In the age of social media, science increasingly reaches audiences not through lecture halls, but via smartphone and computer screens. A growing number of science communicators are building their visibility online, as experts, educators, and opinion leaders. They present complex topics in accessible, engaging, and often emotional or personal formats, attracting large and diverse audiences. However, operating in an environment dominated by algorithms, brevity, immediacy, and visual appeal presents unique challenges for establishing and maintaining scientific authority.

This research project investigates how scientific authority is constructed, sustained, and negotiated by leading Polish science communicators in the digital space. The study focuses on the communication strategies used by content creators on platforms such as YouTube, Instagram, Twitter/X, and LinkedIn. Key research questions include: How do science communicators reinforce their credibility online? How do they combine factual accuracy with the demands of popularity and user engagement? How do they respond to the pressure for simplification and the need for instant impact?

The project analyzes the activities of three prominent figures in Polish science communication: Maciej Kawecki (specializing in law and digital technologies), Tomasz Rożek (combining physics and science journalism), and Paulina Górska (focused on climate and environmental communication). Each represents a distinct field of expertise and communication style, allowing for the exploration of diverse approaches to establishing expert authority. The study examines how these communicators adapt their content to platform-specific logics, what rhetorical, linguistic, and visual strategies they employ, and how they foster audience engagement and build relationships in a competitive and rapidly evolving media landscape.

The research adopts a qualitative methodology, including an analysis of 300–500 posts from various platforms and in-depth interviews with selected science communicators. The analytical framework draws on rhetorical analysis, linguistic pragmatics, critical discourse analysis, and multimodal communication studies to uncover the complex mechanisms through which online expertise is constructed and legitimized. Particular attention is paid to the influence of platform logic on content presentation, such as brevity, algorithmic curation, emotionality, visual aesthetics, and engagement-driven reward systems (likes, comments, shares).

The project addresses an issue of significant social relevance, in the context of declining trust in science, the rising popularity of pseudoscience, and the increasing polarization of public discourse. Its aim is to provide an in-depth understanding of how contemporary science communicators combine expert knowledge with the expectations of digital audiences and how they shape and maintain scientific authority in a changing media culture. More broadly, the project offers insights into the mechanisms of effective, trustworthy, and engaging science communication in the information age.