～NII/LLMC Invited Talk～
Grounding, Mutual Knowledge and Trustworthy Interaction: Experiences from Combining LLMs with Knowledge Graphs

NII — National Institute of Informatics

In this talk I will discuss opportunities opened up by integration of LLMs with knowledge graphs. I will describe the importance of mutual knowledge for trustworthy interaction, including the concept of grounding. I will give examples from our ongoing work, where we apply the Graph RAG approach to the Kyoto cooking database which we imported into Neo4j. Thus we also addressed multilingual aspects of dialogue management: using Graph RAG, a robot can talk about Japanese cooking in English, using a knowledge base that is in Japanese.

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Dr. Kristiina Jokinen received her first degree at University of Helsinki, and her PhD from UMIST, Manchester. She was awarded a JSPS Fellowship for PostDoc research at NAIST (Nara Institute of Science and Technology), and was Invited Researcher at ATR Research Labs in Kyoto, and Visiting Professor at Doshisha University.

She has led numerous national and international research projects and currently leads dialogue research in the EU-Japan collaboration project e-VITA. Her research concerns human-robot interaction, AI-based dialogue modelling and multimodal communication, and she has published widely on these topics. She developed Constructive Dialogue Model as a general framework for interaction, and together with Graham Wilcock she developed the Wikipedia-based robot dialogue system WikiTalk, which won the Special Recognition for Best Robot Design (Software Category) at the International Conference of Social Robotics in 2017.

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