDis Database

Currently conceptualized as a social asset, science has undergone a paradigm shift wherein there have emerged innovative knowledge dissemination dynamics aimed to make knowledge accessible for expert and non-expert audiences. The development of the digital medium has contributed to the democratisation of scientific knowledge by providing experts with technical affordances and abundant semiotic resources with which they can reach diversified audiences, and discursively tailor the form of specialised knowledge so that it caters for their heterogeneous levels of expertise. In this context, the SciDis (Science Dissemination) Database emerges as a dynamic collection of digitally-mediated texts which encompasses varied discursive online phenomena of scientific dissemination.

This paper presents the SciDis Database, providing a description of the recontextualisation and knowledge transfer practices it comprises to this date. For this purpose, it first outlines the main methodological criteria established in the compilation of the database as a dynamic, yet representative, collection of digital texts. Three specific methodological issues are regarded as central in the identification of disseminating practices online, including the thematic coherence between the scientific disciplines considered, the typology of the practices under study, and the agency of the selected texts. Drawing on these compilatory issues and the practices pinpointed to this date, potential applications of the database are discussed.

Pilar Mur Dueñas (University of Zaragoza) – Forging comprehensibility, credibility and interactivity in recontextualised knowledge: High frequency language traits

In the current broad digitally-mediated dissemination of knowledge, scientists and scriptwriters play a key role as they take diverse digital textual practices to make such knowledge potentially available to diversified audiences. In addition, their discursive choices are of great importance to effectively recontextualise such knowledge, ensuring that it is accessible, understood and accepted by experts and (semi)laypersons.

This paper seeks to analyse frequent lexical choices and metadiscoursal markers made by scientists and scriptwriters when research on environmental economic sustainability is disseminated in the digital medium. The analysis is based on the Economy SciDis sub-corpus and comprises 30 scientific dissemination texts (from *The Conversation*, feature articles and research digests) dealing with the topics of sustainability and circular economy.

Keywords reveal the research areas and topics that are covered and disseminated and the metadiscoursal items in a 100-word list generated from the corpus highlights specific metadiscoursal choices made when realising common strategies in the recontextualisation of specialized knowledge, namely, explanatory, attention-getting and credibility strategies. Such choices play a key role in the construction of persuasive digital dissemination texts to convince readers to engage sustainable practices. The pedagogical implications of the study are highlighted.

Silvia Murillo (University of Zaragoza) – Uses of Emoji as Engagement Devices in Twitter/X for Research Dissemination Purposes

Along with their websites, international projects use social media for their dissemination and communication activities, mainly Twitter/X. In their Twitter/X accounts, emoji are often included in the tweets, in an attempt to reach diversified audiences, including the general public. The emoji used in the messages are in general associated to the keywords of the projects, and their activities, contributing to the dissemination of their results (and to their promotion). These graphic elements can be attitudinal or speech act clues for the intended interpretation of the messages, or they can contribute to the actual content of the messages, and they have been studied from a Relevance theory perspective (Sasamoto 2022, Scott 2022, Yus 2022). In this presentation I will examine a subset of the EUROPROtweets database comprising 10 accounts associated to H2020 project websites, in order to account for how emoji contribute to building the messages. I will draw from previous Relevance-theoretic accounts of the uses of emoji, and contribute with some insights from my research of reformulation processes in verbal language (Murillo 2012). Emoji can substitute for words, or they can follow or precede words in a process resembling verbal reformulations. Non-facial, reformulative emoji seem to be particularly frequent in the tweets of the research projects, and these items are used to enhance the content of the messages and their engagement, thus contributing in original ways to the recontextualization of the knowledge generated by the projects.

Murillo, S. (2012). The use of reformulation markers in Business Management research articles: An intercultural analysis. *International Journal of Corpus Linguistics*, 17(1), 64-90. <https://doi.org/10.1075/ijcl.17.1.03mur>

Sasamoto, R. (2022). Perceptual resemblance and the communication of emotion in digital contexts: A case of emoji and reaction GIFs. *Pragmatics*, 33(3), 393-417. <https://doi.org/10.1075/prag.21058.sas>

Scott, K. (2022). *Pragmatics Online*. Oxon: Routledge.

Yus, F. 2022. *Smartphone Communication. Interactions in the App Ecosystem*. London: Routledge.

Corpus: <https://intergedi.unizar.es/europro-digital-corpus/>

Josef Schmied (TU Chemnitz) – Developments in Digital Science Communication: Looking back at the last 20 years of new genres and new research questions

This contribution brings together major developments in the expanding field of Science Communication over the last 20 years, up to the impact of the Covid-19 pandemic and Large Language Models. It tracks how digital practices developed from innovation to norm. It covers diverse discourse practices of knowledge generation and dissemination, including expert-to-expert (developing authorial stance in the context of subject conventions) as well as expert-to-academic public (between infotainment and citizen science). It focuses on constructivist approaches to current practices of identity construction by non-native researchers in different academic traditions in Europe. It demonstrates trends towards collaborative research and participation in multi-author publications. It discusses new media affordances and new genres like weblogs and video abstracts or podcasts and 3-minute pitches. As a discourse basis for future research, it sketches ways towards answering new empirical research questions such as: How can science reviews find a compromise between rigid analysis and speedy dissemination or between author identity and disciplinary expectations? Do journalists sex-up research results through their metalanguage? Which ethical issues have to be considered in current genres of science communication? Which developments have to be included in current graduate teaching?

Christina Sanchez-Stockhammer (TU Chemnitz) – Press releases as the missing link between linguistic research and the public

In view of the increasing emphasis currently placed on outreach as part of academic research, more and more researchers are now starting to communicate their research results to a general audience. This is often done by means of social media like X, Instagram, TikTok or YouTube, since these are popular with the intended target audience, accessible and easy to use. However, the impact that can be achieved by means of social media depends on how many followers a channel has – and this will most likely be limited, at least initially. My contribution therefore draws attention to press releases as an important and often underestimated tool for linguists to make their research known to a wider audience. Based on my own experiences with the writing of press releases and some actual examples, I will outline advantages and disadvantages of this type of text, describe its characteristics and provide some insights into what characterises good press releases.

Sasha Genevieve Coelho & Cansu Akan (TU Chemnitz) – Positivity bias in science communication: A sentiment and corpus linguistics analysis of the Science Media Centre

The Pollyanna principle or the tendency to use more positive words in comparison to negative words is a known phenomenon in scientific publishing (Matlin 2016). Vinkers et al. (2015) examined PubMed research paper titles and abstracts between 1974 and 2014 for the occurrence of predefined positive and negative words and found an increasing relative frequency of positive words by over 800%. Academic writing has become more positively biased. Emotions play an important part in information processing (Savolainen 2014) and especially positive emotions increase the chances of perceiving semantic, visual and grammatical coherence even when there might not be any (Topolinski and Strack 2009).

The current study employs corpus linguistics and sentiment analysis to analyse headlines and news articles from the Science Media Centre (<https://www.sciencemediacentre.org/>) from 2020 to 2023 (token strength: 177415). A comparative sentiment analysis will be done using VADER and machine learning techniques to analyse if newer articles follow a positivity trend,

similar to that of the academic abstracts. This study also investigates the language used in science communication to provide insights into the linguistic competencies future scientists must develop for effective science communication. We identify key collocations and domain-specific language patterns, focusing on key scientific terms related but not limited to cause-effect relationships, trend explanations, reporting, and data interpretation. This will be achieved through the use of *Sketch Engine* for collocation and language pattern analysis, and *WordValue* for visualization. The findings will inform recommendations for the linguistic tools necessary for impactful science communication.

Matlin, M.W. (2016). "Pollyanna principle" in R.F. Pohl (ed.): *Cognitive Illusions: Intriguing Phenomena in Judgement, Thinking and Memory*. Psychology Press, pp.315-333.

Sanchez-Stockhammer, C. & Tochtermann, J. (2022) *WordValue* (Version 1.4, July 2024). Munich: Ludwig-Maximilians-Universität. Accessible at www.wordvalue.gwi.uni-muenchen.de.

Savolainen, R. (2014). Emotions as motivators for information seeking: A conceptual analysis. *Library and Information Science Research*, 36(1), 59–65. <https://doi.org/10.1016/j.lisr.2013.10.004>

Sketch Engine. (2003). Lexical Computing CZ. Accessible at <https://www.sketchengine.eu/>

Topolinski, S., & Strack, F. (2009). The architecture of intuition: Fluency and affect determine intuitive judgments of semantic and visual coherence and judgments of grammaticality in artificial grammar learning. *Journal of Experimental Psychology: General*, 138(1), 39–63. <https://doi.org/10.1037/a0014678>

Vinkers, C.H., Tjebkink, J.K., Otte, W.M. (2015) " Use of positive and negative words in scientific PubMed abstracts between 1974 and 2014: Retrospective analysis. *BMJ (Clinical Research ed.)* 315:h6467

Veronika Karnowski (TU Chemnitz) – Social media, news, and science communication: A media and communication studies perspective

Effective science communication hinges on the acknowledgment of both subjectively recognized and objectively justified epistemic authorities. In the realm of digital media, new and unconventional sources of knowledge have emerged that can serve as functional epistemic authorities. However, the rise of false authorities spreading misinformation poses significant challenges, while other credible sources remain overlooked.

In this talk, I will draw on two examples to illustrate how mobile and social media have transformed the dissemination and reception of knowledge, specifically news, in today's media landscape. First, I will present insights from our research on news sharing behaviors on social media platforms, highlighting the dynamics of information exchange. Second, I will explore the impact of mobile media on news consumption, which has led to considerable intrapersonal variation in how individuals engage with news content.

By understanding these shifts, we can better navigate the complexities of knowledge dissemination in a digital age and enhance the effectiveness of science communication strategies.

Jana Bressemer & Ellen Fricke (TU Chemnitz) – Engaging minds, moving hands: Science communication in Gesture Studies

Our talk explores how gesture (studies) may be communicated through various formats of science communication. Our aim is to foster public engagement and discussion around gestures, highlighting their relevance not only in human communication but also in the context of machine interaction.

We will illustrate our activities through two key projects:

1. **The Traveling Exhibition "Gestures: Past, Present, Future": It makes gestures and their diverse connections to current cultural as well as technical developments and transformation processes tangible and experiential.** This exhibition brings gesture research to diverse audiences, featuring various interactive exhibits. The exhibition was supported by a museum education program, keynotes, and curator-led tours.
2. **The Podcast "Talking Bodies" and Social Media Activities:** The podcast and accompanying social media platforms engage broad audiences, including educators and students, in topics ranging from gestures to metaphors in language. Live recordings, such as at Podfest Berlin (2023), further enhance public interaction.

Based on these activities, we will reflect on our experiences of communicating gesture (studies). We will highlight a public's strong interest in gestures, yet also challenges in breaking down stereotypes about gestures and overcoming lay misconceptions, paralleling issues in language awareness. And we reflect on these issues on the background of our aim to emphasize the complexity, diversity, and functionality of gestures without oversimplifying.

Rabea Kleymann (TU Chemnitz) – Data picnics: A participatory format for mapping civic discourses

This talk introduces data picnics, a participatory format developed within the [C the Unheard!](#) project to map civic discourses. Data picnics bring together researchers, students, and civil society to explore and visualize local civic data, fostering collaboration between academic and public audiences. By engaging in the processes of data visualization and storytelling, participants create new narratives that challenge existing representations of Chemnitz.

This talk elucidates the ways in which digital humanities offer indispensable instruments for the collection, interpretation, and communication of data. It draws upon data visualizations and stories from the project to examine the function of data literacy in public discourse and the potential of participatory formats like data picnics to enrich scientific communication by empowering individuals to become active contributors to data-driven narratives.

Lauren Gawne (La Trobe University) – The use of linguistic terminology in lingcomm

Sharing linguistics with non-specialist audiences requires special consideration of the role of terminology. The selection of terminology to feature requires consideration of the audience and the aims of the materials being created. This is part a specific communications skill set that is related to, but distinct from, academic and pedagogical communication, a practice I refer to in this talk as *lingcomm*. Lingcomm is not only communicating to general audiences about linguistics, but using the tools of linguistic analysis to deconstruct and share insights into this practice. When it comes to use of "jargon" we can draw on research in discourse analysis, educational psychology, and semantics to build a considered approach to the terminology we use in lingcomm. In this talk I share work on two different projects where we have analysed the use of linguistic terminology in lingcomm materials. The first is a reflexive analysis of the approach to terminology selection that my co-host Gretchen McCulloch and I use on the podcast *Lingthusiasm*. The second is work with Jess Kruk about the way terminology can be most effectively deployed in lingcomm, and how this differs to the use of terminology in formal educational contexts.

Daniel Pascual (University of Zaragoza) – Users ask, experts respond: Typology, structure and engagement in Ask an Expert practices

Science communication is being exploited in new ways to connect experts and lay readers. *Ask an Expert* practices offer a dissemination space in which users can seek and provide advice and exchange information about specialised information. This paper specifically focuses on *Ask an Expert* practices revolving around environmental discourse. The analysis rests on a corpus of 80 texts extracted from the MIT Climate Portal. The corpus is part of the SciDis Database, which gathers scientific dissemination practices unfolded in digital media. Findings of the study point, first, at a typology of current *Ask an Expert* practices, including social media, forum-like websites, and disciplinary webpages. Then, a rhetorical structure is sketched for the case of *Ask an Expert* disciplinary webpages, emphasising meaningful sections and moves. Finally, a detailed study is carried out, through the software tool NVivo, to look into the frequency and use of engagement markers. The most salient categories found comprise reader references, code glosses, directives and questions, together with a novel category, which is content asides. The paper intends to shed light on the scientific dissemination potential of *Ask an Expert* practices and how the dialogic relationship between experts and users is forged through these texts.

Alba Ansó-Millán (University of Zaragoza) – Analysing podcast discourse: A study of proximity in The Psychology Podcast

In the light of the current profusion of (mis)information (Navas-Echazarreta et al., 2022), it seems paramount to safeguard citizens' trust and engagement with science, a challenge which particularly affects genres of science communication disseminated through digital media. In this regard, this study focuses on a relatively young digital practice which seems to be particularly consumed these days: Podcasts. The main purpose of this analysis is to explore how the rhetorical construction of proximity (Hyland, 2010) is shaped by the requirement to address a large group of listeners with varying degrees of expertise. To do so, ten podcast openings from *The Psychology Podcast* (Kaufman, 2014-present), an English-language interview-like channel, were collected to carry out a discourse analysis based on Hyland's (2005) interactional framework of metadiscourse. The results revealed that self-reference, attitude markers, and direct allusions to the addressees were the most frequent strategies oriented towards forging a proximity bond with listeners. The findings highlighted that the experts and the podcaster acted as synergistic forces playing two different roles. Whilst the former functioned as a *scientist-storyteller*, framing the podcast in a personal atmosphere, the latter was the *catalyst* for drawing the broad audience in. Both the podcaster and the experts resorted to personalisation (Caliendo, 2014; Scotto di Carlo, 2014) as a key strategy aimed at appealing to the affinity of listeners at large. Overall, in endeavouring to engage and elicit trust, these podcasts could be considered digital spaces where not only does communicating science matter, but the individual *how did I get here* story behind.