Improving the current state-of-art for the online communities and misinformation detection systems.

BACKGROUND:
The proposed research is based on the theory that misinformation has different propagation paths than information, and that the role of communities within online platforms play a significant role.

RESEARCH OBJECTIVES:
1. To improve machine learning based community detection models on the task of online misinformation detection.
2. To develop a community-based misinformation propagation model.
3. To produce a comprehensive study at scale including different modalities

METHODS:
• RO1: Data Collection, Modelling (i.e. using BERT transformer) and Community Detection using GNN
• RO2: NLP methods for text and Spatial GNN for the social network structure

RESPONSIBLE INNOVATION:
• Public Engagements
• Future Thinking

What is fake news?
• Fake News can be described as untrue or exaggerated stories, often spread through social media
• False stories can be retweeted by thousands of people before counter-evidence (i.e. truthful information) starts to emerge. Since fake news is often more exciting than the facts, research shows it spreads far quicker.

Different modalities:
1. Visual
2. Social
3. Textual

A geometric deep learning approach
The proposed method will allow integrating heterogeneous data pertaining to the user profile and activity, social network structure, news spreading patterns and content in order to detect fake news on social network.

“Online misinformation can cause significant harm to an individual”