Why study inclusion in the IETF

- IETF is a voluntary global organization with its communication, activities recorded and available for analysis and study
- Diversity, Inclusion and Representation make the consensus process robust.
- Do consensus mechanisms depend on offline meeting, side talks and in person advocacy?
  - This puts participants who engage in remote-only mode (perhaps due to geographical, personal constraints) at a disadvantage
- People are multi-dimensional and their sense of community may not be appropriated by their observable demographic indicators
  - Data driven identification of influence that some members may have on consensus building

Big Outstanding Questions

- Has the move to virtual only interactions increased diversity, inclusion?
- Quantify the diversity in the consensus mechanism of proposing new internet drafts to rfcs to internet standards.
  - How much opinion diversity is present in working groups?
    - Are certain issues or communities regularly not being heard
- For new comers - automatically identify advocates
- Computationally understand the evolving organizational structure and norms of the IETF

Approaches to obtain answers

- Quantifying Diversity:
  - Collect mailing list, meeting minutes participation data using ietfdata tool and run statistical tests for relevant hypothesis - before covid19 versus during covid19.
    - Use the ietfdata tool built by workshop participants and contribute to its examples
  - Use naive bayes sentiment classifier to understand opinion diversity.
- Mining for advocates:
  - Use time series clustering algorithm to group members on their behavioral, topical and influence similarity
    - Workshop participants would have insights on which set of members need to be studied
- Understanding the organizational structure and norms of IETF
  - Use a graph mining approach to uncover structure from the communication on mailing lists.
    - What features of communication between members are relevant? Workshop participants have done work on this.
    - Workshop participants are also interested in temporal aspect, and that may motivate development of novel temporal graph mining algorithms
  - Statistically test relevant hypothesis related to norms from available data
    - Multiple workshop participants have tested some norms such as those related to gender, also about who is the average IETF member

Relevant research

- PhD thesis in Mining Personality Traits and Homophilic Groups from Enterprise Social Networks
- Identifying leaders and fine grained communities with coherent topics - Priyanka Sinha, Lipika Dey, Pabitra Mitra, and Dilys Thomas. 2020. A Hierarchical Clustering Algorithm for Characterizing Social Media Users. In Companion Proceedings of the Web Conference 2020 (Taipei, Taiwan) (WWW '20). Association for Computing Machinery, New York, NY, USA, 353–362. https://doi.org/10.1145/3366424.3383296 https://www.youtube.com/watch?v=_OmQWp7vflg
- Mining peers and peer groups (under review) - Priyanka Sinha, Ritu Patel, Pabitra Mitra, Dilys Thomas, Lipika Dey. Mining Homophilic Groups of Users using Edge Attributed Node Embedding from Enterprise Social Networks
- Understanding individual behavior - Priyanka Sinha, Lipika Dey, Pabitra Mitra, and Anupam Basu. 2015. Mining HEXACO personality traits from Enterprise Social Media. In Proceedings of the 6th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis. Association for Computational Linguistics, Lisboa, Portugal, 140–147. http://aclweb.org/anthology/W15-2920
- Explaining dialogue outcomes - Priyanka Sinha, Pabitra Mitra, Antonio Anastasio Bruto da Costa, Nikolaos Kekatos. 2021. Explaining Outcomes of Multi-Party Dialogues using Causal Learning. https://arxiv.org/abs/2105.00944
- Social Sensing for Smart Enterprise Transformation - Lipika Dey, Tirthankar Dasgupta, and Priyanka Sinha. 2018. Social Sensing and Enterprise Intelligence: Towards a Smart Enterprise Transformation (SSEI 2018) Chairs' Welcome and Organization. In *Companion Proceedings of the The Web Conference 2018* (*WWW '18*). International World Wide Web Conferences Steering Committee, Republic and Canton of Geneva, CHE, 1685–1686. DOI:https://doi.org/10.1145/3184558.3192323