

Jeannette M. Wing

Avanessians Director of the Data Science Institute
Professor of Computer Science
Zuckerman Mind, Brain, and Behavior Institute, Affiliate Member
550 W. 120th St. MC 4720
Columbia University
New York, NY 10027

(212) 853-0681 (office)
(917) 435-3576 (cell)
(212) 854-1599 (fax)
wing@columbia.edu
<http://www.columbia.cmu.edu/wing/>

Professional Preparation

1979 S.B. Massachusetts Institute of Technology	Computer Science and Engineering
1979 S.M. Massachusetts Institute of Technology	Electrical Engineering and Computer Science
1983 Ph.D. Massachusetts Institute of Technology	Computer Science

Appointments

2017–	Avanessians Director of the Data Science Institute, Columbia University
2017–	Professor, Computer Science, Columbia University
2013-2017	Corporate Vice President, Microsoft Research
2004–2007, 2010–2012	Head, Computer Science Department, Carnegie Mellon University
2007-2010	Assistant Director, Computer and Information Science and Engineering, National Science Foundation
1999–2004	Associate Dean for Academic Affairs, School of Computer Science, Carnegie Mellon University
1996–2004	Associate Dept. Head for the Ph.D. Program, Computer Science Dept., CMU
1996–	Professor, Computer Science Dept., CMU
2002–2003	Visiting Researcher, Microsoft Research, Redmond, WA
1998–1999	Associate Dean for Doctoral Programs, School of Computer Science, CMU
1992	Visiting Associate Professor, Massachusetts Institute of Technology
1990–1996	Associate Professor, Computer Science Dept., CMU
1985–1990	Assistant Professor, Computer Science Dept., CMU
1983–1985	Assistant Professor, Computer Science Dept., University of Southern California

Publications Related to Proposed Project

1. J.M. Wing, Vandana P. Janeja, Tyler Kloefkorn, and Lucy C. Erickson, “Data Science Leadership Summit, Workshop Report,” September 2018. <https://dl.acm.org/citation.cfm?id=3293458>.
2. T. Zheng, J.M. Wing, C. Stein, and D. Hsu, “New Master’s or Doctoral Data Science/Analytics Programs: Columbia,” *AMSTAT News*, December 2018, pp. 6-11.
3. J.M. Wing, “Computational Thinking and Thinking about Computing,” *Philosophical Transactions of the Royal Society*, vol. 366, July 2008, pp. 3717–3725.
4. J.M. Wing, “Computational Thinking,” *Communications of the ACM*, viewpoint, vol. 49, no. 3, March 2006, pp. 33–35.
5. J.M. Wing, “Hints to Specifiers,” Chapter 5 in *Educational Issues of Formal Methods*, edited by M. Hinchey and N. Dean, Academic Press, London, 1996, pp. 57-77. Preliminary version available as CMU-CS-95-118R, May 1995, which supersedes “Teaching Mathematics to Software Engineers,” CMU-CS-95-118, February 1995.

Five Other Significant Publications

1. S. Sen, S. Guha, A. Datta, S. Rajamani, J. Tsai, and J.M. Wing, “Bootstrapping Privacy Compliance in Big Data Systems,” in *35th IEEE Symposium on Security and Privacy (“Oakland”)*, San Francisco, CA, May 18–21, 2014. Best Student Paper Award.

2. O. Sheyner, J. Haines, S. Jha, R. Lippmann, and J.M. Wing, “Automated Generation and Analysis of Attack Graphs,” *Proceedings of the IEEE Symposium on Security and Privacy*, Oakland, CA, May 2002.
3. E.M. Clarke and J.M. Wing, “Formal Methods: State of the Art and Future Directions,” *ACM Computing Surveys*, vol. 28, no. 4, December 1996, pp. 626–643. Available as CMU-CS-96-178.
4. B.H. Liskov and J.M. Wing, “A Behavioral Notion of Subtyping,” *ACM Trans. on Prog. Lang. and Systems*, 16(6), Nov. 1994, pp. 1811–1841.
5. M.P. Herlihy and J.M. Wing, “Linearizability: A Correctness Condition for Concurrent Objects,” *ACM Trans. on Prog. Lang. and Systems*, 12(3), July 1990, pp. 463–492;

Synergistic Activities

1. Data Science Leadership
 - ACM/IMS 2019 Event on Data Science, San Francisco, CA, Co-chair of Steering Committee, scheduled for June 15, 2019.
 - Machine Learning in Science and Engineering, Annual Data Science Forum, Atlanta Georgia, Program Committee, scheduled for June 10-12, 2019.
 - Women in Data Science, Annual Data Science Forum, Atlanta Georgia, Program Committee, scheduled for June 9, 2019.
 - Academic Data Science Leadership Summit, sponsored by NSF, Moore Foundation, and Sloan Foundation, New York, NY, March 26, 2018. Inaugural event.
 - NSF Workshop on Enabling Computer and Information Science and Engineering Research and Education in the Cloud, Alexandria, VA, January 8-9, 2018.
2. Editorial Board Member (select): *Harvard Data Science Review*, Advisory Board, 2018–; *ACM Transactions on Data Science*, Senior Associate Editor, 2018–. *Communications of the ACM*, 2007–; *Journal of the Association for Computing Machinery*, 1999–2018; *IEEE Transactions on Dependable and Secure Computing*, 2006–; *Software Tools for Technology Transfer*, 2001–2016; *Formal Aspects of Computing*, North American Associate Editor (since 1997), Springer-Verlag, 1988–; *Formal Methods in System Design*, Kluwer Press, 1994–; *ACM Trans. on Prog. Lang. and Systems*, 1992–1999; and *ACM Trans. on Soft. Eng. and Methodology*, 1989–1999.
3. Honors and Awards (select): ACM Fellow, American Academy of Arts and Sciences Fellow, AAAS Fellow, IEEE Fellow; ACM Distinguished Service Award, CRA Distinguished Service Award; SIGSOFT Retrospective Paper Award (2012). Columbia College of Dental Medicine Birnberg Research Award.
4. *Committee Member (select)*: Task Force on Automated Decision Systems, NYC Mayor’s Office, 2018–2019. Boston University Hariri Institute for Computing Advisory Board, 2018–. Michigan Institute for Data Science Advisory Board, 2018–. National Library of Medicine Blue Ribbon Panel, 2018–. NSF Accountable Decision Systems Advisory Board, 2017–. American Academy of Arts and Sciences, Class I Section 6 (Computer Science), Chair 2017–. American Association for the Advancement of Science, Section T (Information, Computing and Communication), Chair, 2016–2017. Association for Women in Mathematics, Advisory Board, 2017–. Institute for Pure and Applied Mathematics, member of Board of Trustees, 2016–. NSA Board of Judges, Best Scientific Cybersecurity Paper, 2012–2018. NITRD co-chair, 2007–2010, Computer Science and Telecommunications Board, member: 2001–2004, co-chair: 2004–2005. ACM Council, 2006–2007. Microsoft Trustworthy Computing Academic Advisory Board, 2003–2007, 2010–2012. DARPA Information and Science Technology Panel (ISAT), Vice Chair, 2012–2014; Chair, 2014–2016; Steering Committee, 2012–. NSF CISE Advisory Committee, 1995–1998.
5. *Industry Advisory Boards (select)*: Alibaba, Artificial Intelligence Finance Institute, AILens.