Curriculum Vitae

Barbara Oakley, PhD, PE
Distinguished Professor of Engineering
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Overview

Barbara Oakley, PhD, PE is a Distinguished Professor of Engineering at Oakland University in Rochester, Michigan; a Fellow of IEEE and AIMBE; McGraw Prize winner, Her work focuses on the complex relationship between neuroscience and social behavior. Dr. Oakley's research has been described as "revolutionary" in the *Wall Street Journal*—she has published in outlets as varied as the *Proceedings of the National Academy of Sciences*, the *Wall Street Journal*, and *The New York Times*.

Dr. Oakley is one of the foremost experts on the creation of high quality massive open online courses. She is also the author of *New York Times* best-selling science book to help onboard learners into mathematically-oriented disciplines: *A Mind for Numbers*, (million+ copies sold, translated into over two dozen languages). Additionally, she is the creator and co-instructor of one of the world's most popular massive open online courses: UCSD-Coursera's *Learning How to Learn*, with over five million students on all language versions (including Hungarian, https://www.coursera.org/learn/a-tanulas-tanulasa) along with other Class Central rated "top 100 MOOCs of all time."

Barbara has won numerous teaching awards, including the McGraw Prize (colloquially known as the "Nobel Prize for Education"), Michigan Distinguished Professor of the Year; Coursera's inaugural "Innovation Instructor," the IEEE William E. Sayle II Award for Achievement in Education, the American Society of Engineering Education's Chester F. Carlson Award for technical innovation in engineering education and the Theo C. Pilkington award for Biomedical Engineering Education. Dr. Oakley has headlined and keynoted conferences around the world, speaking at Harvard, Yale, Princeton, UCLA, the University of Michigan, Georgia Tech, the Naval Post Graduate Institute, the Defense Language Institute, University of Tokyo, University of Sao Paulo, Coursera, FutureLearn, OpenClassrooms, Microsoft, Google, Baidu, Novartis, Nationwide, Proctor & Gamble, and hundreds of other venues.

Dr. Oakley has adventured widely through her lifetime. She rose from the ranks of Private to Captain in the U.S. Army, during which time she was recognized as a Distinguished Military Scholar. She also worked as a communications expert at the South Pole Station in Antarctica, and has served as a Russian translator on board Soviet trawlers on the Bering Sea.

Education

Institution	Degree	Date
• Oakland University	Ph.D. Systems Engineering	1998
• Oakland University	M.S. Electrical and Computer Engineering	1995
• University of Washington	B.S. Electrical Engineering	1986
• University of Washington	B.A. Slavic Languages & Literature	1977

Professional Employment: Full- or Part-time Academic Positions since Bachelor's Degree

Institution or Company	Position	From/To	Full or Part-Time
• University of California San Diego	Visiting Scholar	Oct. 2014 – present	Full
• Oakland University	Professor	2014 – present	Full
• Oakland University	Professor	2014 – present	Full
• Oakland University	Associate Professor	2004 – 2014	Full
• Oakland University	Assistant Professor	1998 – 2004	Full
• Michigan Technological University	Adjunct Assistant Professor	1999, 2001, 2003	Part
• Oakland University	Teaching Assistant	1996-1998	Part
• FireFly Enterprises Utica, Michigan	Independent Consultant	1990-1996	Part
• Ford Motor Company Dearborn, Michigan	Product Design Engineer	1989-1990	Full
• Spectra Technology, Inc. Bellevue, Washington	Controls Task Manager	1986-1989	Full
• ITT Antarctic Services South Pole Station, Antarctica	Radio Operator	1983-1984	Full
• Marine Resources Bering Sea, Pacific Northwest Coastline	Russian Translator	1982-1983	Full
• U.S. Army West Germany	Regular Army Signal Officer (2LT – CPT)	1977-1981	Full
• U.S. Army Defense Language Institute, Monterey, CA	Enlisted (Private- SP4)	1974-1975	Full

Major Research Areas

Education; STEM education; learning; teaching; altruism

Professional Engineering License

Received licensure as a Professional Engineer in the State of Michigan, License Number 44379, 1998.

Awards and Honors

1. McGraw Prize for Lifelong Learning (2023).
2. Gold Award: E-Learning Experience by the International E-Learning Association (IELA) for the creation of the *Uncommon Sense Teaching* specialization, Coursera (2023).
3. IEEE William E. Sayle II Award for Achievement in Education (2020).
4. Michigan Distinguished Professor of the Year (2018).
5. Fellow, Institute of Electrical and Electronic Engineers (2018).
6. Ramón y Cajal Distinguished Scholar of Global Digital Learning, McMaster University (2016).

7. Inaugural "Innovation Instructor," Coursera (2015).
8. American Society of Engineering Education Chester F. Carlson Award for outstanding technical innovation in the field of engineering education (2015).
9. American Society of Engineering Education Theo C. Pilkington Award for outstanding educator in advancing the field of bioengineering (2015).
10. Oakland University Teaching Excellence Award, 2013.
11. Nautilus Award for the book *Practicing Sustainability*, 2013.
12. Finalist, Society of Midland Writers, for the book *Cold-Blooded Kindness*, 2012.
13. Fellow, American Institute of Medical and Biological Engineers, 2009.
14. Fellow, World Academy of Art and Science, 2009.
15. Finalist, Midlands Writers Awards, 2008.
16. Appointed to Senior Member, IEEE, 2002.
17. Naim and Ferial Kheir Teaching Award, 2002.
18. John D. and Dortha J. Withrow Teaching Award, 2001.
19. National Science Foundation New Century Scholar, 1999.
20. Election into Tau Beta Pi, 1999.
21. National Science Foundation FIE New Faculty Fellow, 1998.
22. First Place, Pacific Northwest Writers' Conference Literary Awards, 1990.
23. Antarctic Services Medal, National Science Foundation, 1984.
24. Distinguished Military Scholar and Graduate, U.S. Army, 1977.
25. Association of the United States Army Award, 1976.

Published Works

E. Annotated Bibliography

Books

1. **Top 10 Pick for Learning Ladders' Best Books for Educators** *Uncommon Sense Teaching: Practical Insights in Brain Science to Help Students Learn*, Barbara Oakley, Beth Rogowski, Terrence Sejnowski, Penguin-Random House, June 15, 2021.
2. *Learn Like a Pro*, Barbara Oakley and Olav Schewe, St. Martin's Press (June 1, 2021) and over a dozen translations worldwide.
3. *Learning How to Learn: How to Succeed in School Without Spending All Your Time Studying; A Guide for Kids and Teens*, Barbara Oakley and Terrence Sejnowski, Tarcher-Penguin, August, 2018.
4. **Booklist best-seller.** *Mindshift: How Ordinary and Extraordinary People Have Changed Their Lives through Learning—and You Can Too*, Barbara Oakley, Tarcher-Penguin, April, 2017.
5. *A Mind for Numbers,* by Barbara Oakley, Tarcher-Penguin, July 2014. This ***New York Times* best-selling science book** uses insights from neuroscience to show college and high school students how to learn math and science more easily and effectively. Published in over two dozen languages worldwide, over a million copies in print.
6. *Practicing Sustainability*, edited by Guruprasad Madhavan, Barbara Oakley, David Green, David Koon, and Penny Low. Springer, October, 2012. **Selected for a 2013 Nautilus Silver Book Award.**
7. *Pathological Altruism* Eds Barbara Oakley, Ariel Knafo, Guruprasad Madhavan, David

Sloan Wilson, Oxford University Press, January 2012.
8. *Cold-Blooded Kindness*, by Barbara Oakley, Prometheus Books, April, 2011.
9. *Career Development in Bioengineering and Biotechnology*, Eds. Guruprasad Madhavan, Barbara Oakley, Luis Kun, Springer, 2008.
10. *Evil Genes: Why Rome Fell, Hitler Rose, Enron Failed, and My Sister Stole My Mother's Boyfriend*, by Barbara Oakley, Prometheus Books. October, 2007.
11. *Hair of the Dog: Tales from Aboard a Russian Trawler*, Barbara Oakley, WSU Press, 1996.

Book Chapters

1. "Chapter 21. Empathy, Theory of Mind, Cognition, Morality, and Altruism," by Mark Reimers and Barbara Oakley, in *On Human Nature: Biology, Psychology, Ethics, Politics, and Religion*, ed. Michel Tibayren, Francisco Ayala, Elsevier, 2016.
2. "Consilience through the Integration of Engineering and Social Science," by Barbara Oakley, in *Darwin's Bridge, Uniting the Humanities and Sciences*, ed. Joe Carroll, Dan P. McAdams, and Edward O. Wilson, Oxford University Press, 2016.
3. "Machiavellians and Organizational Evil," by Barbara Oakley, in *The Foundations of Organizational Evil*, (M.E. Sharpe, 2012), ed. Carole L. Jurkiewicz, Ph.D. (pp. 31-76)
4. "Pathological Altruism — An Introduction," Barbara Oakley, Ariel Knafo, and Michael McGrath, a chapter in *Pathological Altruism*, Oxford University Press, 2012. (Pages 3-9.)
5. "Too Much of a Good Thing? Foreign Aid and Pathological Altruism," by Guruprasad Madhavan and Barbara Oakley
6. "Codependency and pathological altruism," by Michael McGrath and Barbara Oakley, a chapter in *Pathological Altruism*, Oxford University Press, 2011, pages 49-74.
7. "Writing Non-Fiction Books," by Barbara Oakley, a chapter in G. Madhavan, Barbara Oakley, and Luis Kun, *Career Development in Bioengineering and Biotechnology*, Springer 2008. (Pages 283-287.)
8. Area Editor of the Sensors and Instrumentation Section of the *Wiley Encyclopedia of Biomedical Engineering*. April, 2006.
9. "Tribology," Gary Barber and Barbara Oakley, invited book chapter for the Macmillan Encyclopedia of Energy, 2000. (Pages 1163-1167.)

Articles and Related Items

A. **Peer-Reviewed Journal Articles**

1. Chen, Ken-Zen, Jing-Yu Tseng, and Barbara Oakley. "Transforming Online Teacher Training through Expansive Learning: A Case Study Applying Cultural-Historical Activity Theory and the Change Laboratory Method." *The Asia-Pacific Education Researcher* (2025).
2. **Gold Award Winner:** Oakley, B., J. M. Aristizabal Pineda, D. Joyner, B. Rogowsky and T. Sejnowski "Uncommon Sense Teaching: A 3-Course Online Specialization on the Coursera Platform to Share Advances in Effective Teaching." *International Journal of Advanced Corporate Learning* (*iJAC*), 2024. in press.
3. **Selected as Feature Article** in *eLife*: "Framework for advancing rigorous research," Walter Koroshetz, Shannon Behrman, Cynthia Brame, Janet Branchaw, Emer A y Brown, Erin

Clark, David Dockterman, Jordan Elm, Pamela Gay, Katelyn Green, Sherry Hsi, Michael Kaplitt, Benedict Kolber, Alex Kolodkin, Diane Lipscombe, Malcolm Macleod, Caleb Mckinney, Marcus Munafo, **Barbara Oakley**, Jeffrey Olimpo, Nathalie Percie Du Sert, Indira Raman, Ceri Riley, Amy Shelton, Stephen Uzzo, Devon C Crawford and Shai D Silberberg, *eLife*. 2020; 9:e55915.

4. Ken-Zen Chen, Barbara Oakley, Redeveloping a Global MOOC to be More Locally Relevant: Design-Based Research, *International Journal of Educational Technology in Higher Education*. (2020) 17, 9, https://doi.org/10.1186/s41239-020-0178-6.
5. Oakley, B., & Sejnowski, T. J. "What We Learned from Creating One of the World's Most Popular MOOCs" *npj Science of Learning*, 4, 7, (2019) 1-7.
6. Jung, Eulho, Dongho Kim, Meehyun Yoon, Sanghoon Park and Barbara Oakley. "The Influence of Instructional Design on Learner Control, Sense of Achievement, and Perceived Effectiveness in a Supersize MOOC Course." Computers & Education 128, (2019): 377-388.
7. "Creating a Sticky MOOC," by Barbara Oakley, Debra Poole, and MaryAnne Nestor, *OLC Online Learning Journal*, 20, 1, (2016), 1-12.
8. "Reducing Hospital ICU Noise: A Behavior-Based Approach," Avinash Konkani, Barbara Oakley, Barbara Penprase, *The Journal of Healthcare Engineering*, June issue 5, 2, (2014): 229-46.
9. "A Practical Approach to Understanding—and Applying!—the Scholarship of Application," Barbara Oakley and Cynthia J. Finelli, *IEEE Transactions on Engineering Education*, 57, 2, May, (2014), 69-74.
10. "Concepts and implications of altruism bias and pathological altruism," invited paper, *Proceedings of the National Academy of Sciences*, by Barbara Oakley, 110, Supplement 2 (2013): 10408-10415.
11. "Do higher dispositions for empathy predispose males towards careers in nursing? A descriptive correlational design" Barbara Penprase, Barbara Oakley, Reuben Ternes, & Dana Driscoll. *Nursing Forum* 2014 Jan 3. doi: 10.1111/nuf.12058.
12. "Empathy as a determining factor for nursing career selection," Barbara Penprase, Barbara Oakley, Reuben Ternes, & Dana Driscoll, *Journal of Nursing Education*. 2013, 52 (4):192-197.
13. "Reducing Hospital Noise: A Review of Medical Device Alarm Management," by A. Konkani, B. Oakley, T.J. Bauld, *The Journal of Biomedical Instrumentation & Technology*, Nov/Dec 2012, pp 478-487.
14. **Selected for special editorial comment; most viewed paper.** "Noise In Hospital Intensive Care Units - A Critical Review of a Critical Topic," *The Journal of Critical Care*, Avinash Konkani, Barbara Oakley, 2012, 27 (5): 522 e1-9.
15. "Best Practices Involving Teamwork in the Classroom: Results from a Survey of 6,435 Engineering Student Respondents," Barbara Oakley, Darrin Hanna, Zenon Kuzmyn, Richard Felder. *IEEE Transactions on Education*, August 2007, 50 (3) 266-272.
16. "Compact Planar Antennas for Short Range Wireless Automotive Communication," Basim Al-Khateeb, Victor Rabinovich, Barbara Oakley, Nikolai Alexandrov. *IEEE Transactions on Vehicular Technology*, 2006, 55 (4) 1425-1435.
17. "Small Printed Meander Dipole Antenna Performance, Including the Effect of RF Cables, in the 315-MHz Frequency Band," Victor Rabinovich, Basim Al-Khateeb, Barbara Oakley, Nikolai Alexandrov. *Microwave and Optical Technology Letters*, September 2006, 48 (9) 1828-1833.

18. "A Signal and Noise Measurement Procedure for an Antenna/RF Receiver Combination in a Short Range Communication System," Victor Rabinovich, Basim Al-Khateeb, Barbara Oakley, and Nikolai Alexandrov. *Microwave and Optical Technology Letters*, October 20, 2005, 47 (2) 116-119.
19. "A Relative Technique for Characterization of PCV Error of Large Aperture Antennas Using GPS Data," Daniel Aloi, Andrew Rusek, and Barbara Oakley. *IEEE Transactions on Instrumentation and Measurement*, 2005, 54 (5) 1820-33.
20. "An Active Receiving Antenna for Short-Range Wireless Automotive Communication," Basim Al-Khateeb, Victor Rabinovich, Barbara Oakley. *Microwave and Optical Technology Letters*, November 20, 2004, 43 (3) 293-297.
21. "A Review of Nanobioscience and Bioinformatics Initiatives in North America," Barbara Oakley and Darrin Hanna. Invited paper by the Editor of the *IEEE Transactions on Nanobioscience,* 2003, 2 (4) 74-84.
22. "Four-Point Electrode Measurement of Complex Impedance in the Vicinity of Bovine Aorta for Quasi-Static Frequencies," David Stiles, Barbara Oakley. *Bioelectromagnetics*, January 2005, 26 (1) 54-58.
23. "Using a System-on-a-Chip Implantable Device to Filter Circulating Infected Cells in Blood or Lymph," Darrin Hanna, Barbara Oakley, and Gabrielle Stryker. *IEEE Transactions on Nanobioscience,* 2003, 2 (1) 6-13.
24. "Simulated Characterization of Atherosclerotic Lesions in the Coronary Arteries by Measurement of Bioimpedance," David K. Stiles, Barbara A. Oakley. *IEEE Transactions on Biomedical Engineering*, 2003, 50 (7) 916-921.
25. "Turning Student Groups into Effective Teams," Barbara Oakley, Richard Felder, Rebecca Brent, Imad Elhajj. *Journal of Student Centered Learning*, 2004, 2 (1) 9-34.
26. "Ultrasonic Parameters as a Function of Absolute Hydrostatic Pressure. I. A Review of the Data for Organic liquids," Barbara Oakley, Gary Barber, Tony Worden, and Darrin Hanna. *Journal of Physical and Chemical Reference Data*, 2003, 32 (3) 1501-1533.
27. "Ultrasonic Parameters as a Function of Absolute Hydrostatic Pressure. II. Mathematical Models of the Speed of Sound in Organic Liquids," by Barbara Oakley, Darrin Hanna, and Meir Shillor, and Gary Barber. *Journal of Physical and Chemical Reference Data*, 2003, 32 (3) 1535-1544.
28. "It Takes Two to Tango: How 'Good' Students Enable Problematic Behavior in Teams," Barbara Oakley, *Journal of Student Centered Learning*, Fall 2002, 1 (1) 19-27.
29. "Noninvasive Cardiac Absolute Pressure Sensing: A Fundamentally New Approach," Barbara Oakley, David Stiles, Virinder Moudgil. *Medical Hypothesis,* October 2001, 57 (4) 515-519.
30. "Toying with a Capstone Design Course," Michael Latcha, Barbara Oakley, *Journal of Engineering Education,* October 2001, 90 (4) 627-629.
31. "A self-contained, portable variable-pressure hydrostatic cell for use in low gauge pressure electromagnetic, ultrasonic, and photoacoustic studies," Barbara Oakley, Forrest Wright, Gary Barber, Michael Latcha, Chris Kobus, and Pamela Grim. *Review of Scientific Instruments*, January 1999, 70 95-97.

B. **Peer-Reviewed Conference Proceedings**

1. Chen, K.-Z., & Oakley, B. "Redeveloping a global MOOC to be more locally relevant: Design-based research," American Educational Research Association conference, Toronto,

April, 2019.

2. “Tendencies Towards DEEP or SURFACE Learning for Participants Taking a Large Massive Open Online Course (MOOC),” Amber Kemppainen, Jon Sticklen, Barbara Oakley, Denzel Chung, 2015 IEEE Frontiers in Education Conference (FIE).
3. “Time-Domain Reflectometry (TDR) in Graduate Courses,” Andrew Rusek, Subramanian Ganesan, Barbara Oakley, Daniel Aloi, ASEE North Central Section Conference, 2012.
4. “Improving Student Understanding of Instrumentation and Measurement in US Engineering Undergraduate Programs,” by Andrew Rusek, Barbara Oakley, and Subramaniam Ganesan, ASEE North Central Section Conference, Grand Rapids, April 3 - 4, 2009.
5. “A Framework for Developing Courses on Engineering and Technology for Non-Engineers,” John Krupczak, Timothy Simpson, Vince Bertsch, Kate Disney, Elsa Garmire, Barbara Oakley, Mary Rose, *Proceedings of the 2008 ASEE Conference*, Pittsburgh, PA, June, 2008.
6. “Career and Professional Development in Bioengineering: Translation of a Conference Initiative to Education and Training,” Guru Madhavan, Aimee Betker, Jennifer Flexman, Barbara Oakley, *Proceedings of the 2008 ASEE Conference*, Pittsburgh, PA, June, 2008.
7. “Easy-to-Do Transmission Line Demonstrations that Demonstrate Sinusoidal Standing Waves and Transient Pulse Reflections,” Andrew Rusek, Barbara Oakley, *Proceedings of the 2007 ASEE Conference*, Honolulu, HI, June, 2007.
8. “The Untapped Student Goldmine,” Barbara Oakley, Lorenzo Smith, Yin-Ping (Daniel) Chang, *Proceedings of the 2007 ASEE Conference*, Honolulu, HI, June, 2007.
9. “Electroporation-Induced Cell Lysis in SWLA-2 Hybridomas,” Barbara Oakley, Darrin Hanna, Sara Martens, Brooks Gross, Gabrielle Stryker. *Proceedings of the IEEE-EMBS 2006 Conference*, September 1-4, 2006, New York, New York.
10. “Cell Lysis in SWLA-2 Hybridomas due to 1 kHz AC Electric Fields,” Barbara Oakley, Darrin Hanna, Sachin Kandlikar, Brooks Gross, Gabrielle Stryker, *Proceedings of the IEEE-EMBS 2005 Conference*, September 1-4, 2005, Shanghai, China.
11. “Detection of Vesicular Stomatitis Virus using a Capacitive Immunosensor,” Darrin Hanna, Brooks Gross, Sachin Kandlikar, Elizabeth Lempicki, Barbara Oakley, Gabrielle Stryker, *Proceedings of the IEEE-EMBS 2005 Conference*, September 1-4, 2005, Shanghai, China.
12. “Preliminary Results Related to the Principle and Application of Drug Galvano-Acupuncture,” Chen Fu, Barbara Oakley, Shudong Li, Wenlei Zhao, *Proceedings of the IEEE-EMBS 2005 Conference*, September 1-4, 2005, Shanghai, China.
13. “Compact Diversity Antenna System for Remote Control Automotive Applications,” Victor Rabinovich, Basim Al-Khateeb, Barbara Oakley, *Proceedings of the 2005 IEEE AP-S URSI International Symposium* (Washington DC on July 3-8, 2005)
14. “Significant Improvements in Statewide Test Results As the Result of Using A Japanese-Based Supplemental Mathematics System, Kumon Mathematics, in an Inner-Urban School District,” Barbara Oakley, Doreen Lawrence, Jesse Petway, Mark Jackson, Pat Dessert, Darrin Hanna, *Proceedings of the 2005 ASEE Conference*, Portland, OR, June 2005
15. “An Alternate Route for a Career Path Related to Engineering Education: A Kumon Franchise,” Doreen Lawrence and Barbara Oakley,” *Proceedings of the 2005 ASEE Conference*, Portland, OR, June 2005. Kumon North America, Inc.
16. “Development of a State-of-the-Art Bioengineering Lecture Series: An Interdisciplinary Program of Industry, Academia, and Community,” Guruprasad Madhavan, Diana B. Anderson, Joanna M. Hedels, Jason B. Cole, Barbara A. Oakley, and Kenneth J. McLeod, *2005 ASEE St. Lawrence Section Conference*, Binghamton University, Binghamton, New

York.

17. "An Examination of the Effect of Decaying Exponential Pulse Electric Fields on Cell Mortality in Murine Hybridoma Cells, Human Natural Killer Cells, and CD-1 Strain Mouse Spleenocytes," Sachin Kandlikar, Barbara Oakley, Darrin Hanna, and Gabrielle Stryker. *Proceedings of the IEEE-EMBS 2004 Annual Conference*, September, 2004
18. "An Examination of the Effect of an AC Pulsed Electric Field on Cell Mortality in SWLA-2 Hybridomas," Brooks Gross, Sachin Kandlikar, Barbara Oakley, Darrin Hanna, Andrew Rusek, and Gabrielle Stryker. *Proceedings of the IEEE-EMBS 2004 Annual Conference*, September, 2004.
19. "Comparison of Conformal and Nonconformal Meshes in the Electromagnetic Simulation of Atherosclerotic Lesions," David K. Stiles and Barbara A. Oakley, *Proceedings of the 2003 IEEE EMBS Annual Conference*, September 17th – 21st, 2003, Cancun, Mexico.
20. "Using the Kumon Method to Revitalize Mathematics in an Inner-Urban School District," by Barbara Oakley, Doreen Lawrence, Walter Burt, Broderick Boxley, and Chris Kobus, *Proceedings of the ASEE 2003 Conference*, June 21st – 25th, 2003, Nashville, TN
21. "Simulation of Electromagnetic Fields in a Microelectrode Array," Barbara Oakley, Julie de Hagen, Darrin Hanna, Basim Al-Khateeb, Mahmoud Al-Nsour, *Proceedings of the IEEE EMBS Special Topic Conference on Nanobioscience*, Genova, Italy, June 6th, 2002.
22. "Simulation of Four-Point Electrode Measured Impedance and Current Densities Near an Atherosclerotic Lesion," David Stiles, Barbara Oakley, *2nd Annual International IEEE-EMBS Special Topic Conference on Microtechnologies in Medicine & Biology*, Madison, Wisconsin, May 2nd – 4th, 2002.
23. "Demonstrating CDMA, Frequency Hopping, and Other Wireless Techniques with PSPICE," Andrew Rusek, Barbara Oakley, *Proceedings of the 2002 ASEE Conference,* June 16th – 19th, Montreal, Quebec.
24. "Closing the Loop in High-Frequency Amplifier Design Processes," Andrew Rusek and Barbara Oakley, *Proceedings of the ASEE Midwest Conference*, Oakland University, Winter, 2002.
25. "A Cost-Effective Amplifier for Electromagnetic Field Strength Measurement," Andrew Rusek and Barbara Oakley, *Proceedings of the 2001 Engineering in Medicine and Biology Conference*, October 25th – 28th, 2001 Istanbul, Turkey.
26. "Pspice Applications in the Teaching of Wireless and High Frequency Electronics," Andrew Rusek and Barbara Oakley. *Proceedings of the 2001 ASEE Conference*, June 24th – 27th, 2001, Albuquerque, NM.
27. "Pspice Applications in the Teaching of Communications Electronics," Andrew Rusek and Barbara Oakley. *Proceedings of the 2001 ASEE Conference*, June 24th – 27th, 2001, Albuquerque, NM.
28. "Computer Modeling of CAN Automotive Bus Transceivers," Andrew Rusek, Barbara Oakley. *Proceedings of the Second IEEE Electro-Information Technology Conference*, Oakland University, June, 2001.
29. "Software Tools for Teaching High Frequency Electronics Courses," Andrew Rusek, Barbara Oakley. *Proceedings of the Second IEEE Electro/information Technology Conference*, Oakland University, June, 2001
30. "Leading Engineers Towards English," Barbara Oakley, *Frontiers in Education Conference*, Tempe, Arizona, 1998.
31. "Incorporating Writing Skills into the Engineering Curriculum," Barbara Oakley, Brian Connery, Kris Allen, *Proceedings of the 1999 Frontiers in Education Conference*, San Juan,

Puerto Rico, November, 1999.

32. "A Percolation Model for Rapid Vacancy Diffusion during Initial Void Growth in Minimum-Size VLSI Conductors," Barbara Oakley and Hoda S. Abdel-Aty-Zohdy, *Proceedings of the 1995 International Semiconductor Device Research Symposium*, Charlottesville, Virginia, Volume II, 313-317.

C. Non-Peer Reviewed Articles

See https://barbaraoakley.com/articles/ for an extended list of articles, including op-eds in the *New York Times* and the *Wall Street Journal.*

F. MOOCS and Specializations

1. ***Learning How to Learn: Powerful Mental Tools to Help You Master Tough Subjects***, (2014) massive open online course through Coursera and UC San Diego with co-instructor with Dr. Terrence Sejnowski, the Francis Crick Professor at the Salk Institute. The course has had over three million students and has been noted has as one of the world's largest and most popular course online courses. The Chinese syncretic version of this course, pioneered by Professor Kenzen Chen of National Chiao Tung University, won Taiwan's award for best MOOC.
2. ***Mindshift: Break Through Obstacles to Learning and Discover Your True Potential*** massive open online course through Coursera and McMaster University with co-instructor with Dr. Terrence Sejnowski, the Francis Crick Professor at the Salk Institute. This course has been declared one of the top fifty MOOCs of all time by Class Central. (2017)
3. ***Learning How to Learn for Youth***, a set of teen videos about learning with Arizona State University. This course has been replicated in Russian (Higher School of Economics in Moscow), Chinese (National Chiao Tung University), Spanish (ESIC), and Kazakh (EdGravity), with "mother tongue" speakers of those languages. (2018)
4. ***Learn Like a Pro: Science-Based Tools to Become Better at Anything***. MOOC for edX, launched June 1, 2021.
5. **Uncommon Sense Teaching Specialization** on Coursera with three MOOCs, launched Sep 4, 2022. **Winner of the Gold Award: E-Learning Experience by the International E-Learning Association (IELA).**
   - **MOOC 0: Teaching Online**
   - **MOOC 1: Uncommon Sense Teaching**
   - **MOOC 2: Uncommon Sense Teaching, Part 2**

G. Presentations

For a comprehensive listing of hundreds of past presentations see https://barbaraoakley.com/speaking/.

H. Memberships in Scholarly Societies

- American Institute of Medical and Biological Engineers, *Fellow*
- IEEE-Engineering in Medicine and Biology Society, *Fellow*

- American Society of Engineering Education

I. Reviewer for

Journals:

- *Proceedings of the National Academy of Sciences*
- *Physics in Medicine and Biology*
- *Physiological Measurement*
- *Journal of Neural Engineering*
- *The Journal of Personality and Individual Differences*
- *Journal of Political Psychology*
- *The IEEE Transactions on Education*
- *IEEE Transactions on Systems, Man, and Cybernetics*
- *The Journal of Engineering Education*

Publishers:

- Wiley-Interscience
- Oxford University Press
- Prometheus Books
- Citadel Press
- McGraw-Hill Science/Engineering/Math

Conference Organizations

- LWMOOCS (Learning with MOOCs)
- BRIMS (Behavioral Representation in Modeling & Simulation)
- ASME American Society of Mechanical Engineering
- Institute of Electrical and Electronic Engineers-Engineering in Medicine and Biology Society
- American Society of Engineering Education

J. Selected Service

- Steering Committee, Learning with MOOCs Conference organization
- Vice President, Members, IEEE-Engineering in Medicine and Biology Society, 2014-2016.
- Committee of Appointments and Promotions (CAP), Fall, 2011 – 2012
- SECS Executive Committee, 2011 – 2012.
- Co-Advisor for Tau Beta Pi, 2003 – 2012.
- SECS Committee on Academic Standing, 2001-2011. (Chair of the Committee, 2001-2003).