Brennan Antone

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APPOINTMENT

CORNELL UNIVERSITY

2022-   Assistant Research Professor,
            Department of Information Science, Department of Communication
            Center for Data Science for Enterprise and Society

EDUCATION

NORTHWESTERN UNIVERSITY

2023   Ph.D. in Industrial Engineering and Management Sciences
            Department of Industrial Engineering and Management Sciences
            Advisor: Noshir Contractor, Committee: Suzanne Bell, Leslie DeChurch, David Morton
            Major: Management Science
            Minors: Applied Statistics & Statistical Learning, Optimization

2020   M.S. in Industrial Engineering and Management Sciences
            Department of Industrial Engineering and Management Sciences

2017   B.S. in Psychology, and in Industrial Engineering
            Department of Psychology, Dept. of Industrial Engineering and Management Sciences
            Segal Certificate in Engineering Design

RESEARCH INTEREST

1. **Computer-Supported Collaboration at Work**
   Examining how novel forms of workplace technology – platforms such as Microsoft Teams, Slack, and Zoom – promote or dissuade effective teaming through affordances and facilitating interaction.

2. **Leveraging Social Networks within Teams**
   Studying patterns of leadership, communication, and advice relationships in teams, especially in extreme teams (e.g., space exploration) and virtual teams. How team networks form and perform.

3. **Network Perception (Cognition)**
   Identifying how people view their social connections and learn about the connections between others – as a product of individual differences, communication technology use, and teaming behaviors. And how network perceptions enable key behaviors, like information sharing and brokerage, in networks.

4. **Methods for Analyzing Social Network Structure**
   Advancing methods (e.g., egocentric ERGM) for modeling networks across large-scale national surveys - to understand network structure as a product of team- and organization-level context. And advancing methods for leveraging high-fidelity digital trace data to model networks in organizations.

5. **Identifying Network-Based Team Interventions**
   Supporting teamwork using prescriptive approaches – by recommending team compositions, implementing countermeasures, and developing tools to help individuals reflect on personal networks.

BOOK CHAPTER

Antone, B., Lungeanu, A., Bell, S. T., De Church, L. A., & Contractor, N. (2020). Computational Modeling of Long-Distance Space Exploration: A Guide to Predictive and Prescriptive Approaches to the Dynamics of Team Composition. In L. Landon, S. Kelley, & E. Salas (Eds.), Psychology and Human Performance in Space Programs, Research at the Frontier. (pp. 107-130): CRC Press.

PUBLICATIONS

Wu, Y. J., **Antone, B.**, DeChurch, L. A., & Contractor, N. S. (2023). Information sharing at a hybrid workplace: Understanding the role of ease-of-use perceptions of communication technologies in advice-seeking relationship maintenance. *Journal of Computer-Mediated Communication*.

Antone, B., Lungeanu, A., DeChurch, L. A., Bell, S. T., & Contractor, N. S. (2021). Re-pairing to repair: A countermeasure that enhances crew relations in deep space. In *Proceedings of the International Astronautical Congress, IAC* (Vol. 1). International Astronautical Federation, IAF.

Wu, Y. J., **Antone, B.**, Srinivas, A., DeChurch, L. A., & Contractor, N. S. (2021). Teaming in the Time of COVID-19: Creating, dissolving, and reactivating network ties in response to a crisis." *Journal of Applied Psychology,* 106(10), 1483-1492. https://doi.org/10.1037/apl0000969

Antone, B., Gupta, A., Bell, S. T., DeChurch, L. A., & Contractor, N. S. (2020). Testing Influence of Network Structure on Team Performance Using STERGM-Based Controls. *Complex Networks and Their Applications VIII,* 1018-1030. Springer International Publishing. doi: 10.1007/978-3-030-36683-4_81

MANUSCRIPTS IN PREPARATION

Antone, B. Online Communities of Practice Support Use of Large Generative AI Models. *Under review*.

Antone, B., Wu, Y. J., Yuan, Y. C., DeChurch, L. A., & Contractor, N. S. Contributions of Enterprise Social Media to Burnout for In-person and Hybrid Teams. *Preparing for submission*.

CONFERENCE PRESENTATIONS & POSTERS

Antone, B., Wu, Y. J., Modi, N., Suschevskiy, V., & Contractor, N. S. Tool Demo: "Flipping" Organizational Network Reporting Using the Personal Network Report. [Conference Presentation]. 73rd Annual International Communication Association (ICA) Conference, Toronto, Canada.

Wu, Y. J., **Antone, B.**, DeChurch, L. A., & Contractor, N. S. Information sharing at a hybrid workplace: Misalignment in technology perception predicts advice-seeking tie dissolution [Conference Presentation]. 73rd Annual International Communication Association (ICA) Conference, Toronto, Canada.

Wu, Y. J., **Antone, B.**, DeChurch, L. A., & Contractor, N. S. (2023, August 4-8) Information sharing at a hybrid workplace: Understanding the role of ease-of-use perceptions of communication

technologies in advice-seeking relationship maintenance. In *Academy of Management Proceedings*. Briarcliff Manor, NY 10510: Academy of Management.

Wu, Y. J., **Antone, B.**, DeChurch, L.A., & Contractor, N. (2022, July 19-22). How does hybrid work work? Effects of perceptions of technologies on advice tie dissolution in the transition to hybrid work [Conference Presentation]. The 8th International Conference on Computational Social Science (IC^{2}S^2).

Antone, B. (2021, October 23). Supporting Working Networks in Space and Beyond [Conference Presentation]. The 34th Annual Organizational Communication Mini Conference**,** Virtual.

Antone, B., DeChurch, L.A., Morton, D., Bell, S., & Contractor, N. (2021, April 15-17). A Network-Based Method to Recommend Optimal Team Compositions for Space Exploration [Conference Presentation]. The 36th Society for Industrial and Organizational Psychology (SIOP) Annual Conference, Virtual.

Wu, Y. J., Srinivas, A., **Antone, B.**, DeChurch, L. A., & Contractor, N. S. (2021, January 29). *Social Network Churn Within and Between Teams in Times of COVID-19* [Conference Presentation]. The Third North American Social Networks Conference (NASN).

Antone, B., Lungeanu, A., DeChurch, L., Bell, S., & Contractor, N. (2021, February 4). *A Successful Crew Composition Countermeasure Validated in HERA* [Conference Presentation]. NASA Human Research Program Investigators' Workshop, Virtual.

Antone, B., Gruest, V., Gupta, A., DeChurch, L., Bell, S., & Contractor, N. (2021, February 3). *Team Performance in Space Crews* [Conference Presentation]. NASA Human Research Program Investigators' Workshop, Virtual.

Antone, B., Wu, J., Chan, C., Li, H., Xu, Y., Lane, J. N., DeChurch, L. A., Leonardi, P. M., & Contractor, N. S. (2020). *Teaming in the Time of Covid: Reconfiguration of Workplace Communication Networks*. Presented at the Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting, [online].

Wu, Y. J., **Antone, B.**, Chan, C., DeChurch, L. A., & Contractor, N. S. (2020, Sep). *Status difference and network mobilization in organizations in times of COVID-19.* Poster presented at the Organizational Communication Mini-Conference (OCMC).

Antone, B., Néray, B., Munar, W., Koskinen, J., & Contractor, N. S. (2020). Missing Tie Imputation in Sparse Networks with Ego-Centric Responses [Conference presentation]. Virtual Sunbelt Conference of the International Network for Social Network Analysis (INSNA), July 13 – July 17.

Antone, B., DeChurch, L., Bell, S. T., & Contractor, N. (2020, June). Repairing teams for the moon. In M. Marcinkowski & S. Bell (co-chairs). *Moon 2024: Translating Research to Practice for Upcoming Artemis Lunar Exploration.* Symposium presented at the Society for Industrial and Organizational Psychology annual conference, Austin, TX [online].

Antone, B., Lungeanu, A., Bell, S. T., DeChurch, L. A., & Contractor, N. S. (2020). *Crew Recommender for Effective Work in Space (Project Crews): Validation & Countermeasure Development*. NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, B., Gruest, V., DeChurch, L. A., Bell, S., & Contractor, N. S. (2020). *Team Performance in Long Duration Space Missions: SIRIUS '19*. NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, B., Zhang, D., Li, H., Zhang, T., Kudaravalli, A., Xu, Y., DeChurch, L. A., Leonardi, P.M., & Contractor, N. S. (2019, October). *Predictive Extensions to ERGMs and applications in real-time monitoring of organizational social networks.* Presented at the Seventh International Workshop on Social Network Analysis (ARS'19), Vietre sul Mare, Italy.

Contractor, N. S., **Antone, B.**, Lungeanu, A., Bell, S. T., & DeChurch, L. A. (2019, January). *Validating Models of Team Composition Decisions for Long-Duration Space Exploration.* Presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, B., Lungeanu, A., DeChurch, L. A., Bell, S. T., & Contractor, N. S. (2019, January). *Schedule Optimization to Improve Team Outcomes in Long-Duration Space Exploration.* Presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, B., Lungeanu, A., & Contractor, N. S. (2018, December). *An Extension of Autologistic Actor Attribute Models for Multi-Attribute Influence Processes.* Presented at the 7th International Conference on Complex Networks and their Applications, Cambridge, United Kingdom.

Antone, B., Lungeanu, A., Huang, Y., Contractor, N. S., Munar, W., Bingenheimer, J., & Rimal, R. (2018, December). *Modern Contraceptive Use in Rural Kenya: Intervention Analysis through Simulation of Complex Diffusion Processes.* Proceedings of the 2018 Winter Simulation Conference, Gothenburg, Sweden.

Antone, B., Lungeanu, A., & Contractor, N. S. (2018, November). *Multi-attribute Diffusion Models for Cross-sectional Networks.* Presented at the Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting, Phoenix, AZ.

Antone, B., Gibson, Z., Bell. S. T., Lungeanu, A., DeChurch, L. A., & Contractor, N. S. (2018, July). *Crew Recommender for Effective Work in Space (CREWS).* Paper presented at the 13th Interdisciplinary Network for Group Research (INGRoup) Annual Meeting, Bethesda, MD.

Antone, B. (2018, April). *Emergent Leadership in Isolated Teams.* Presented on a panel titled "A Question of Time: Multidisciplinary Approaches to Understanding Team Dynamics" at the Society for Industrial and Organizational Psychology (SIOP) Annual Conference, Chicago, IL.

Contractor, N. S., DeChurch, L. A., **Antone, W.**, Twyman, M., Gibson, Z., Sawant, A., Gado, H., & Bell, S. (2018, January). *Teamstar: A Tool for evaluating and mitigating space team risk.* Poster presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, W., Lungeanu, A., Gibson, Z., DeChurch, L., Bell S., & Contractor, N. (2018, January). *Team dynamics: Using simulation as a tool to develop theory.* Poster presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Ng, J., **Antone, W.**, Gibson, Z., Bell, S. T., DeChurch, L. A., & Contractor, N. S. (2017, April). *Crew Recommender for Effective Work in Space: CREWS.* Paper presented at the Building Better Teams on Earth and Beyond Symposium at the Society for Industrial and Organizational Psychology (SIOP) Annual Conference, Orlando, FL.

Contractor, N. S., Gibson, Z., **Antone, W.**, Ng, J., DeChurch, L. A., & Bell, S. T. (2017, January). *Composing effective space crews: Predicting crew camaraderie (CREWS).* Presented on a panel titled "Markers for Individualizing Countermeasures in Exploration" at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Contractor, N. S., **Antone, W.**, Gibson, Z., Ng, J., DeChurch, L. A., & Bell, S. T. (2017, January). *Building extreme teams: Simulating team composition effects in isolated and confined environments.* Poster presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

Antone, W., Contractor, N. S., Bell, S. T., & DeChurch, L. A. (2017, January). *Faulty analysis: Analyzing the validity of different faultline measurement algorithms for long-duration space exploration.* Poster presented at the NASA Human Research Program Investigators' Workshop, Galveston, TX.

AWARDS & FUNDING

- NASA Human Research Program 2020 Grant Augmentation Competition for Students and Postdocs. "POLARIS: Prescriptions Optimally Learned Assessing Risk in Space" $30,000 in funding.
- The Harold Richards Graduate Fellowship, in the area of organizational theory and systems analysis. 2017. $7000 in funding.
- 2nd place award, Oral presentations, 2017 Undergraduate Research and Arts Expo, Northwestern University Office of Undergraduate Research. "Building Extreme Teams: Simulating Team Dynamics over Time".
- Academic Year Undergraduate Research Grant, Northwestern University Office of Undergraduate Research. Spring 2017. "Networks on Digital Platforms". $1,000 in funding.

WORKSHOPS & TEACHING

Workshops & Seminars:
- In-Person workshop organizer for "Interactive Tools and Teaching Methods for Motivating Social Network Thinking", INSNA Sunbelt, June 28th, 2023, In-person.
- Online workshop organizer for "Interactive Tools and Teaching Methods for Motivating Social Network Thinking",", INSNA Sunbelt, June 23rd, 2023, Virtual.
- Workshop co-chair for "Near Future of Work 2021: Supporting Digital and Remote Collaboration", a companion workshop of the 13th ACM Web Science Conference, June 22nd, 2021, Virtual.
- Friday Seminar co-presenter, "Social Network Analysis of Teams and Organizations", Society for Industrial and Organizational Psychology 2020 Virtual Conference, April 23, 2021, Virtual.

Teaching:
- Teaching Assistant for "Understanding and Leveraging Networks", Master of Science in Communication (Hybrid Leadership Program), Spring 2022.
- Teaching Assistant for "Social Network Analysis", Master of Science in Communication, Winter 2022.
- Teaching Assistant for "Social Network Analysis", B.S. in Computer Science, B.S. in Industrial Engineering, B. Ph. in Communication, Winter 2022.
- Teaching Assistant for "Social Network Analysis", Master of Science in Analytics, Fall 2021.
- Teaching Assistant for "Social Network Analysis" B.Ph. in Communication, B.S. in Industrial Engineering, Spring 2021.

- Teaching Assistant for "Understanding and Leveraging Networks", Master of Science in Communication, Spring 2021.
- Teaching Assistant for "Understanding and Leveraging Networks", Master of Science in Communication (Hybrid Leadership Program), Spring 2021.
- Teaching Assistant for "Social Network Analysis", Master of Science in Analytics, Fall 2020.
- Grader for "Social Network Analysis", Ph.D. in Media, Technology, & Society, Ph.D. in Industrial Engineering & Management Sciences, Fall 2020.

PROFESSIONAL MEMBERSHIPS

2019 – present   Member of *Out in Science, Technology, Engineering, and Mathematics* (oSTEM)

2021 – present   Member of the *International Communication Association* (ICA)

2020 – present   Member of the *International Network for Social Network Analysis* (INSNA)

2018 – present   Member of *Interdisciplinary Network for Group Research* (INGRoup)

2018 – 2023   Member of the *Institute for Operations Research and Management Science* (INFORMS)

2018 – 2019   Project Manager, Northwestern INFORMS Student Chapter

2017 – present   Member of the *Society for Industrial and Organizational Psychology* (SIOP)