Zoltan P. Majdik

North Dakota State University Department of Communication Fargo, N.D. 58102 U.S.A.

EMAIL: zoltan dot majdik at ndsu dot edu ORCID: https://orcid.org/oooo-ooo2-3851-4694

OSF: https://osf.io/5q8ya/

RG: https://www.researchgate.net/profile/Zoltan-Majdik

Current Position

2023-present Professor, Department of Communication, North Dakota State University

Past Positions

Associate Professor, North Dakota State University
 Assistant Professor, North Dakota State University
 Graduate Teaching/Research Assistant, University of Southern California

Areas of specialization

Computational Rhetoric • Language Modeling • Deep Learning & AI

Education

2003

2024

2024

Ph.D. in Communication, Annenberg School for Communication and Journalism, University of Southern California

DISSERTATION: The Gene is out of the Bottle: The Communication of Genetic Complexity in Direct-to-Consumer Genetics

M.A. in Communication, Annenberg School for Communication and Journalism, University of Southern California

B.A. in Communication and in English, University of Southern California

Publications & Talks

PEER-REVIEWED JOURNAL ARTICLES

Yang, M. H., & Majdik, Z. P. (2024). Pathological liars: Algorithmic knowing in the rhetorical ecosystem of Wallstreetbets. *Rhetoric Society Quarterly*, 54(3). https://doi.org/10.1080/02773945.

Majdik, Z. P., Graham, S. S., Shiva Edward, J. C., Rodriguez, S. N., Karnes, M. S., Jensen, J. T., Barbour, J. B., & Rousseau, J. F. (2024). Sample size considerations for fine-tuning large language models for named entity recognition tasks: Methodological study. JMIR AI, 3, e52095. https://doi.org/10.2196/52095

Graham, S. S., Shiva, J., Sharma, N., Barbour, J. B., Majdik, Z. P., & Rousseau, J. F. (2024). Conflicts

- of interest publication disclosures: Descriptive study. JMIR Data, 5(1), e57779. https://doi.org/10.2196/57779
- Graham, S. S., Harrison, K. R., Edward, J. C. S., Majdik, Z. P., Barbour, J. B., & Rousseau, J. F. (2024). Beyond bias: Aggregate approaches to conflicts of interest research and policy in biomedical research. World Medical & Health Policy, wmh3.608. https://doi.org/10.1002/wmh3.608
- Majdik, Z. P., & Wynn, J. (2023). Building better machine learning models for rhetorical analyses: The use of rhetorical feature sets for training artificial neural network models. *Technical Communication Quarterly*, 32(1), 63–78. https://doi.org/10.1080/10572252.2022.2077452
- Graham, S. S., Sharma, N., Karnes, M. S., Majdik, Z. P., Barbour, J. B., & Rousseau, J. F. (2023). A content analysis of self-reported financial relationships in biomedical research. *AJOB Empirical Bioethics*, 14(2), 91–98. https://doi.org/10.1080/23294515.2022.2160509
- Graham, S. S., Majdik, Z. P., Barbour, J. B., & Rousseau, J. F. (2022). Associations between aggregate NLP-extracted conflicts of interest and adverse events by drug product. Studies in Health Technology and Informatics, 290, 405–409. https://doi.org/10.3233/SHTI220106
- Graham, S. S., Karnes, M. S., Jensen, J. T., Sharma, N., Barbour, J. B., Majdik, Z. P., & Rousseau, J. F. (2022). Evidence for stratified conflicts of interest in research contexts: A methodological review. BMJ Open, 12, e063501. https://doi.org/10.1136/bmjopen-2022-063501
- Graham, S. S., Majdik, Z. P., Barbour, J. B., & Rousseau, J. F. (2021). A dashboard for exploring clinical trials sponsorship and potential virtual monopolies. JAMIA Open, 4(4), 00abo89. https://doi.org/10.1093/jamiaopen/00abo89
- Majdik, Z. P. (2021). Five considerations for engaging with big data from a rhetorical-humanistic perspective. *Poroi*, *16*(1)
- Duchsherer, A., Jason, M., Platt, C. A., & Majdik, Z. P. (2020). Immunized against science: Narrative community building among vaccine refusing/hesitant parents. *Public Understanding of Science*, 29(4), 419–435. https://doi.org/10.1177/0963662520921537
- Graham, S. S., Majdik, Z. P., Clark, D., Kessler, M. M., & Hooker, T. B. (2020). Relationships Among Commercial Practices and Author Conflicts of Interest in Biomedical Publishing. *PLoS ONE*, 15(7). https://doi.org/10.1371/journal.pone.0236166
- Graham, S. S., Majdik, Z. P., & Clark, D. (2020). Methods for Extracting Relational Data from Unstructured Texts Prior to Network Visualization in Humanities Research. Journal of Open Humanities Data, 6(8). https://doi.org/10.5334/johd.21
- Majdik, Z. P. (2019). A Computational Approach to Assessing Rhetorical Effectiveness: Agentic Framing of Climate Change in the Congressional Record, 1994–2016. *Technical Communication Quarterly*, 28(3), 207–222. https://doi.org/10.1080/10572252.2019.1601774
- Platt, C. A., & Majdik, Z. P. (2012). The Place of Religion in Habermas's Transformed Public Sphere. Argumentation and Advocacy, 49(2), 138–141
- Majdik, Z. P., & Platt, C. A. (2012). Selling Certainty: Genetic Complexity and Moral Urgency in Myriad Genetics' BRAC Analysis Campaign. *Rhetoric Society Quarterly*, 42(2), 120–143
- Majdik, Z. P., & Keith, W. M. (2011). Expertise as argument: Authority, democracy, and problem-solving. Argumentation, 25(3), 371–384
- Majdik, Z. P., & Keith, W. M. (2011). The problem of pluralistic expertise: A Wittgensteinian approach to the rhetorical basis of expertise. *Social Epistemology*, 25(3), 275–290
- Majdik, Z. P., Platt, C. A., & Meister, M. (2011). Calculating the Weather: Deductive Reasoning and Disciplinary Telos in Cleveland Abbe's Rhetorical Transformation of Meteorology. *Quarterly Journal of Speech*, 97(1), 74–99
- Majdik, Z. P. (2011). On Delimiting Rhetorical Invention in Biopolitics: A Rejoinder to Lynch. Rhetoric & Public Affairs, 14(2), 379–389
- Majdik, Z. P. (2009). Judging Direct-to-Consumer Genetics: Negotiating Expertise and Agency in Public Biotechnological Practice. *Rhetoric & Public Affairs*, 12(4), 571–605
- Majdik, Z. P., Kephart III, J. M., & Goodnight, G. T. (2008). The Presidential Debates of 2004: Contested Moments in the Democratic Experiment. *Controversia*, 6(1)

PEER-REVIEWED CHAPTERS, ENCYCLOPEDIA ENTRIES, & PROCEEDINGS

- Majdik, Z. P. (2019). When expertises clash: (Topic) modeling stasis about complex issues across large discursive corpora. In *The Routledge Handbook of Language and Science* (1st ed., pp. 308–318). Routledge
- Majdik, Z. P. (2014). Biological citizenship. *Encyclopedia of Health Communication* (pp. 105–106). Sage
- Majdik, Z. P. (2009). Between morality and ethics: Risk and argument in direct-to-consumer genetics. S. Jacobs & M. Zarefsky (Eds.), Concerning argument: Selected papers from the 15th Biennial Conference on Argumentation (pp. 495–505). National Communication Association
- Majdik, Z. P. (2006). Quo vadis, political debate? Truth-telling through comedy in Jon Stewart's Crossfire appearance. P. Riley & M. Zarefsky (Eds.), Engaging Argument: Proceedings of the NCA/AFA Conference on Argumentation (pp. 394–401). National Communication Association

OTHER ACADEMIC PUBLICATION GENRES

- Majdik, Z. P., & Graham, S. S. (2024). Rhetoric of/with AI: An introduction. Rhetoric Society Quarterly, 54. https://doi.org/10.1080/02773945.2024.2343264
- Majdik, Z. (2016). Expertise as practice: A response to DeVasto. Social Epistemology Review and Reply Collective, 5(11), 1–6
- Majdik, Z. P. (2016). On rhetoric between science and society [lead review essay]. *Rhetoric & Public Affairs*, 19(1), 91–108
- Majdik, Z. (2012). Reply to Derek Ross' "Ambiguous Weighting and Nonsensical Sense". Social Epistemology Review and Reply Collective, 1–5
- Majdik, Z. P. (2005). Power Without Persuasion: The Politics of Direct Presidential Action [book Review]. *Rhetoric & Public Affairs*, 8(3), 532–534

PRESENTATIONS

- Majdik, Z. P. (2024). Rhetorical alignment of AI systems [Featured talk]. @ Max Planck Institute/University of Tübingen/Rhet AI Center's Persuasive Algorithms: The Rhetorics of Generative AI, Tübingen, Germany
- Dadzie, E. M., & Majdik, Z. P. (2024). Fact-check or play? Rhetorical strategies for intervening in medical conspiracy theories. @ National Communication Association, New Orleans, LA
- Majdik, Z. P., & Dadzie, E. M. (2024). Inverting language models as method for rhetorical analysis [Panel presentation]. @ ARSTM Pre-Conference at National Communication Association, New Orleans, LA
- Majdik, Z. P. (2024). Distant reading through the looking glass: Language modeling as a mode of rhetorical analysis. @ Rhetoric Society of America, Denver, CO
- Majdik, Z. P., & Dadzie, E. (2023). The meteoric (but maybe not metaphoric) rise of ChatGPT: An experimental approach to testing RLHF-based llms' ability to persuade with metaphors [Panel presentation]. @ National Communication Association, National Harbor, MD
- Majdik, Z. P. (2023). *Adaptability in rhetorical ecologies.* @ Rhetoric Society of Europe, Tübingen, Germany
- Yang, M., & Majdik, Z. P. (2022). Pathological buyers: Algorithmic knowing and sense-making in the rhetorical ecology of wallstreetbets. @ National Communication Association, New Orleans, LA
- Majdik, Z. P. (2022). Panel: Re-parsing public address: Computational objects, methods, and ethics in rhetorical studies [Panel discussion]. @ National Communication Association, New Orleans, LA
- Majdik, Z. P. (2022). *Rhetorical patterns of global health crises.* @ ARSTM Pre-Conference at National Communication Association, Baltimore, MD
- Majdik, Z. P. (2021). *Metaphor progression in public discourses about COVID-19*. @ National Communication Association, Seattle, WA

- Majdik, Z. P., & Wynn, J. (2020). Machine/deep learning of complex rhetorical structures in scientific discourses: Is it doable? @ National Communication Association, Baltimore, MD
- Majdik, Z. P. (2019). *Replication in the humanities. (More why than how.)* [Panel presentation]. @ Central States Communication Association, Omaha, NE
- Graham, S. S., Clark, D., & Majdik, Z. P. (2019). *Transparency to visibility (T2V): Digital resistance and the medical-industrial complex* [Non-presenting author]. @ Digital Frontiers, Austin, TX
- Majdik, Z. P. (2019). Computing the grotesque. @ Rhetoric Society of Europe, Gent, Belgium
- Majdik, Z. P. (2019). Computational approaches to rhetoric: What are they good for? @ National Communication Association, Baltimore, MD
- Majdik, Zoltan P. "Summary Remarks: On Trust in Science." Presented at the Annual ARSTM NCA Preconference, Dallas, TX, 2017.
- Majdik, Zoltan P. "Rhetorical Dynamics of Framing Agency and Choice in Climate Change Policy Discourse." Paper presented at the Annual Meeting of the National Communication Association, Las Vegas, NV, 2015. COMPETITIVE PANEL
- Majdik, Zoltan P. "Distributed Agency and Disembedded Expertise in an Age of Applied Genetics."

 Paper presented at the Annual ARSTM NCA Preconference, Las Vegas, NV, 2015. COMPETITIVE PAPER
- Majdik, Zoltan P. "How to Make Rhetorical Analyses Salient to Practicing Scientists: A Few Suggestions." Paper presented at the Annual Meeting of the National Communication Association, Chicago, IL, 2014. Panel Submission: "Who Gets to Show Up and What Should Happen When They Get There? Rhetorical Assessments of Normative Models in STEM-Policy Deliberation"
- Platt, Carrie Anne, and Zoltan P. Majdik. "Digital Voices in an Age of Artificial Intelligence: IBM's Watson and the Disturbance of Traditional Apodictic/Phronetic Sources of Argument." Paper presented at the Biennial NCA/AFA Conference on Argumentation, Alta/Snowbird, UT, 2013. Competitive paper
- Majdik, Zoltan P., and Carrie Anne Platt. "Fight or Flight: X-Ray Backscatter Scanning and the Question of Expertise." Paper presented at the Annual ARSTM NCA Preconference, New Orleans, LA, 2011. COMPETITIVE PAPER
- Majdik, Zoltan P., and Don Waisanen. "The Challenge of Institutional Incoherence to the Idea of Reasoned Argument: Argumentation as and in Institutional Contexts." Paper presented at the Biennial NCA/AFA Conference on Argumentation, Alta/Snowbird, UT, 2011. Competitive paper
- Majdik, Zoltan P., and Carrie Anne Platt. "Rhizomic Rhetoric in the Key of Aristotle and Vico: Moral Argument in the Institutional Domains of Science and Technology." Paper presented at the Annual Meeting of the National Communication Association, San Francisco, CA, 2010. Panel Submission: "Breaking Bridges and Building Networks: Explorations of Rhetorical Agency in Chaotic Textual Ecologies"
- Majdik, Zoltan P., and Carrie Anne Platt. "Selling Certainty: Genetic Complexity, Moral Urgency, and the Gendered Body in Myriad Genetics' BRACAnalysis Campaign." Paper presented at the Annual Meeting of the National Communication Association, San Francisco, CA, 2010. COMPETITIVE PAPER
- Majdik, Zoltan P. "Broken Heart' Models and Gaussian Copulas: Implications of Vico's View of Mathematics for Rhetorical Criticism." Paper presented at the Biennial Meeting of the Rhetoric Society of America, Minneapolis, MN, 2010. COMPETITIVE PAPER
- Platt, Carrie Anne, Zoltan P. Majdik, and Mark Meister. "Spending for a Rainy Day: Latent Polysemy and the Rhetoric of Consumerism in Contemporary Weathercasting." Paper presented at the biennial meeting of the Rhetoric Society of America, Minneapolis, MN, 2010. COMPETITIVE PAPER
- Majdik, Zoltan P. "Looking for Legitimacy: Deficiencies of Justification in Direct-to-Consumer Genetics." Paper presented at the Annual Meeting of the National Communication Association, Chicago, IL, 2009. COMPETITIVE PAPER
- Majdik, Zoltan P. "The Myriad Problem(s) of Genetic Biotechnology: Problematizing 'Expertise'

in Commercial Genetic Biotechnology." Paper presented at the Biennial NCA/AFA Conference on Argumentation, Alta/Snowbird, UT, 2009. COMPETITIVE PAPER

Majdik, Zoltan P. "Shaking the Genetic Foundation: Translating Complex Genetic Science into Everyday Biotechnological Practice." Paper presented at the Annual Meeting of the National Communication Association, San Diego, CA, 2008. COMPETITIVE PAPER

Majdik, Zoltan P. "Fortuna's Threat: Machiavellian virtù vs. the Recalcitrance of an External Reality." Paper presented at the Annual Meeting of the National Communication Association, Chicago, IL, 2007. Сомретитие рарек

Majdik, Zoltan P. "Between Morality and Ethics: Argument in Direct-to-Consumer Genetics." Paper presented at the Biennial NCA/AFA Conference on Argumentation, Alta, UT, 2007. COMPETITIVE PAPER

Goodnight, G. Thomas, Zoltan P. Majdik, and John M. Kephart III. Presidential Debates as Public Argument." Paper presented at the NCA/AFA Conference on Argumentation, Alta, UT, 2007. COMPETITIVE PAPER

Majdik, Z. P. (2006). The virtue of argument: Discourse ethics as an axiological foundation of informed consent for genetic services [Competitive paper]. @ International Society for the Study of Argumentation (ISSA), Amsterdam, Netherlands

Majdik, Z. P. (2006). *Mystification v. mystery: Burke's poetic rationalization as a rhetorical mode of ethical action* [Competitive paper]. @ National Communication Association, San Antonio, TX

Majdik, Z. P. (2006). From abstraction to application: On the deliberate controlling of controversy in the human genome project [Competitive paper]. @ National Communication Association, San Antonio, TX

Majdik, Z. P. (2005). Some serious fun: Truth-telling and comedy in jon stewart's 'crossfire' appearance [Competitive paper]. @ National Communication Association, Boston, MA

Majdik, Z. P. (2005). Quo vadis, political debate? Truth-telling through comedy in Jon Stewart's Crossfire appearance [Competitive paper]. @ NCA/AFA Alta Conference on Argumentation, Alta, UT

Majdik, Z. P. (2005). Powerful publics: Public discourse and direct democracy in Switzerland's 'Yes to Europe!' referendum [Competitive paper]. @ National Communication Association, Boston, MA Majdik, Z. P. (2004). Cross-cultural comparison of speech communication studies in Europe and the

United States [Competitive paper]. @ National Communication Association, Chicago, IL

Invited Talks

2008

2006

2019

2011

2022

2009, 2010

Guest lecture, NDSU BIOL 491

TITLE: "Communicating Science"

NDSU College of Arts, Humanities, and Social Sciences Research Conversations

TITLE: Poster presentation of current research

Panel presentation, NDSU Graduate Student Council event

TITLE: "Networking: How to Build Professional Connections

Colloquium presentation, NDSU Communication colloquium series

Guest lecture, NDSU POLS 115 (American Government)

TITLE: "Arguing and Argument in Politics"

Grants

2023 Co-PI, with Shuning Lu (PI)

Summer Institute in Computational Social Science - NDSU

Amount awarded to grant: \$10,700

Co-PI, with Shuning Lu (PI)

Summer Institute in Computational Social Science - NDSU

Funded by SICSS (with core sponsors: Alfred P. Sloan Foundation, Russell Sage Foundation, Facebook, and SSRC (Social Science Research Council))

Amount awarded to grant: \$15,000

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MPI (NDSU), with S. Scott Graham (Contact MPI, UT-Austin), Justin F. Rousseau (MPI, UT-Austin), & Joshua Barbour (MPI, UT-Austin)

A Network Science Approach to Conflicts of Interest: Metrics, Policies, and Communication Design Funded by National Institute of General Medical Sciences/National Institutes of Health (NIH) Award No. Ro1 GM141476

Amount awarded to grant: \$832,304

Senior personnel/Lead, Communication & Dissemination Group

NDSU EPSCoR Track-1 (ND-ACES)

National Science Foundation (NSF EPSCoR Research Infrastructure)

Amount awarded to grant: \$20,000,000

2018-2019 Consultant

2020-2024

2013

Contract paid from National Endowment for the Humanities (NEH) Grant HAA-261070-18 Transparency to Visibility (T2V): Network Visualization in Humanities Research PD: Scott Graham, & co-PD: Dave Clark

Primary consulting responsibility: build computational framework for automated relationship extraction from unstructured text data **Amount awarded to grant**: \$80,649

2016-2019 Senior personnel/Lead, Communication & Dissemination Group

NDSU EPSCoR Track-1 (INSPIRE-ND)

National Science Foundation (NSF EPSCoR Research Infrastructure)

Amount awarded to grant: \$20,000,000

GRANT APPLICATIONS NOT FUNDED

Co-PI (NDSU PI), with S. Scott Graham (PI, UT-Austin) and Dave Clark (co-PI, University of Wisconsin, Milwaukee)

Text to Visualization (T2V): Network Modeling with Humanities Data

National Endowment for the Humanities (NEH)

Amount requested: \$323,184

PI, "The Problem of Citizen Decision-Making In and About Politics"
NEH grant proposal, selected by NDSU as one of two proposals to be submitted to the NEH Summer Stipend competition. [Not funded.]

Teaching

Undergraduate Courses:

- Rhetoric (various foci)
- · Persuasion
- · Public Speaking
- Data Visualization Across Communication Industries
- Communication Ethics & Law
- Argumentation & Advocacy
- Rhetoric of Ideas, Ideology, & Propaganda
- Communication Criticism

GRADUATE COURSES:

- Rhetoric (various foci)
- Communication Theory

Graduate Advising

As Advisor:

i/p	Wangari Githua
i/p	Melissa Bartels
i/p	Halah Jost-Mahunik
	Ion Barry

Ian Berry 2023 Ezzat Haider 2022

> THESIS: The Use of Rhetorical Frames to Create Hope during Wars and Genocides: The case of the Yezidi Women

Malcolm Jason, Ph.D. 2020

THESIS: A Rhetorical Consideration of Christian Nationalism, Secular Society, and the Need for a Civic Religious Pluralism

Lora Meredith, M.A. 2018

> THESIS: Pentadic Analysis of a Wyoming TV Show: The Rhetoric of Scene and Agency and Its Impact on Native American Communities.

Benjamin Walton, M.A. 2016

Gunther-Michael Jaehnl, M.A.

Keith Bistodeau, M.A. 2014

> THESIS: A Historical Perspective Framed Content Analysis Investigation of Persuasive Shifts Present in Interstate Oratorical Association Final Round Speeches.

Jaishikha Nautiyal, M.A. 2013

THESIS: Rhetorical Agency in the Baghavad Gita

Ramya Chandrasekaran, M.A. 2012

THESIS: The Hindutva Movement: A Burkean Analysis of Violence as Retributive Justice

David Chaganava, M.A. 2009

> THESIS: Communication Technology and the Changing Face of Rhetorical Persuasion in Emerging Democratic Systems: The Case of Georgia.

As committee member:

Note: may be incomplete

Peter Lindmark i/p Erik Gustafson, Ph.D. Curtis Sullivan, Ph.D. 2019 Robert Becker, Ph.D. 2019 Joshua Parcha, Ph.D. 2017 Bryce Tellmann, M.A. 2017 Megan Even, M.A. (English) 2015 Michael Jones, M.A. 2014 Marney Mathiasen, M.A. 2013 Kay Beckerman, M.A. 2013 Jessica Rick, M.S. 2013 Michelle Kramlich, M.S. 2013 Matthew Attansay, Ph.D. 2012 Shelly Stowman, Ph.D.

2011

7

Najla Ghazi Amundson, Ph.D. 2010 Jennifer Reierson, Ph.D.

Administrative Responsibilities

Public Speaking Course Director, 2022-present

NDSU Department of Communication

Director of Graduate Studies, 2017-2023

NDSU Department of Communication

Service to the University

NORTH DAKOTA STATE UNIVERSITY

I.T. council, member 2023-present

2023-present Task force on Graduate Health Insurance, co-chair

Graduate Council, member 2021-present

Institutional Review Board, vice chair and member 2018-present

Provost Ad-Hoc Committee on Academic Misconduct, member 2017

Special Grievance Committee, chair 2016 Institutional Review Board, member 2014-2018 Institutional Review Board, alternate 2013-2014

Diversity Committee, member 2013-2014

NDSU Graduate Methods Conference, co-organizer 2011, 2012

NDSU College of Arts and Sciences

Task force on Graduate Tuition Waivers, chair 2023

NDSU College of Arts, Humanities, and Social Sciences

Promotion and Tenure Committee, member 2019-2022

Budget Advisory Group, member 2016-2017

Promotion and Tenure Committee, member 2015-2016

Search Committee (Director for International Studies), member

Curriculum Committee, member 2012-2013

NDSU DEPARTMENT OF COMMUNICATION

Search Committee, member

Promotion and Tenure Committee, member 2017-2018 Promotion and Tenure Committee, chair 2016-2017

Graduate Committee, member and chair (since 2017) 2012-present

Search Committee (tenure-line), chair 2015 Curriculum Committee, member 2014-present Scholarship and Awards Committee 2013-2014 Curriculum Committee, chair 2011-2012

Search Committee (tenure-line), member 2011-2012

Assessment Committee, co-chair 2010-2011

DCE Committee, member 2010-2011

Lambda Pi Eta Communication Honors Society, advisor 2009-2016

Graduate Committee, member 2009-2010

2009-2010 Scholarship and Awards Committee, member 2008-2009 Search Committee (tenure-line), member

Service to the profession

EDITORIAL WORK

2016-2017 Editorial board member, CSTAND

Editorial consultant, Communication Studies

est. 2007 Editorial graduate assistant, Argumentation & Advocacy

REVIEWING, AD HOC

Argumentation & Advocacy Behavior Research Methods Communication Studies Communication Theory

CSTAND

European Journal of Cultural and Political Sociology

Informal Logic

National Science Foundation (STS program)

Social Epistemology Rhetoric & Public Affairs Rhetoric of Health & Medicine Rhetoric Society Quarterly

Technical Communication Quarterly World Medical & Health Policy

Written Communication

REVIEWING, CONFERENCES

NCA, Association for the Rhetoric of Science, Technology, and Medicine (ARSTM) ARSTM, Preconferences at NCA, RSA

OTHER

NCA Doctoral Education Committee
President, Association for the Rhetoric of Science, Technology, & Medicine (ARSTM)