

# Brennan Antone

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## EDUCATION

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### NORTHWESTERN UNIVERSITY

- 2017-present Ph.D. candidate, Industrial Engineering and Management Sciences  
Dept. of Industrial Engineering and Management Sciences  
Northwestern University  
*Major:* Management Science  
*Minors:* Applied Statistics & Statistical Learning, Optimization
- 2020 M.S. In Industrial Engineering and Management Sciences  
Dept. of Industrial Engineering and Management Sciences  
Northwestern University
- 2017 B.S. in Industrial Engineering, and in Psychology  
Dept. of Industrial Engineering and Management Sciences, Dept. of Psychology  
Northwestern University

## RESEARCH INTERESTS

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Social networks	Computer-supported cooperative work
Computational social science	Organizational communication technology
Leadership in teams	Network interventions
Team composition and assembly	Simulation and agent-based modeling

## BOOK CHAPTERS

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**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

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- 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. *Proceedings of the International Astronautical Congress*.
- Wu, Y. J., Srinivas, A., **Antone, B.**, 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*

## CONFERENCE PRESENTATIONS & POSTERS

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**Antone, B.** (2021, October 23). Supporting Working Networks in Space and Beyond [Conference Presentation]. The 34<sup>th</sup> 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., Kudravalli, 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 7<sup>th</sup> 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 13<sup>th</sup> 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**

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- 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.
- 2<sup>nd</sup> 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**

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### **Workshops & Seminars:**

- Session organizer, “Organizational Collaboration Technology’s Impact on Remote and Hybrid Work” at Sunbelt 2022 XLII Social Networks Conference, July 16, 2022.
- Workshop co-chair for “Near Future of Work 2021: Supporting Digital and Remote Collaboration”, a companion workshop of the 13<sup>th</sup> ACM Web Science Conference, June 22<sup>nd</sup>, 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 “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 Communications, 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**

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- 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 *International Network for Social Network Analysis* (INSNA)
- 2018 – present Member of *Interdisciplinary Network for Group Research* (INGRoup)
- 2018 – present Member of *Institute for Operations Research and Management Science* (INFORMS)
- 2018 – 2019 Project Manager, Northwestern INFORMS Student Chapter
- 2017 – present Member of *Society for Industrial and Organizational Psychology* (SIOP)