



Delft University of Technology

## Insights on Group and Team Dynamics

Allen, Joseph; Hung, Hayley; Keyton, Joann; Murray, Gabriel; Oertel, Catharine; Varni, Giovanna

### DOI

[10.1145/3462244.3480976](https://doi.org/10.1145/3462244.3480976)

### Publication date

2021

### Document Version

Final published version

### Published in

ICMI 2021 - Proceedings of the 2021 International Conference on Multimodal Interaction

### Citation (APA)

Allen, J., Hung, H., Keyton, J., Murray, G., Oertel, C., & Varni, G. (2021). Insights on Group and Team Dynamics. In *ICMI 2021 - Proceedings of the 2021 International Conference on Multimodal Interaction* (pp. 855-856). (ICMI 2021 - Proceedings of the 2021 International Conference on Multimodal Interaction). Association for Computing Machinery (ACM). <https://doi.org/10.1145/3462244.3480976>

### Important note

To cite this publication, please use the final published version (if applicable).  
Please check the document version above.

### Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

### Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.  
We will remove access to the work immediately and investigate your claim.

***Green Open Access added to TU Delft Institutional Repository***

***'You share, we take care!' - Taverne project***

**<https://www.openaccess.nl/en/you-share-we-take-care>**

Otherwise as indicated in the copyright section: the publisher is the copyright holder of this work and the author uses the Dutch legislation to make this work public.

# Insights on Group and Team Dynamics

Joe Allen  
joseph.a.allen@utah.edu  
University of Utah  
USA

Gabriel Murray  
gabriel.murray@ufv.ca  
University of the Fraser Valley and  
the University of British Columbia  
Canada

Hayley Hung  
h.hung@tudelft.nl  
Delft University of Technology  
Netherlands

Catharine Oertel  
C.R.M.M.Oertel@tudelft.nl  
Delft University of Technology  
Netherlands

Joann Keyton  
jkeyton@ncsu.edu  
North Carolina State University  
USA

Giovanna Varni  
giovanna.varni@telecom-paris.fr  
Télécom Paris, Institut polytechnique  
de Paris  
France

## ABSTRACT

We are organizing again the workshop on Interdisciplinary Insights into Group and Team Dynamics which is a joint effort between researchers in the the ICMI and INGRoup (Interdisciplinary Network for Group Research) communities. This workshop aims to provide a common destination for researchers to exchange ideas and collaborate. We have found in previous years that instigating interdisciplinary collaborations can be hard. The aim of this workshop is to sustain a joint community to foster continued cross-disciplinary exchange and mutual understanding.

## CCS CONCEPTS

• **Applied computing** → **Psychology**; • **Human-centered computing** → **Collaborative and social computing theory, concepts and paradigms**; • **Computing methodologies** → **Artificial intelligence**.

## KEYWORDS

group interaction, group dynamics

### ACM Reference Format:

Joe Allen, Hayley Hung, Joann Keyton, Gabriel Murray, Catharine Oertel, and Giovanna Varni. 2021. Insights on Group and Team Dynamics. In *Proceedings of the 2021 International Conference on Multimodal Interaction (ICMI '21)*, October 18–22, 2021, Montréal, QC, Canada. ACM, New York, NY, USA, 2 pages. <https://doi.org/10.1145/3462244.3480976>

## 1 INTRODUCTION

Human life happens in groups whether at work or leisure. Group dynamics is an area of inquiry of interest to both fundamental and applied settings. Recently, in the fields of social signal processing and affective computing, there has been a trend to move from controlled lab experiments to perception of group phenomena in uncontrolled real life settings, leading to significant technical challenges. This implies a great need to gather more data to train, validate, and test methods for behaviour perception, modelling, and

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

*ICMI '21, October 18–22, 2021, Montréal, QC, Canada*

© 2021 Copyright held by the owner/author(s).

ACM ISBN 978-1-4503-8481-0/21/10.

<https://doi.org/10.1145/3462244.3480976>

synthesis. In the disciplines of social and organizational psychology, perception of group phenomena have often been observed and studied both in the lab and in uncontrolled real life settings, with an emphasis on theoretical development and growth over time.

To capture temporal group and team dynamics, both social and computer scientists are increasingly working with annotated behavioral interaction data. Such data can provide the basis for developing novel research lines that capture dynamic, often "messy" group phenomena and at the same time provide intriguing challenges for the automated analysis of multi-modal interaction. By bringing social and computer scientists together, the unique modeling of the computer scientists can be informed by the extensive theories from the social scientists, and eventually novel new insights resulting in new research avenues and new theory will emerge. For example, what can the behavioral patterns of social signals in group interactions tell us about complex, often difficult to grasp emergent group constructs such as conflict, cohesion, cooperation, or team climate? Technological advances in social signal processing allow for novel ways of group analysis to tackle these types of questions. At the same time, a growing number of group researchers with a background in the social sciences are embracing more behavioral approaches to group phenomena. Facilitating dialogue collaboration among these disciplines has the potential to spark synergies and radically innovate both research in multi-modal interaction research as well as group research and theory in general.

This workshop is part of a timeline of initiatives starting from a 2016 Lorentz Workshop [2] which aimed to bring group scholars and researchers in the social and affective computing community together. The following events were co-organised by organizers or attendees of the Lorentz Workshop:

- 2018: ICMI workshop on Group Interaction Frontiers in Technology (Boulder Colorado) [3];
- 2018: Symposium on Group Dynamics (Delft, The Netherlands)
- 2019: INGRoup Preconference on Frontiers of Group Interaction Research – Promoting collaborations among social and computer scientists 2019 (Lisbon, Portugal);
- 2019: ACII workshop on Emotions and Emergent States in Groups
- 2020: ICMI workshop on Group and Team Dynamics (Virtual) [1]

- 2020: INGroup session: GeeksnGroupies: Cracking the code to Interdisciplinary Collaboration between Computer scientists and Group researchers. (Virtual)

This workshop aims to continue the momentum of having group scholars and researchers in multi-modal interaction develop a common language and a platform to meet, foster and maintain relationships and to grow as a community. In 2020, we extended our efforts from alternating between workshops at the ICMI in one year and at the INGroup conferences in the next year to a more integrative approach. That is, we reported back on the insights from the ICMI 2020 workshop during a one-hour event at the INGroup conference on 28th October ( “GeeksnGroupies: Cracking the code to interdisciplinary collaboration between computer scientists and group researchers”) that was also well attended by both disciplines. This effort was easier to facilitate as a result of the enforced virtual conference format as a result of the global pandemic. This workshop serves as yet another opportunity to build connections between these communities as a follow-up is being scheduled at the upcoming INGroup conference.

## 2 WORKSHOP ORGANIZATION

The workshop will be organized in a mini-conference format with papers solicited and reviewed via a double blind peer review process. Each paper will be reviewed by three reviewers, with at least one expert from each of the two disciplines to ensure that a broad spectrum of expertise is used to judge each paper.

## 3 KEYNOTE SPEAKERS

In addition to presenting submitted papers, the workshop also features two keynote speakers:

- Giovanna Varni (Telecom Paris, Institut polytechnique de Paris, France),  
Talk Title: A look at automated groups’ analysis.
- Marshall Scott Poole (University of Illinois Urbana Champagne, USA),  
Talk Title: A Social Media Based Decision Support System: Combining Participant Input with Interaction Analytics in Decision Making.

We have chosen again to select a keynote speaker from both communities to highlight differences and similarities in how we work.

## 4 PROGRAM COMMITTEE

We have assembled a mixed set of reviewers covering both expertise in multi-modal interaction as well as group communication.

- Oya Aran, Proctor & Gamble, USA
- Dinesh Babu Jayagopi, IIT Bangalore, India
- Kazuhiro Otsuka, Yokohoma National University, Japan
- Stephanie Tan, Delft University of Technology, Netherlands
- Bernd Dudzik, Delft University of Technology, Netherlands
- Joe Bonito, University of Arizona, USA
- Senthil Chandrasegaran, Delft University of Technology, Netherlands
- Lesley Jessiman, University of the Fraser Valley, Canada
- Andrew Pilny, University of Illinois, USA

- Aaron Schecter, University of Georgia, USA
- Sarah Sebo, University of Chicago, USA

## ACKNOWLEDGMENTS

This workshop was partially funded by the Netherlands Organization for Scientific Research (NWO) under the MINGLE project number 639.022.606 and by the 4TU . Humans & Technology Dutch Centre of Excellence.

## REFERENCES

- [1] Hayley Hung, Gabriel Murray, Giovanna Varni, Nale Lehmann-Willenbrock, Fabiola H. Gerpott, and Catharine Oertel. 2020. Workshop on Interdisciplinary Insights into Group and Team Dynamics. In *Proceedings of the 2020 International Conference on Multimodal Interaction (Virtual Event, Netherlands) (ICMI '20)*. Association for Computing Machinery, New York, NY, USA, 876–877.
- [2] Nale Lehmann-Willenbrock, Hayley Hung, and Joann Keyton. 2017. New frontiers in analyzing dynamic group interactions: Bridging social and computer science. *Small group research* 48, 5 (2017), 519–531.
- [3] Gabriel Murray, Hayley Hung, Joann Keyton, Catherine Lai, Nale Lehmann-Willenbrock, and Catharine Oertel. 2018. Group Interaction Frontiers in Technology. In *Proceedings of the 20th ACM International Conference on Multimodal Interaction*. ACM, 660–662.