

NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

## **NetEthics Bibliography on Ethics and Responsible Conduct of Research (RCR) in Engineering Research Networks (2000-2023)**

*Last revised: May 17, 2023*

Prepared by Claire Colby, JD Candidate, University of Minnesota Law School, working with Professors Susan M. Wolf, Timothy L. Pruett, Gillian H. Roehrig, Keisha Varma, and Korkut Uygun.

**Introduction:** This bibliography contains resources on conducting ethical and responsible research within complex engineering networks. Literature on research ethics tends to focus on the “micro” level of the individual investigator or the “macro” level of societal impacts of research. There is a dearth of ethics literature at the “meso” level to guide complex multi-disciplinary teams working together to achieve a common scientific goal. This bibliography draws from the literature in domains including ethics and responsible conduct of research (RCR), law, organizational psychology, engineering, management, and team science. This document includes sources relevant to responsibly and ethically conducting research at the network level and does not aim to replicate the full literature in each subject area. This bibliography is **limited to sources published in or after the year 2000**, and sources published in English.

This bibliography was prepared as work for the NSF-funded project on “NetEthics: Building Tools & Training to Advance Responsible Conduct in Complex Research Networks Pioneering Novel Technologies” (Award No. 2220611). The NetEthics project involves collaboration with national experts, interviews with participants in an Engineering Research Center (ERC), and an extensive literature review. NetEthics is co-led by principal investigators at the University of Minnesota and Massachusetts General Hospital. More information about NetEthics can be found [here](#).

This bibliography is organized into **eight sections, by topical area**. These topic areas reflect categories of issues identified through literature review and consultation with experts. There is overlap between categories, and many resources address more than one category of issues. Each resource is listed only once and in the most relevant category. Within each subsection, entries are listed in alphabetical order by first author or editor.

To suggest additional resources for this bibliography, please email the Consortium on Law and Values Senior Administrative Director Dori Henderson at [hend0054@umn.edu](mailto:hend0054@umn.edu).

## Table of Contents

<b><i>I. Ethically Allocating Credit</i></b> .....	<b>3</b>
<b>A. Articles</b> .....	<b>3</b>
<b>B. Online Resources</b> .....	<b>4</b>
<b><i>II. Collaborating Across Differences in Discipline, Training, and Geography</i></b> .....	<b>4</b>
<b>A. Articles</b> .....	<b>4</b>
<b>B. Presentations</b> .....	<b>4</b>
<b>C. Books and Reports</b> .....	<b>5</b>
<b>D. Online Resources</b> .....	<b>5</b>
<b><i>III. Ensuring Ethical Research</i></b> .....	<b>5</b>
<b>A. Articles</b> .....	<b>5</b>
<b>B. Presentations</b> .....	<b>6</b>
<b>C. Books and Reports</b> .....	<b>6</b>
<b>D. Codes of Conduct</b> .....	<b>6</b>
<b>E. Online Resources</b> .....	<b>6</b>
<b><i>IV. Fostering Positive Team Dynamics</i></b> .....	<b>6</b>
<b>A. Articles</b> .....	<b>6</b>
<b>B. Books and Reports</b> .....	<b>7</b>
<b>C. Online Resources</b> .....	<b>7</b>
<b><i>V. Managing and Leading the Network</i></b> .....	<b>7</b>
<b>A. Articles</b> .....	<b>7</b>
<b>B. Books and Reports</b> .....	<b>9</b>
<b>C. Online Resources</b> .....	<b>9</b>
<b><i>VI. Advancing Diversity, Equity, and Inclusion</i></b> .....	<b>9</b>
<b>A. Articles</b> .....	<b>9</b>
<b>B. Presentations</b> .....	<b>12</b>
<b>C. Books and Reports</b> .....	<b>12</b>
<b>D. Online Resources</b> .....	<b>12</b>
<b><i>VII. Building a Sustainable Network</i></b> .....	<b>122</b>
<b>A. Articles</b> .....	<b>12</b>
<b>B. Presentations</b> .....	<b>13</b>
<b>C. Books and Reports</b> .....	<b>14</b>
<b><i>VIII. Promoting Socially Responsible Research Outcomes</i></b> .....	<b>14</b>

A. Articles .....	14
B. Online Resources.....	14

## I. Ethically Allocating Credit

### A. Articles

- Borenstein J, Shamoo AE. Rethinking Authorship in the Era of Collaborative Research. *Accountability in Research* 2015;22:267-283. [Link](#).
- Borer ET, MacDougall AS, Stevens CJ, Sullivan LL, Wilfahrt PA, Seabloom EW. Writing a Massively Multi-Authored Paper: Overcoming Barriers to Meaningful Authorship for All. *Methods in Ecology and Evolution* 2023. doi: [10.1111/2041-210X.14096](https://doi.org/10.1111/2041-210X.14096). [Link](#).
- Coles NA, DeBruine LM, Azevedo F, Baumgartner HA, Frank MC. ‘Big Team’ Science Challenges Us to Reconsider Authorship. *Nature Human Behavior* 2023. doi: [10.1038/s41562-023-01572-2](https://doi.org/10.1038/s41562-023-01572-2). [Link](#).
- Fontarosa P, Bauchner H, Flanagan A. Authorship and Team Science. *JAMA* 2017;318:2433-2437. [Link](#).
- Hammer MJ, Miaskowski C. Authorship Ethics in the Era of Team Science. *Oncology Nursing Forum* 2017;44:655-657. [Link](#).
- Hosseini M, Lewis J, Zwart H, Gordijn B. An Ethical Exploration of Increased Average Number of Authors Per Publication. *Science and Engineering Ethics* 2022;28:25. doi:[10.1007/s11948-021-00352-3](https://doi.org/10.1007/s11948-021-00352-3). [Link](#).
- Leahey E. From Sole Investigator to Team Scientist: Trends in the Practice and Study of Research Collaboration. *Annual Review of Sociology* 2016;42:81-200. [Link](#).
- Nogrady B. Hyperauthorship: The Publishing Challenges for ‘Big Team’ Science. *Nature* 2023;615-175-177. [Link](#).
- Smith E, Williams-Jones B, Master Z, Larivière V, Sugimoto CR, Paul-Hus A, Shi M, Diller E, Caudle K, Resnik DB. Researchers’ Perceptions of Ethical Authorship Distribution in Collaborative Research Teams. *Science and Engineering Ethics* 2019;26:1995-2022. [Link](#).
- Smith E, Williams-Jones B, Master Z, Larivière V, Sugimoto CR, Paul-Hus A, Shi M, Resnik DB. Misconduct and Misbehavior Related to Authorship Disagreements in Collaborative Science. *Science and Engineering Ethics* 2020;26:1967-1993. [Link](#).
- Thurston MM, Moniri NH, Bowen JP, Winkles CL, Miller SW. Managing the “Three Cs” of Academic Literature Authorship: Contributions, Credit, and Conflict. *American Journal of Pharmaceutical Education* 2023;10009. doi: [10.1016/j.ajpe.2022.10.002](https://doi.org/10.1016/j.ajpe.2022.10.002). [Link](#).
- Vasilevsky NA, Hosseini M, Teplitzky S, Ilik V, Mohammadi E, Schneider J, Kern B, Colomb J, Edmunds SC, Gutzman K, Himmelstein DS, White M, Smith B, O’Keefe L, Haendel M, Holmes KL. Is Authorship Sufficient for Today’s Collaborative Research? A Call for Contributor Roles. *Accountability in Research* 2021;28:23-43. [Link](#).
- Washburn JJ. Encouraging Research Collaboration Through Ethical and Fair Authorship: A Model Policy. *Ethics & Behavior* 2008;18:44-58. [Link](#).
- Welsh RK, Lareau CR, Clevenger JK, Reger MA. Ethical and Legal Considerations Regarding Disputed Authorship with the Use of Shared Data. *Accountability in Research* 2008;15(2):105-131. [Link](#).

## **B. Online Resources**

- Cheruvellil K, Elliott KC, Montgomery GM, Settles IH, Soranno PA. Case Study: Ethics & Team Power Dynamics in Authorship Decisions. *Online Ethics Center* (last accessed May 16, 2023). [Link](#).
- Pimple KD. Authorship in Scientific and Academic Research. *National Center for Professional & Research Ethics* (last accessed May 16, 2023). [Link](#).
- Pimple KD. Collaborative Research: Avoiding Pitfalls and Sharing Credit. *Online Ethics Center* (last accessed May 16, 2023). [Link](#).

## **II. Collaborating Across Differences in Discipline, Training, and Geography**

### **A. Articles**

- Bielefeldt AR, Polmear M, Knight D, Canney N, Swan C. Disciplinary Variations in Ethics and Societal Impact Topics Taught in Courses for Engineering Students. *Journal of Professional Issues in Engineering Education and Practice* 2019;145:04019007-1. doi: [10.1061/\(ASCE\)EI.1943-5541.0000415](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000415). [Link](#).
- Bozeman B, Gaughan M, Youtie J, Slade CP, Rimes H. Research Collaboration Experiences, Good and Bad: Dispatches from the Front Lines. *Science and Public Policy* 2016;43:226-244. [Link](#).
- Haven TL, Tjindik JK, Martinson BC, Bouter LM. Perceptions of Research Integrity Climate Differ Between Academic Ranks and Disciplinary Fields: Results from a Survey Among Academic Researchers in Amsterdam. *PLoS ONE* 2019;14:0210599. doi: [10.1371/journal.pone.0210599](https://doi.org/10.1371/journal.pone.0210599). [Link](#).
- Jensen-Ryan D, Murren CJ, Rutter MT, Thompson JJ. Advancing Science while Training Undergraduates: Recommending from a Collaborative Biology Research Network. *Life Sciences Education* 2020;19:13. doi: [10.1187/cbe.20-05-0090](https://doi.org/10.1187/cbe.20-05-0090). [Link](#).
- Lim JH, Hunt BD, Findlater N, Tkacik PT, Dahlberg JL. “In Our Own Little World”: Invisibility of the Social and Ethical Dimension of Engineering Among Undergraduate Students. *Science and Engineering Ethics* 2021;74:27. doi: [10.1007/s11948-021-00355-0](https://doi.org/10.1007/s11948-021-00355-0). [Link](#).
- Liu Y, Wu Y, Rousseau S, Rousseau R. Reflections on and a Short Review of the Science of Team Science. *Scientometrics* 2020;125:937-950. [Link](#).
- Mathur A, Lean SF, Maun C, Walker N, Cano A, Wood ME. Research Ethics in Inter- and Multidisciplinary Teams: Differences in Disciplinary Interactions. *PLoS ONE* 2019;14:225837. doi: [10.1371/journal.pone.0225837](https://doi.org/10.1371/journal.pone.0225837). [Link](#).
- Tobi H, Kampen JK. Research Design: The Methodology for Interdisciplinary Research Framework. *Quality & Quantity* 2018;52:1209-1225. [Link](#).
- Vasconcelos SMR, Steneck NH, Anderson M, Masuda H, Palacios M, Pinto JCS, Sorenson MM. The New Geography of Scientific Collaborations. *EMBO Reports* 2012;13:404-407. [Link](#).

### **B. Presentations**

- Beever J, Kuebler S, Pinkert LA, Taylor LE. Faculty Perspectives on Frameworks of Responsibility in their Disciplines. 2021 IEE International Symposium on Ethics in Engineering, Science and Technology (ETHICS), Waterloo, ON, Canada, 2021. [Link](#).
- Beever J, Pinkert L, Kuebler S. Disciplinary Leaders Perceptions of Ethics: An Interview-Based Study of Ethics Frameworks. Paper presented at 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. [Link](#).

NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

Bielefeldt AR, Polmear M, Canney NE, Swan C, Knight D. Institutional Variations in Ethics and Societal Impacts Education: Practices and Sufficiency Perceptions Among Engineering Educators. Paper presented at 2019 ASEE Annual Conference & Exposition, Tampa, FL. [Link](#).

### C. Books and Reports

Feister MK. EXPLORING THE CONSTITUTIVE AND SOCIAL PROCESSES OF ETHICS IN MULTIDISCIPLINARY ENGINEERING DESIGN TEAMS (Purdue University, PhD dissertation, 2015). [Link](#).

Hall KL, Vogle AL, Croyle RT, eds. STRATEGIES FOR TEAM SCIENCE SUCCESS: HANDBOOK OF EVIDENCE-BASED PRINCIPLES FOR CROSS-DISCIPLINARY SCIENCE AND PRACTICAL LESSONS LEARNED FROM HEALTH RESEARCHERS (Springer, 2019). [Link](#).

Kirst M, Schaefer-McDaniel N, Hwang S, O'Campo P, eds. CONVERGING DISCIPLINES: A TRANSDISCIPLINARY APPROACH TO URBAN HEALTH PROBLEMS (Springer, 2010). [Link](#).

### D. Online Resources

Coalesce. *CTSA Online Assistance for Leveraging the Science of Collaborative Effort* (last accessed May 16, 2023). [Link](#).

Conference Report: Connecting Silos, May 2019. *National Center for Professional & Research Ethics* (last accessed May 16, 2023). [Link](#).

Kalichman M, Magnus PD, Plemmons D. Topics: Collaboration. *Online Ethics Center* (last accessed May 16, 2023). [Link](#).

Peterson MJ. Cultural Competence in a Transnational Workplace. *International Dimensions of Ethics Education in Science and Engineering* (last accessed May 16, 2023). [Link](#).

Peterson MJ. Hints on Cross Cultural Skills. *International Dimensions of Ethics Education in Science and Engineering* (last accessed May 16, 2023). [Link](#).

Peterson MJ. Transnational Differences in Ethical and Regulatory Standards. *International Dimensions of Ethics Education in Science and Engineering* (last accessed May 16, 2023). [Link](#).

## III. Ensuring Ethical Research

### A. Articles

Ali J, Califf R, Sugarman J. Anticipated Ethics and Regulatory Challenges in PCORnet: The National Patient-Centered Clinical Research Network. *Accountability in Research* 2016;23:79-96. [Link](#).

Austin MA, Hair MS, Fullerton SM. Research Guidelines in the Era of Large-Scale Collaborations: An Analysis of Genome-Wide Association Study Consortia. *American Journal of Epidemiology* 2012;9:962-969. [Link](#).

Herkert JR. Ways of Thinking About and Teaching Ethical Problem Solving: Microethics and Macroethics in Engineering. *Science and Engineering Ethics* 2005;11:373-385. [Link](#).

Lee LM. Research Integrity and the Regulatory-Industrial Complex. *Accountability in Research* doi: [10.1080/08989621.2023.2179395](https://doi.org/10.1080/08989621.2023.2179395). [Link](#).

Linville CL, Cairns AC, Garcia T, Bridges B, Herington J, Laverty JT, Tanona S. How Do Scientists Perceive the Relationship Between Ethics and Science? A Pilot Study of Scientists' Appeal to Values. *Science and Engineering Ethics* 2023;29:15. doi: [10.1007/s11948-023-00429-1](https://doi.org/10.1007/s11948-023-00429-1). [Link](#).

Petersen AM, Pavlidis I, Semendeferi I. A Quantitative Perspective on Ethics in Large Team Science. *Science and Engineering Ethics* 2014;20:923-945. [Link](#).

NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

Rolland B, Burnside ES, Voils CI, Shah MN, Braiser AR. Enhancing Reproducibility Using Interprofessional Team Best Practices. *Journal of Clinical and Translational Science* 2020;5:20. doi:[10.1017/cts.2020.512](https://doi.org/10.1017/cts.2020.512). [Link](#).

Ulrich CM, Wallen G, Cui N, Chittams J, Sweet M, Plemmons D. Establishing Good Collaborative Research Practices in the Responsible Conduct of Research in Nursing Science. *Nursing Outlook* 2015;62:171-180. [Link](#).

### **B. Presentations**

Petersen AM. Being Ethical in Large-Team Science: A Quantitative Historical Perspective (History of Science Society 2013 Annual Meeting, Boston, MA.) [Link](#).

### **C. Books and Reports**

Colbert MC, Nussenblatt RB, Gottesman MM. *Integrity in Research: Principles for the Conduct of Research*, in PRINCIPLES AND PRACTICE OF CLINICAL RESEARCH (Gallin JI, Ognibene FP, Johnson LL, eds. Academic Press, 2018). [Link](#).

Institute of Medicine. ON BEING A SCIENTIST (National Academies Press 2009). [Link](#).

National Research Council. INTEGRITY IN SCIENTIFIC RESEARCH (National Academies Press, 2002). [Link](#).

### **D. Codes of Conduct**

American Institute of Chemical Engineers (AIChE). Code of Ethics (last accessed May 16, 2023). [Link](#).

American Society of Civil Engineers (ASCE). Code of Ethics (last accessed May 16, 2023). [Link](#).

Biomedical Engineering Society (BMES). Code of Ethics (last accessed May 16, 2023). [Link](#).

Institute of Electrical and Electronics Engineers (IEEE). Code of Ethics (last accessed May 16, 2023). [Link](#).

International Council on Systems Engineering (INCOSE). Code of Ethics (last accessed May 16, 2023). [Link](#).

National Society of Professional Engineers (NSPE). Code of Ethics (last accessed May 16, 2023). [Link](#).

### **E. Online Resources**

Cognitive Biases that Can Cloud Judgment: Thinking Through Complex Ethical Dilemmas in the Engineering Profession. *Online Ethics Center* (last accessed May 16, 2023). [Link](#).

## **IV. Fostering Positive Team Dynamics**

### **A. Articles**

Asencio R, Murase T, Chollet B, DeChurch LA, Zaccaro SJ. Bridging the Boundary without Sinking the Team: Communication, Identification, and Creativity in Multiteam Systems. *Group Dynamics: Theory, Research, and Practice* 2023;27:28-49. [Link](#).

Cooke NJ, Cohen MC, Fazio WX, Inderberg LH, Johnson CJ, Lematta GJ, Peel M, Teo A. From Teams to Teamness: Future Directions in the Science of Team Cognition. *Human Factors* 2023. doi: [10.1177/00187208231162449](https://doi.org/10.1177/00187208231162449). [Link](#).

Laursen BK, Gonnerman C, Crowley SJ. Improving Philosophical Dialogue Interventions to Better Resolve Problematic Value Pluralism in Collaborative Environmental Science. *Studies in History and Philosophy of Science* 2021;87:54-71. [Link](#).

Lee SS-J, Jabloner A. Institutional Culture is the Key to Team Science. *Nature Biotechnology* 2017;35:1212-1214. [Link](#).

NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

- Luciano MM, DeChurch LA, Mathieu JE. Multiteam Systems: A Structural Framework and Meso-Theory of System Functioning. *Journal of Management* 2018;44:1065-1096. [Link](#).
- Marks MA, DeChurch LA, Mathieu JE, Panzer FJ, Alonso A. Teamwork in Multiteam Systems 2005;90:964-971. [Link](#).
- Martinson BC, Thrush CR, Crain AL. Development and Validation of the Survey of Organizational Research Climate (SORC). *Science and Engineering Ethics* 2013;19:813-834. [Link](#).
- Mumford MD, Murphy ST, Connelly S, Hill JH, Antes AL, Brown RP, Devenport LD. Environmental Influences on Ethical Decision Making: Climate and Environmental Predictors of Research Integrity. *Ethics and Behavior* 2007;61:337-366. [Link](#).
- Pennock RT, O'Rourke M. Developing a Scientific Virtue-Based Approach to Science Ethics Training. *Science and Engineering Ethics* 2017;23:243-262. [Link](#).
- Shuffler ML, Carter DR. Teamwork Situated in Multiteam Systems: Key Lessons Learned and Future Opportunities. *American Psychologist* 2018;73:390-406. [Link](#).
- Stokols D, Misra S, Moser RP, Hall KL, Taylor BK. The Ecology of Team Science: Understanding Contextual Influences on Transdisciplinary Collaboration. *American Journal of Preventative Medicine* 2008;35:96-115. [Link](#).
- Turner JR, Baker R. Collaborative Research: Techniques for Conducting Collaborative Research From the Science of Team Science (SciTS). *Advances in Developing Human Resources* 2020;22:72-86. [Link](#).

## **B. Books and Reports**

- Davison RB, Hollenbeck JR. *Boundary Spanning in the Domain of Multiteam Systems*, in MULTITEAM SYSTEMS (Zaccaro SJ, Marks MA, DeChurch L, eds. 2011). [Link](#).
- Hubbs G, O'Rourke M, Orzack SH, eds. THE TOOLBOX DIALOGUE INITIATIVE (CRC Press 2020). [Link](#).

## **C. Online Resources**

- Coordinated Science Laboratory. Ethics Center to Develop Leadership Curriculum for Howard Hughes Medical Institute. *University of Illinois Grainger College of Engineering Coordinated Science Library* (last accessed May 16, 2023). [Link](#).
- Gunsalus CK. Incivility and Bullying -- Quick Tips. *National Center for Professional & Research Ethics* (last accessed May 16, 2023). [Link](#).
- Institute for Translational Sciences. Innovations in Team Science. *UTMB Health* (last accessed May 16, 2023). [Link](#).
- Meuser JD. Understanding and Influencing Culture. *National Center for Professional & Research Ethics* (last accessed May 16, 2023). [Link](#).
- Stanford Center for Biomedical Ethics. The Center for Biomedical Ethics Offers a Team Science Consultation Service through Spectrum. *Stanford Medicine Research Office* (last accessed May 16, 2023). [Link](#).
- Toolbox Dialogue Initiative. *Michigan State University* (last accessed May 16, 2023). [Link](#).

## **V. Managing and Leading the Network**

### **A. Articles**

- Antes AL, Kuykendall A, DuBois JM. Leading for Research Excellence and Integrity: A Qualitative Investigation of the Relationship-Building Practices of Exemplary Principal Investigators. *Accountability in Research* 2019;26:198-226. [Link](#).

- Bennett LM, Gadlin H. Collaboration and Team Science: From Theory to Practice. *Journal of Investigative Medicine* 2012;60:768-775. [Link](#).
- Börner K, Contractor N, Falk-Krzesinski, Fiore SM, Hall KL, Keyton J, Spring B, Stokols D, Trochim W, Uzzi B. A Multi-Level Systems Perspective for the Science of Team Science. *Science Translational Medicine* 2010;2:49. doi:[10.1126/scitranslmed.3001399](#). [Link](#).
- Campell-Voytal K, Daly JM, Nagykaldi ZJ, Aspy CB, Dolor RJ, Fagnan LJ, Levy BT, Palac JL, Michaels L, Patterson B, Kano M, Smith PD, Sussman AL, Williams R, Sterling P, O’Beirne M, Neale AV. Team Science Approach to Developing Consensus on Research Good Practices for Practice-Based Research Networks: A Case Study. *Clinical and Translational Science* 2015;8:632-637. [Link](#).
- DeChurch LA & Marks MA. Leadership in Multiteam Systems. *Journal of Applied Psychology* 2006;91:311-329. [Link](#).
- De Vries RA, Hollenbeck JR, Davison RB, Walter F, Van der Vegt GS. Managing Coordination in Multiteam Systems: Integrating Micro and Macro Perspectives. *Academy of Management Journal* 2015;59:5. doi:[10.5465/amj.2014.0385](#). [Link](#).
- Falk-Krzesinski HJ, Contractor N, Fiore SM, Hall KL, Kane C, Thompson Klein J, Spring B, Stokols D, Trochim W. Mapping a Research Agenda for the Science of Team Science. *Research Evaluation* 2011;20(2):145-158. [Link](#).
- Forscher PS, Wagenmakers EJ, Coles NA, Sila MA, Dutra NB, Basnight-Brown D, Ijzerman H. The Benefits, Barriers, and Risks of Big Team Science. 2022;18:607-623. [Link](#).
- Henson VR, Cobourn KM, Weathers KC, Carey CC, Farrell KJ, Klug JL, Sorice MG, Ward NK, Weng W. A Practical Guide for Managing Interdisciplinary Teams: Lessons Learned from Natural and Human Systems Research. *Social Sciences* 2020;9:119. doi:[10.3390/socsci9070119](#). [Link](#).
- Kretser A, Murphy D, Bertuzzi S, Abraham T, Allison DB, Boor KJ, Dwyer J, Grantham A, Harris LJ, Hollander R, Jacobs-Young C, Rovito S, Vafiadis D, Woteki C, Wyndham J, Yada R. Scientific Integrity Principles and Best Practices: Recommendations from a Scientific Integrity Consortium. *Science and Engineering Ethics* 2019;25:327-355. [Link](#).
- Meijer I, Molas-Gallart J, Mattsson P. Networked Researched Infrastructures and Their Governance: The Case of Biobanking. *Science and Public Policy* 2012;39:491-499. [Link](#).
- Rico R, Hinsz VB, Burke S, Salas E. A Multilevel Model of Multiteam Motivation and Performance. *Organizational Psychology Review* 2017;7:197-226. [Link](#).
- Rico R, Hinsz VB, Davison RB, Salas E. Structural Influences Upon Coordination and Performance in Multiteam Systems. *Human Resource Management Review* 2018;28:332-346. [Link](#).
- Shuffler ML, Jiménez-Rodríguez M, Kramer WS. The Science of Multiteam Systems: A Review and Future Research Agenda. *Small Group Research* 2015;46:659-699. [Link](#).
- Stricker A, Westhauer T, Sheets T, Hawkins-Scribner T, Calogne C. Values-Based Network Leadership in an Interconnected World. *Journal of Values-Based Leadership* 2018;11:12. doi: [10.22543/0733.111.1210](#). [Link](#).
- Surratt HL, Otachi JK, Slade E, Kern PA, King V, Kelly TH, DiPaola RS. Optimizing Team Science in an Academic Medical Center: A Qualitative Examination of Investigator Perspectives. *Journal of Clinical and Translational Science* 2023;7(1):57. doi: [10.1017/cts.2023.3](#). [Link](#).



NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

- Turner JR, Thurlow N, Baker R, Northcutt D, Newman K. Multiteam Systems in an Agile Environment: A Realist Systematic Review. *Journal of Manufacturing Technology Management* 2019;30:748-771. [Link](#).
- Vogel AL, Knebel AR, Faupel-Badger JM, Portilla LM, Simeonov A. A Systems Approach to Enable Effective Team Science from the Internal Research Program of the National Center for Advancing Translational Sciences. *Journal of Clinical and Translational Science* 2021;5:163. doi:10.1017/cts.2021.811. [Link](#).
- Zaccaro SJ, Dubrow S, Torres EM, Campbell LNP. Multiteam Systems: An Integrated Review and Comparison of Different Forms. *Annual Review of Organizational Psychology and Organizational Behavior* 2020;7:479-503. [Link](#).

## **B. Books and Reports**

- Bennett LM, Gadlin H, Marchand C., eds. COLLABORATION AND TEAM SCIENCE FIELD GUIDE (National Cancer Institute, 2018). [Link](#).
- Bozeman B, Youtie J. THE STRENGTH IN NUMBERS: THE NEW SCIENCE OF TEAM SCIENCE (Princeton University Press, 2017). [Link](#).
- Carter DR, Asencio R, Trainer Hm, DeChurch LA, Kanfer R, Zaccaro SJ. *Best Practices for Researchers Working in Multiteam Systems*, in STRATEGIES FOR TEAM SCIENCE SUCCESS (Hall KL, Vogel AL, Croyle RT, eds. Springer, 2019).
- National Research Council. ENHANCING THE EFFECTIVENESS OF TEAM SCIENCE (National Academies Press, 2015). [Link](#).

## **C. Online Resources**

- Building Effective Multi-Stakeholder Research Teams: Best Practices in Multi-Stakeholder Team Science. *Patient-Centered Outcomes Research Institute* (last accessed May 16, 2023). [Link](#).
- Clinical and Translational Science Institute. Team Science Toolbox. *Penn State University* (last accessed May 16, 2023). [Link](#).
- Divergent Science LLC (last visited May 16, 2023). [Link](#).
- International Network for the Science of Team Science (INSciTS) (last visited May 16, 2023). [Link](#).
- NIH, National Cancer Institute. Team Science Toolkit (last accessed May 16, 2023). [Link](#).

# **VI. Advancing Diversity, Equity, and Inclusion**

## **A. Articles**

- Bear JB, Woolley AW. The Role of Gender in Team Collaboration and Performance. *Interdisciplinary Science Reviews* 2011;36:146-153. [Link](#).
- Bielefeldt AR, Polmear M, Knight D, Swan C, Canney N. Intersections between Engineering Ethics and Diversity Issues in Engineering Education. *Journal of Professional Issues in Engineering Education and Practice* 2018;144:04017017. doi:10.1061/(ASCE)EI.1943-5541.0000360. [Link](#).
- Boyce AS, Tovey TLS, Onwuka O, Moller JR, Clark T, Smith A. Exploring NSF-Funded Evaluators' and Principal Investigators' Definitions and Measurement of Diversity, Equity, and Inclusion. *American Evaluation Association* 2023;44(1):50-73. [Link](#).
- Butz AR, Spencer K, Thayer-Hart N, Cabrera IE, Byars-Winson A. Mentors' Motivation to Address Race/Ethnicity in Research Mentoring Relationships. *Journal of Diversity in Higher Education* 2019;12:242-254. [Link](#).

- Campbell LG, Mehtani S, Dozier ME, Rinehart J. Gender-Heterogenous Working Groups Produce Higher Quality Science. *PLoS ONE* 2013;8:79147. doi:[10.1371/journal.pone.0079147](https://doi.org/10.1371/journal.pone.0079147). [Link](#).
- Cheruvellil KS, Soranno PA, Weathers KC, Hanson PC, Goring SJ, Filstrup CT, Read EK. Creating and Maintaining High-Performing Collaborative Research Teams: The Importance of Diversity and Interpersonal Skills. *Frontiers in Ecology and the Environment* 2014;12(1):31-38. [Link](#).
- Clark BG, Underwood OD. Mitigating Implicit Bias as a Leader. *JOM* 2019;71:2152-2155. [Link](#).
- Coles NA, Hamlin JK, Sullivan LL, Parker TH, Altschul D. Build Up Big-Team Science. *Nature* 2022;601:505-507. [Link](#).
- Dakin R, Ryder TB. Gender Bias in Research Teams and the Underrepresentation of Women in Science. *BioRxiv* 2019. doi:[10.1101/741694](https://doi.org/10.1101/741694). [Link](#).
- Faulker W. Doing Gender in Engineering Workplace Cultures: Observations from the Field. *Engineering Studies* 2009;1;3-18. [Link](#).
- Goings TC, Belgrave FZ, Mosavel M, Evans CBR. An Antiracist Research Framework: Principles, Challenges, and Recommendations for Dismantling Racism Through Research. *Journal of the Society for Social Work and Research* 2023;14(1):101-128. [Link](#).
- Hall KL, Vogel AL, Huang GC, Serrano KJ, Rice EL, Tsakraklides SP, Fiore SM. The Science of Team Science: A Review of the Empirical Evidence and Research Gaps on Collaboration in Science. *American Psychologist* 2018;73:532-548. [Link](#).
- Humbert AL, Guenther EA, Müller J. Not Simply ‘Counting Heads’: A Gender Diversity Index for the Team Level. *Social Indicators Research* 2021;157:689-707. [Link](#).
- Isaac S, Kotluk N, Tormey R. Educating Engineering Students to Address Bias and Discrimination Within Their Project Teams. *Science and Engineering Ethics* 2023;29:6. doi: [10.1007/s11948-022-00426-w](https://doi.org/10.1007/s11948-022-00426-w). [Link](#).
- Jeske M, Vasquez E, Fullerton SM, Saperstein A, Bentz M, Foti N, Shim JK, Lee SSJ. Beyond Inclusion: Enacting Team Equity in Precision Medicine Research. *PLoS One* 2022;17:0263750. doi: [10.1371/journal.pone.0263750](https://doi.org/10.1371/journal.pone.0263750). [Link](#).
- Jones G, Chase BC, Wright J. Cultural Diversity Drives Innovation: Empowering Teams for Success. *International Journal of Innovation Science* 2020;12:323-343. [Link](#).
- Joshi A. By Whom and When is Women’s Expertise Recognized? The Interactive Effects of Gender and Education in Science and Engineering Teams. *Administrative Science Quarterly* 2014;59:202-239. [Link](#).
- Levites Strelakova YA, Kornetti DL, Pemu P, King Gordon T, Kumar D, Brown M, Spires S, Ofili EO. Strategic Team Sciences Promotes Collaboration and Practice-Based Research at the Research Centers in Minority Institutions. *International Journal of Environmental Research and Public Health* 2023;20(6):4800. doi: [10.3390/ijerph20064800](https://doi.org/10.3390/ijerph20064800). [Link](#).
- Lezotte S. Making Sense of Diversity and Inclusion in Engineering. *Journal of Diversity in Higher Education* 2021. doi:[10.1037/dhe0000371](https://doi.org/10.1037/dhe0000371). [Link](#).
- Locklear T, Lewis R, Calhoun F, Li A, Dickerson KC, McMillan A, Davis L, Dzirasa K, Weinfurt KP, Grambow SC. Advancing Workforce Diversity by Leveraging the Clinical and Translational Science Awards (CTSA) Program. *Journal of Clinical and Translational Science* 2023;7(1):E30. doi: [10.1017/cts.2022.489](https://doi.org/10.1017/cts.2022.489). [Link](#).
- Love HB, Fosdick BK, Cross JE, Suter M, Egan D, Tofany E, Fisher ER. Towards Understanding the Characteristics of Successful and Unsuccessful Collaborations: A

- Case-Based Team Science Study. *Humanities and Social Sciences Communications* 2022;9:371. doi: [10.1057/s41599-022-01388-x](https://doi.org/10.1057/s41599-022-01388-x). [Link](#).
- Mannix E, Neale MA. What Differences Make a Difference? The Promise and Reality of Diverse Teams in Organizations. *Psychological Science in the Public Interest* 2005;6(2):31-55. [Link](#).
- Murphy F. Engineering a Gender Bias. *Nature* 2017;543:S31. doi: [10.1038/543S31a](https://doi.org/10.1038/543S31a). [Link](#).
- Ni C, Smith E, Yuan H, Larivière V, Sugimoto CR. The Gendered Nature of Authorship. *Science Advances* 2021;7:eabe4639. doi: [10.1126/sciadv.abe4639](https://doi.org/10.1126/sciadv.abe4639). [Link](#).
- Nielsen MW, Alegria S, Börjeson L, Etzkowitz H, Falk-Krzensinski HJ, Joshi A, Leahey E, Smith-Doerr L, Woolley AW, Schiebinger L. Gender Diversity Leads to Better Science. *PNAS* 2017;114:1740-1742. [Link](#).
- Nielsen MW, Bloch CW, Schiebinger L. Making Gender Diversity Work for Scientific Discovery and Innovation. *Nature Human Behavior* 2018;2:726-734. [Link](#).
- Polemear M, Chau AD, Simmons DR. Ethics as an Outcome of Out-of-Class Engagement Across Diverse Groups of Engineering Students. *Australasian Journal of Engineering Education* 2021; 26:64-76. [Link](#).
- Rey CM. Team Science and the Diversity Advantage. *Science* 2008. doi: [10.1126/science.caredit.a0800135](https://doi.org/10.1126/science.caredit.a0800135). [Link](#).
- Rincon R. Promoting the Need for Greater Diversity and Inclusion in Engineering. *Electrochemical Society Interface* 2022;31:49-51. [Link](#).
- Roberge ME, Van Dick R. Recognizing the Benefits of Diversity: When and How Does Diversity Increase Group Performance? *Human Resource Management Review* 2010;20:295-308. [Link](#).
- Ruge-Jones L, Barley WC, Wilson SR, MacSwain C, Johnson L, Everett J, Poole M. Activated Differences: A Qualitative Study of How and When Differences Make a Difference on Diverse Teams. *Management Communication Quarterly* 2023. doi: [10.1177/08933189231153847](https://doi.org/10.1177/08933189231153847). [Link](#).
- Salazar MR, Lant TK, Fiore SM, Salas E. Facilitating Innovation in Diverse Science Teams Through Integrative Capacity. *Small Group Research* 2012;43:527-558. [Link](#).
- Santos M, Luna M, Reyes DL, Traylor A, Lacerenza CN, Salas E. How to be an Inclusive Leader for Gender-Diverse Teams. *Organizational Dynamics* 2022;51:100914. doi:[10.1016/j.orgdyn.2022.100914](https://doi.org/10.1016/j.orgdyn.2022.100914). [Link](#).
- Sege RD, Laraque-Arena D. Steps Towards Equity in Research. *Journal of Clinical and Translational Science* 2023;7:65. doi:[10.1017/cts.2023.8](https://doi.org/10.1017/cts.2023.8). [Link](#).
- Settles IH, Brasell ST, Soranno PA, Cheruvellil KS, Montgomery GM, Elliott KC. Team Climate Mediates the Effect of Diversity on Environmental Science Team Satisfaction and Data Sharing. *PLoS ONE* 2019;14:0219196. doi:[10.1371/journal.pone.0219196](https://doi.org/10.1371/journal.pone.0219196). [Link](#).
- Smith-Doerr L, Alegria S, Sacco T. How Diversity Matters in the U.S. Science and Engineering Workforce: A Critical Review Considering Integration in Teams, Fields, and Organizational Contexts. *Engaging Science, Technology, and Society* 2017;3:139-153. [Link](#).
- Swartz TH, Palermo AGS, Masur SK, Aberg JA. The Science and Value of Diversity: Closing the Gaps in our Understanding of Inclusion and Diversity. *Journal of Infectious Diseases* 2019;220(S2):S33-S41. [Link](#).
- Wiley Z, Hanna J, Kobaidze K, Franks N. Team Science: Advancing Women and Black, Indigenous, and Other People of Color on the Pathway of Conducting Clinical Research.

*Therapeutic Advances in Infectious Disease* 2023;10. doi: [10.1177/20499361231159501](https://doi.org/10.1177/20499361231159501).  
[Link](#).

Yang, Woodruff TK, Jones BF, Uzzi B. Gender-Diverse Teams Produce More Novel and Higher Impact Ideas. *PNAS* 2022;119(36):2200841119. doi: [10.1073/pnas.2200841119](https://doi.org/10.1073/pnas.2200841119). [Link](#).

## **B. Presentations**

Anicha CL, Aragon C, Bilen-Green C, Blaser B, Burgstahler SE, Shume T. Supporting Faculty and Students with Disabilities. Paper presented at 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. [Link](#).

Falk-Krzensinski HJ. Gender & Team Science: Toward Improving Effectiveness of Research Collaboration. (March 30, 2017, at George Washington University). [Link](#).

Hall KL. Science of Team Science: Building Solid Collaborations that Produce Results. SciTS CTSA Workshop, May 24, 2018. [Link](#).

Mallette JC. Centering Equity and Inclusion in Engineering Collaboration and Writing. Paper presented at 2022 ASEE Annual Conference & Exposition, Minneapolis, MN. [Link](#).

Parker JN. Tips on Team Science and Equity from NSF Program Officer John Parker. (UMass ADVANCE Research Collaboration Workshop, Amherst, MA, Feb. 8, 2019). [Link](#).

Sellers VB, Villaneuva I. What Strategies do Diverse Women in Engineering Use to Cope with Situational Hidden Curriculum? Paper presented at 2021 ASEE Annual Conference & Exposition, Virtual Meeting. [Link](#).

Zoltowski CB, Buzzanell P, Oakes WC, Feister M, Torres D. Understanding the Communicative and Social Processes of Engineering Ethics in Diverse Design Teams. Paper presented at 2015 ASEE Annual Conference & Exposition, Seattle, WA. [Link](#).

## **C. Books and Reports**

Institute of Medicine. *BEYOND BIAS AND BARRIERS: FULFILLING THE POTENTIAL OF WOMEN IN ENGINEERING AND SCIENCE* (National Academies Press, 2017). [Link](#).

Twyman M, Contractor N. *Team Assembly, in STRATEGIES FOR TEAM SCIENCE SUCCESS* (Hall K, Vogel, A, Croyle R, eds. Springer, 2019). [Link](#).

## **D. Online Resources**

Carador MT, Caza BB. The Subtle Stressors Making Women Want to Leave Engineering. *Harvard Business Review* (last accessed May 17, 2023). [Link](#).

Center for Research, Excellence, and Diversity in Team Science. *University of California, Santa Barbara* (last accessed May 17, 2023). [Link](#).

Culture and Diversity -- Quick Tips. *National Center for Professional & Research Ethics* (last accessed May 17, 2023). [Link](#).

Gilliand G. Embracing Diversity in a Team-Science World. *LinkedIn* (last accessed May 17, 2023). [Link](#).

Meuser JD. Understanding Generational Shifts -- Quick Tips. *National Center for Professional & Research Ethics* (last accessed May 17, 2023). [Link](#).

Misra J, Mickey EL, Normanly J, Smith-Doerr L. Creating Equitable Research Collaborations. *UMass Amherst ADVANCE Program* (last accessed May 17, 2023). [Link](#).

## **VII. Building a Sustainable Network**

### **A. Articles**

Bisbey TM, Reyes DL, Traylor AM, Salas E. Teams of Psychologists Helping Teams: The Evolution of the Science of Team Training. *American Psychologist* 2019;74:278-289. [Link](#).

- Collaco JM, St. Geme JW, Abman SH, Furth SL. It Takes a Team to Make Team Science a Success: Career Development within Multicenter Networks. *Journal of Pediatrics* 2023;252:3-6. [Link](#).
- Davison RB, Hollenbeck JR, Barnes CM, Slesman DJ, Ilgen DR. Coordinated Action in Multiteam Systems. *Journal of Applied Psychology* 2012;97:808-824. [Link](#).
- DuBois JM, Schilling DA, Heitman E, Steneck NH, Kon AA. Instruction in the Responsible Conduct of Research: An Inventory of Programs and Materials within CTAs. *Clinical and Translational Science* 2010;3(3);109-111. [Link](#).
- Holsapple MA, Carpenter DD, Sutkus JA, Finelli CJ, Harding TS. Framing Faculty and Student Discrepancies in Engineering Ethics Education Delivery. *Journal of Engineering Education* 2012;101:169-186. [Link](#).
- Kleinschmit AJ, Rosenwald A, Ryder EF, Donovan S, Murdoch B, Grandgenett NF, Pauley M, Triplett E, Tappich W, Morgan W. Accelerating STEM Education Reform: Linked Communities of Practice Promote Creation of Open Educational Resources and Sustainable Professional Development. *International Journal of STEM Education* 2023;10:16. doi: [10.1186/s40594-023-00405-y](https://doi.org/10.1186/s40594-023-00405-y). [Link](#).
- Matusik JG, Mitchell RL, Hays NA, Fath S, Hollenbeck JR. The Highs and Loves of Hierarchy in Multiteam Systems. *Academy of Management Journal* 2022;65:5. [Link](#).
- Mell JN, DeChurch LA, Leenders RTHAJ, Contractor N. Identity Asymmetries: An Experimental Investigation of Social Identity and Information Exchange in Multiteam Systems. *Academy of Management Journal* 2020;63:5. doi:[10.5465/amj.2018.0325](https://doi.org/10.5465/amj.2018.0325). [Link](#).
- Pavlidis I, Peterson AM, Semendeferi I. Together We Stand. *Nature Physics* 2014;10:700-702. [Link](#).
- Pizzolato D, Dierickx K. The Mentor's Role in Fostering Research Integrity Standards Among New Generations of Researchers: A Review of Empirical Studies. *Science and Engineering Ethics* 2023;29:19. doi: [10.1007/s11948-023-00439-z](https://doi.org/10.1007/s11948-023-00439-z). [Link](#).
- Salas E, Reyes DL, McDaniel SH. The Science of Teamwork: Progress, Reflections, and the Road Ahead. *American Psychologist* 2018;73;593-600. [Link](#).
- Semendeferi I, Tsiamirtzis P, Dcosta M, Pavlidis I. Connecting Past with Present: A Mixed-Methods Science Ethics Course and its Evaluation. *Science and Engineering Ethics* 2016;22:251-274. [Link](#).
- Sessa VI, London M, Wanamaker M. How Multiteam Systems Lead. *Team Performance Management* 2019;25:138-156. [Link](#).
- Trachtenberg RE, Russell AJ, Morgan GJ, FitzGerald KT, Collmann J, Steinmann M, Dolling LM. Using Ethical Reasoning to Amplify the Reach and Resonance of Professional Codes of Conduct in Training Big Data Scientists. *Science and Engineering Ethics* 2015;21:1485-1507. [Link](#).
- Wagner JA. Inter-Team Coordination in Multiteam Systems: Mechanisms, Transitions, and Precipitants. *Organizational Psychology Review* 2023. doi: [10.1177/20413866231153537](https://doi.org/10.1177/20413866231153537). [Link](#).

## **B. Presentations**

- Bielefeldt AR, Polmear M, Knight D, Swan C, Canney N. Ethics Across the Curriculum? Integrating Ethics and Societal Impact Topics into Core Engineering Courses. Paper presented at the 2017 ASEE Annual Conference & Exposition, Provo, UT. [Link](#).

NetEthics bibliography: last revised May 17, 2023  
Preparation supported by NSF Grant No. 2220611

Falk-Krzensinski H. The Praxis of Team Science: Resources, Funding, and Support for Collaborative Research. (UCF Grants Day: Strategies for Team-Based Research, April 9, 2012). [Link](#).

Hubbs G, Rinkus MA, McLeskey C. Preparing Students for Interdisciplinary Collaboration and Team Research: Case Studies and Models from the Graduate and Undergraduate Level. (SciTS Conference, Lansing, MI, May 23, 2019). [Link](#).

### **C. Books and Reports**

DiRosa GA, Estrada AX, DeConstanza AH. *Cohesion with Large Collectives: A Multiteam Systems Perspective*, in TEAM COHESION: ADVANCES IN PSYCHOLOGICAL THEORY, METHODS AND PRACTICE (Salas E, Vessey WB, Estrada AX, eds. 17th ed. Emerald, 2015) [Link](#).

National Academy of Engineering. EMERGING TECHNOLOGIES AND ETHICAL ISSUES IN ENGINEERING (National Academies Press, 2004). [Link](#).

National Academy of Engineering. ENGINEERING, SOCIAL JUSTICE, AND SUSTAINABLE COMMUNITY DEVELOPMENT (National Academies Press, 2010). [Link](#).

National Academy of Engineering. ETHICS EDUCATION AND SCIENTIFIC AND ENGINEERING RESEARCH: WHAT'S BEEN LEARNED? WHAT SHOULD BE DONE? (National Academies Press, 2009). [Link](#).

National Academy of Engineering. OVERCOMING CHALLENGES TO INFUSING ETHICS INTO THE DEVELOPMENT OF ENGINEERS (National Academies Press, 2017). [Link](#).

National Academy of Engineering. PRACTICAL GUIDANCE ON SCIENCE AND ENGINEERING ETHICS EDUCATION FOR INSTRUCTORS AND ADMINISTRATORS (National Academies Press, 2013). [Link](#).

## **VIII. Promoting Socially Responsible Research Outcomes**

### **A. Articles**

Berube DM, Bogomoletc E, Eng N. Social Science and Infrastructure Networks and the Human-Technology Interface. *Journal of Nanoparticle Research* 2020;22:296. doi:[10.1007/s11051-020-05022-2](https://doi.org/10.1007/s11051-020-05022-2). [Link](#).

Polmear M, Bielefeldt AR, Knight D, Canney N, Swan C. Analysis of Macroethics Teaching Practices and Perceptions in Engineering: A Cultural Comparison. *European Journal of Engineering Education* 2019;44:866-881. [Link](#).

Tebes JK. Team Science, Justice, and the Co-Production of Knowledge. *American Journal of Community Psychology* 2018;62:13-22. [Link](#)

Tebes JK, Thai ND. Interdisciplinary Team Science and the Public: Steps Towards a Participatory Team Science. *American Psychologist* 2018;73:549-562. [Link](#).

Bielefeldt AR, Canney NE, Swan C, Knight D. Efficacy of Macroethics Education in Engineering. Paper presented at 2016 ASEE Annual Conference & Exposition, New Orleans, Louisiana. [Link](#).

### **B. Online Resources**

Bielefeldt AR. Efficacy of Macroethics Education in Engineering. *Online Ethics Center* (last accessed May 17, 2023). [Link](#).