

CURRICULUM VITAE for Prof. Blake S. Wilson (as of June 2020)

- Current Positions:** *Director*
Duke Hearing Center, Duke University Medical Center (DUMC), Durham, NC 27710, USA
- Adjunct Professor*
Department of Surgery, DUMC; Department of Electrical & Computer Engineering, Duke University, Durham, NC 27708, USA; School of Behavioral and Brain Sciences, The University of Texas at Dallas (UT Dallas), Richardson, TX 75080, USA; Erik Jonsson School of Engineering and Computer Science, Departments of Bioengineering and Electrical Engineering, UT Dallas; Department of Otolaryngology – Head & Neck Surgery, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA
- Consulting Professor*
Department of Biomedical Engineering, Duke University
- Inaugural Scholar in Residence*
Pratt School of Engineering, Duke University
- Member of the Faculty Network*
Duke Institute for Brain Sciences, Duke University
- Affiliated Faculty*
Duke Global Health Institute, Duke University, and MEDx Medicine & Engineering at Duke, Duke University
- Honorary Professor*
University of Warwick, Coventry CV4 8UW, UK
- Chief Strategy Advisor*
MED-EL Medical Electronics GmbH, A-6020 Innsbruck, Austria
- Senior Fellow Emeritus*
RTI International, Research Triangle Park, NC 27709, USA
- Chair*
Lancet Commission on Hearing Loss, *The Lancet*, London, UK
- Member*
World Hearing Forum, World Health Organization, Geneva, Switzerland
- Lasker Laureate; Russ Laureate; Member of the USA's National Academy of Engineering; and Fellow of the Acoustical Society of America, the Institute of Electrical and Electronics Engineers (IEEE), and the National Academy of Inventors*

Positions and Experience

1974 to 2007: Several positions at the Research Triangle Institute (now RTI International) in the Research Triangle Park (RTP), NC, USA, including Research Engineer (1974-78); Senior Research Engineer (1978-83); Senior Research Scientist (1979-83); Head, Neuroscience Program (1983-94); Director, Center for Auditory Prosthesis Research (1994-2002); and Senior Fellow (2002-07). (Wilson created the Neuroscience Program and the Center for Auditory Prosthesis Research at the RTI with assistance and permissions from others, and he served as the first director for both the Program and the Center. He retired from RTI in 2007 after 33 years of continuous service there.)

2006 to 2010: The Overseas Expert, Marie Curie Project for the Remediation of Hearing Loss, five centers in Europe and with the International Center of Hearing and Speech in Kajetany (near Warsaw), Poland, serving as the lead center. (The Marie Curie projects have one term only.)

1984 to present: Adjunct appointments in the Department of Surgery, Duke University Medical Center (DUMC), Durham, NC, USA, including Assistant Professor (1984-94); Associate Professor (1994-2002); and full Professor (2002 to present).

2007 to present: Chief Strategy Advisor, Med El GmbH, Innsbruck, Austria. (This is a part-time consulting position.)

2008 to 2019: Co-Director (with Co-Director Debara L. Tucci, M.D.), Duke Hearing Center, Duke University Medical Center, Durham, NC, USA. (Drs. Farmer, Tucci, Wilson, and Corless created the Duke Hearing Center with assistance and permissions from many others.)

2008 to present: Investigator, Duke Institute for Brain Sciences, Duke University, Durham, NC, USA.

2009 to present: Adjunct Professor, Department of Electrical & Computer Engineering, Duke University.

2011 to 2017: Director, MED-EL Laboratory for Basic Research, RTP, NC, USA.

2012 to present: Honorary Professor, School of Engineering, University of Warwick, Coventry, UK.

2012 to August 2015: Adjunct Professor, Department of Biomedical Engineering, Duke University.

2013 to present: Scholar in Residence, Pratt School of Engineering, Duke University. (Wilson is the first Scholar in Residence for the Pratt School and the position was created for him.)

2013 to present: Member of the Faculty Network, Duke Institute for Brain Sciences, Duke University, Durham, NC, USA.

2013 to present: Member of the Affiliated Faculty, Duke Global Health Institute, Duke University, Durham, NC, USA.

2015 to present: Adjunct Professor, School of Behavioral and Brain Sciences, The University of Texas at Dallas (UT Dallas), Richardson, TX, USA.

2015 to present: Adjunct Professor, Erik Jonsson School of Engineering and Computer Science, Departments of Bioengineering and Electrical Engineering, UT Dallas

2015 to present: Consulting Professor, Department of Biomedical Engineering, Duke University

2016 to present: Senior Fellow Emeritus, RTI International, Research Triangle Park, NC, USA

2019 to present: Director, Duke Hearing Center, Duke University Medical Center, Durham, NC, USA

2019 to present: Chair, *Lancet* Commission on Hearing Loss, *The Lancet*, London, UK

2019 to present: Adjunct Professor, Department of Otolaryngology – Head & Neck Surgery, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA.

Experience in these positions includes direction, as Principal Investigator, of 26 projects (13 for the NIH). Among the projects is a series of seven contiguous projects to develop speech processors for auditory prostheses (1983-2006: NIH N01-NS-3-2356, N01-NS-5-2396, N01-DC-9-2401, N01-DC-2-2401, N01-DC-5-2103, N01-DC-8-2105, and N01-DC-2-1002).

The experience also includes supervision of, or participation in, many other projects in the fields of neural prostheses and remediation of hearing loss.

The positions include more than 30 years of continuous service to both the RTI and Duke University.

Degrees

B.S.E.E., Duke University, Durham, NC, USA

Ph.D., Duke University

D.Sc., University of Warwick, Coventry, UK

D.Eng., University of Technology, Sydney, Sydney, Australia

Dr.med.*hc*, Uppsala University, Uppsala, Sweden

Dr.med.*hc*, University of Salamanca, Salamanca, Spain

Notes: The D.Sc. and D.Eng. degrees are higher doctorates in science and in engineering, respectively. Higher doctorates are only rarely awarded and are the highest among the earned terminal degrees in the arts, sciences, and engineering. The two *honoris causa* (*hc*) degrees are honorary doctorates in medicine.

Major Awards and Honors

Election as a Fellow of the National Academy of Inventors, November 26, 2019.

2019 *Distinguished Alumni Award* from Duke University, the highest honor conferred by the Duke University Alumni Association. (The first Award was conferred in 1982 and there have been 42 recipients of the Award as of the 2019 Award; multiple awards were conferred in 1996, 2006, and 2007.)

Lifetime Achievement Award, “To Prof. Dr. Eng. Blake Wilson for his pioneering work in the development of cochlear implants, his outstanding scientific and professional career, and his contribution to all persons with a severe hearing impairment,” conferred during the opening ceremony for the *15th Annual International Conference on Cochlear Implants and Other Implantable Auditory Technologies*, Antwerp, Belgium, June 27-30, 2018. (The Award was conferred by Prof. Dr. Paul Van de Heyning in his role as the President of the *Conference*; the *Conference* was attended by more than 2000 persons.)

Helmholtz-Rayleigh Interdisciplinary Silver Medal in Psychological & Physiological Acoustics, Speech Communication, and Signal Processing in Acoustics, “For contributions to the development and adoption of cochlear implants,” awarded by the Acoustical Society of America on June 27, 2017. (The Medal is a high honor that has been conferred to only 22 other persons as of the award to Wilson and since the inception of the awards program in 1983.)

Election to the USA’s National Academy of Engineering (NAE), “For engineering development of the cochlear implant that bestows hearing to individuals with profound deafness,” February 8, 2017. (Election to the NAE is among the highest professional honors for engineers.)

Appointment as a Fellow of the Acoustical Society of America, “For the development and enhancement of cochlear implants,” June 6, 2016. (The Fellows of the ASA “are recognized for their conspicuous service or notable contributions to the advancement or diffusion of the knowledge of acoustics or the fostering of its practical applications.”)

Guest of Honor, “In recognition of his worldwide leadership, innovation, and continued pioneering work in the development of the cochlear implant,” *149th Annual Meeting of the American Otological Society*, Chicago, IL, USA, May 18-22, 2016.

Award for Distinguished Research in the Field, Duke Graduate Program in Electrical and Computer Engineering, Duke University, May 13, 2016.

Eduard Rhein Technology Prize, “for the development of the speech coding algorithm *Continuous Interleaved Sampling* for cochlear implants,” January 26, 2016. (The Eduard Rhein Technology Prize recognizes outstanding research results or outstanding developments in the fields of radio, television, or information techniques. Some of the prior winners include CE Shannon, RW Hamming, AJ Viterbi, P-L Lauterbur [who later became a Nobel Laureate], and MR Schroeder; more information about the Prize is presented at <http://www.eduard-rhein-stiftung.de/en/>.)

Guest of Honor, 4th Munich^{LMU} Hearing Implant Symposium 2015: Hearing Implants Around the World, Ludwig-Maximilians-Universität München, Munich, Germany, December 10-13, 2015.

The Gold Medal of the Paul Sabatier University in Toulouse, France, June 18, 2015. (Separate medals were conferred by the President of the University to Wilson, Graeme M. Clark, M.D., Ph.D., Ingeborg J. Hochmair, Ph.D., and Claude-Henri Chouard, M.D., in recognition of their contributions to the field of cochlear implants.)

The Fritz J. and Dolores H. Russ Prize shared with Graeme M. Clark, M.D., Ph.D., Erwin S. Hochmair, Ph.D., Ingeborg J. Hochmair, Ph.D., and Michael M. Merzenich, Ph.D., “for engineering cochlear implants that allow the deaf to hear,” January 7, 2015. (The Russ Prize is the top honor worldwide in bioengineering and is one of three Prizes awarded by the United States’ National Academy of Engineering that are collectively known as the “Nobel Prizes of Engineering.” Further details about the Prize are presented at <http://www.nae.edu/Projects/Awards/RussPrize.aspx>.)

Honorary doctorate in medicine from the University of Salamanca in Salamanca, Spain, recommended by the University Council on November 27, 2014; approved by the University Doctors Assembly on December 4, 2014; and conferred at a special ceremony in Salamanca on May 11, 2015.

Appointment as a Life Fellow of the IEEE, November 24, 2014. (The Fellow appointment is the highest honor bestowed by the IEEE and less than 0.1 percent of the voting members are elevated to the Fellow grade each year. The IEEE is the Institute of Electrical and Electronics Engineers, the world's largest technical professional organization.)

Honorary doctorate in medicine from Uppsala University in Uppsala, Sweden, approved by the Faculty Senate in September 2014 and conferred at the winter conferment ceremony in Uppsala on January 30, 2015.

Inaugural inductee – along with Robert J. Lefkowitz, M.D. and winner of the 2012 Nobel Prize in Chemistry, and Mary-Dell Chilton, Ph.D. and winner of the 2013 World Food Prize – into the Bull City Hall of Fame, March 27, 2014. (Durham, North Carolina, USA, also is known as the “Bull City” and “The City of Medicine.” It is the home of Duke University, the Duke University Health System, North Carolina Central University, and the Durham Performing Arts Center. Durham is a vibrant city with a diverse population of about 240,000.)

Recipient of one of the first three commendations from the *American Cochlear Implant Alliance*, “in recognition of the lifetime contributions of 2013 Lasker Award winner Dr. Blake S. Wilson in serving those with hearing loss through his remarkable contributions to the science of cochlear implantation,” October 24, 2013. (The other two recipients of the first commendations were Ingeborg J. Hochmair, Ph.D., and Graeme M. Clark, M.D., Ph.D., also “for lifetime contributions ... to the science of cochlear implantation.”)

Appointment as the first Scholar in Residence for the Pratt School of Engineering at Duke University, September 13, 2013. (This appointment was created for Wilson, was approved by the President of the University, and has a five-year term that is renewable.)

The 2013 Lasker-DeBakey Clinical Medical Research Award, shared with Graeme M. Clark, M.D., and Ingeborg J. Hochmair, Ph.D., “for the development of the modern cochlear implant – a device that bestows hearing to individuals with profound deafness,” September 9, 2013. (The Lasker Awards are among the most respected science prizes in the world and are second only to the Nobel Prize in Physiology or Medicine for recognizing advances in medicine and medical science; indeed, fully a third of the winners of a Lasker Award go on to win the Nobel Prize subsequently. The Lasker Awards are popularly known as “America’s Nobels.” Only about 250 persons have received a Lasker Award since the inception of the awards program in 1945. Please see <http://www.laskerfoundation.org/> for further details about the Lasker Foundation and its awards.)

Co-Chair, with Co-Chair Christoph von Ilberg, M.D., of the *Presbycusis Research Meeting*, Munich, Germany, January 12-14, 2012.

Guest of Honor (along with Jan Helms, M.D.), *Munich Hearing Implant Symposium: Reaching New Heights*, Ludwig-Maximilians-Universität München, Munich, Germany, December 8-10, 2011.

Guest of Honor, *Ninth European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009. (This Symposium is among the largest conferences in the field of cochlear implants; more than 1,700 delegates attended the symposium in Warsaw, which was an all-time high for these symposia.)

One of Wilson's inventions was named as one of the four greatest inventions or discoveries in the 50-year history of the Research Triangle Park (RTP), as announced in the Triangle Business Journal, February 27, 2009. (The RTP is the largest research park in the USA and includes more than 170 research organizations whose aggregate number of full-time employees exceeds 42,000. The other three inventions or discoveries were the UPC barcode, invented at IBM; the anti-cancer drug Taxol, discovered and developed at the Research Triangle Institute; and the anti-viral drug AZT used to treat HIV-AIDS, invented at GlaxoSmithKline.)

Invitation to give the Neel Distinguished Research Lecture at the *Annual Meeting of the American Academy of Otolaryngology, Head & Neck Surgery*, Chicago, IL, USA, September 21-24, 2008. (The two-part lecture for this year was given with Richard T. Miyamoto, M.D., Chair of Otolaryngology – Head & Neck Surgery at the Indiana University School of Medicine; the attendance for the *Annual Meeting* approximated 8,500. The prior Neel Lecture was given in 2007 by Elias Zerhouni, M.D., the Director of the NIH.)

Invitations to give 12 other named lectures to present, a Hopkins Medicine Distinguished Speaker Lecture, the Duke Engineering 75th Anniversary Lecture, the Graham Fraser Memorial Lecture, and one of the Flexner Discovery Lectures.

Invitation to write the lead article for the special issue of the journal *Hearing Research on Frontiers of Auditory Prosthesis Research: Implications for Clinical Practice*. (The special issue was published in September 2008 and included 18 articles.)

Guest of Honor, *Friedberger Cochlear Implant Symposium*, Bad Nauheim, Germany, June 28-30, 2007.

2007 recipient of the Distinguished Alumni Award, Pratt School of Engineering, Duke University, April 21, 2007.

Guest of Honor, *Sixth Wullstein Symposium 2006: New Developments in Hearing Technology*, Würzburg, Germany, December 7-10, 2006.

Chair, with Co-Chair Michael F. Dorman, Ph.D., of the *Hearing Preservation Workshop V*, Research Triangle Park, NC, USA, October 13-15, 2006.

Guest of Honor, *Workshop on the Present Status and Future Directions of Cochlear Implants*, Nano Bioelectronics & Systems Research Center, Seoul National University, Seoul, Korea, August 25, 2006.

Guest of Honor, *Meeting of the Clinical Otologic Research Team (CORT)*, Cal-Creek Ranch, near Santa Fe, NM, USA, August 8-12, 2006. (The CORT includes leading otologists in the United States.)

Named as an honorary member of the CORT, August 2006.

Special Guest of Honor, *Ninth International Conference on Cochlear Implants and Related Sciences*, Vienna, Austria, June 14-17, 2006. (Blake Wilson, Graeme M. Clark, and James F. Battey, Jr. are the only people to be so honored in this series of the largest conferences in the field of cochlear implants; the Vienna Conference was attended by more than 1,600 delegates from more than 70 countries.)

Guest of Honor, Naval Science & Technological Laboratory, Visakhapatnam, India, March 27-28, 2006.

Guest of Honor, *Hearing Preservation Workshop IV*, Warsaw-Kajetany, Poland, October 14-15, 2005.

Guest of Honor and the Keynote Speaker for the *Annual Meeting of the British Cochlear Implant Group: Pushing the Boundaries of Cochlear Implantation*, Birmingham, UK, April 18-19, 2005.

Guest of Honor, Annual Nalli Family Day, The Hospital for Sick Children, University of Toronto, Toronto, Canada, February 17, 2005.

Guest of Honor, *Fifth Wullstein Symposium on Bilateral Cochlear Implants and Binaural Signal Processing*, Würzburg, Germany, December 2-5, 2004.

Co-Chair, with Chair Peter S. Roland, M.D., of the *Third Hearing Preservation Workshop*, Dallas, TX, USA, October 15-16, 2004.

Designation as a "Friend Forever" to the International Center of Hearing and Speech in Kajetany (near Warsaw), Poland, October 14, 2004.

Special Guest, *Eighth International Cochlear Implant Conference*, Indianapolis, IN, USA, May 10-13, 2004.

Guest of Honor, *Hearing Preservation Workshop II*, Frankfurt, Germany, October 17-18, 2003.

Guest of Honor, *Wullstein Symposium 2002 (3rd Conference on Bilateral Cochlear Implantation and Bilateral Signal Processing, 7th International Cochlear Implant Workshop, and 1st Workshop on Binaural Rehabilitation)*, Würzburg, Germany, December 12-17, 2002.

Co-Chair, with Chair Richard T. Miyamoto, M.D., of the *Hearing Preservation Workshop*, Indiana University School of Medicine, Indianapolis, IN, USA, November 8-10, 2002.

Named as an Honorary Member of the British Cochlear Implant Group, September 6, 2002.

Appointment as one of the first four Senior Fellows for RTI International, September 2002. (RTI International is a large not-for-profit research institute with a staff of more than 4000; one of the principal charges of the Fellows is to serve as advisors to the RTI President in setting the scientific directions for the organization. The first four Senior Fellows were appointed simultaneously and the Senior Fellow position was the highest honor at the time for RTI scientists and engineers.)

Guest of Honor, *Wullstein Symposium (2nd Conference on Bilateral Cochlear Implantation and Bilateral Signal Processing, 6th International Cochlear Implant Workshop and 2nd Auditory Brainstem Implant (ABI) Workshop)*, Würzburg, Germany, April 26-30, 2001.

Guest of Honor, *5th International Cochlear Implant Workshop and 1st Auditory Brainstem Implant (ABI) Workshop*, Würzburg, Germany, June 30 to July 4, 1999.

Recipient of the Presidential Citation for "Major contributions to the restoration of hearing in profoundly deaf persons," on the occasion of the 130th Annual Meeting of the American Otological Society, Scottsdale, AZ, USA, May 10-11, 1997. (This Citation was to Wilson, Dewey T. Lawson, Charles C. Finley, and Mariangeli Zerbi, who were the principal members of the team at the Research Triangle Institute at the time.)

Invitation to write a Guest Editorial in celebration of the 30th anniversary of the British Journal of Audiology (1997).

Winner of the 1996 Discover Award for Technological Innovation in the category of "sound."

Guest of Honor, *International Workshop on Cochlear Implants*, Vienna, Austria, October 24-25, 1996.

Elected General Chair of the *1991 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, June 2-7, 1991.

Selected Professional Activities and Additional Awards and Honors

Inventor of many of the speech processing strategies used with present-day cochlear implant systems.

Listed in *Who's Who in the World*, *Who's Who in America*, *Who's Who in Science and Engineering*, *Who's Who in Finance and Industry*, 2000 Outstanding People of the 20th Century (IBC, Cambridge), Strathmore's *Who's Who*. (Each of these listings has been in place for more than a decade.)

Member of the World Hearing Forum, World Health Organization (2019-)

Recipient of the Albert Nelson Marquis Lifetime Achievement Award (2018).

Recipient of three Professional Development Awards from the Research Triangle Institute (1977, 1983 and 1988; the award in 1977 was one of the three awards granted in the first year of the program).

Recipient of the Physician Award from the Duke University Hospital, Durham, NC, USA, April 20, 2015.

The Overseas Expert for a large training and research project, "Remediation of Hearing Loss," at the Institute of Hearing and Speech, in Kajetany-Warsaw, Poland (2006-2010; this project was supported by the European Commission).

Consultant to the President of India, His Excellency Dr. A.P.J. Kalam, on remediation of hearing loss in that country (March 2006).

Principal outside reviewer for an effort to develop an indigenous cochlear implant system for manufacture and widespread application in India (2005-2007).

Visiting Professor, University of Technology, Sydney, October 2011.

Visiting Professor, University of Illinois, Urbana-Champaign, IL, February 2007.

Visiting Professor, University of Toronto, February 2005.
 Election to Sigma Xi, the scientific honorary society, October 29, 2004.
 Member of the International Scientific Advisory Board for the International Center of Hearing and Speech, Kajetany (near Warsaw), Poland (2003-present).
 Consultant and principal outside reviewer for an effort at Seoul National University to develop a low cost but nonetheless highly effective cochlear implant system for use in developing countries (2002-2007).
 Founder with Dr. Joseph C. Farmer, Jr., and others of the Cochlear Implant Program at Duke (1984).
 Member of the core committee (of four) to develop a comprehensive Hearing Center at Duke (2003-2008).
 Member of the Outreach Faculty for the Engineering Research Center (ERC) for Wireless Integrated Microsystems, at the University of Michigan (2000-present). (The Center is supported as one of approximately 20 ERCs by the NSF; one key goal of the Center at the University of Michigan is to develop a fully implantable auditory prosthesis.)
 Member of the External Scientific Advisory Committee for the W.M. Keck Foundation Neural Prosthesis Research Center, located in Boston, MA (1999-2003).
 Member of the oversight committees for Program Project Grants on cochlear implants at the Kresge Hearing Research Institute, University of Michigan (1987-1995), and at the University of Iowa (1994-1995).
 Co-Investigator for two projects in the Program Project Grant on cochlear implants at the University of Iowa (1995-2000; the projects included the Audiology and Electrophysiology projects within the PPG, with Richard Tyler serving as the PI for the Audiology project and Paul Abbas serving as the PI for the Electrophysiology project).
 Co-investigator for a Duke Institute for Brain Sciences (DIBS) incubator award on “Feasibility studies of the inferior colliculus as a prosthetic site” (2009-2010; the other investigators include Nell Cant, Warren Grill, Jennifer Groh, and Debara Tucci).
 Member of the Science Advisory Council for the House Ear Institute, Los Angeles, CA (1990).
 Member of a team of five North American experts invited by the Chinese government to assist in the specification and development of an inexpensive yet effective cochlear implant system for widespread use in that country (1993).
 Reviewer of grant and contract applications for the NIH, NSF, DVA, MRC (Canada), MRC (UK), Swiss National Science Foundation, Austrian Science Fund, Action on Hearing Loss (UK), and the Wellcome Trust (UK), including service as the Chair of a review committee for the NIH.
 Member of site visit teams to evaluate program project and single grant applications in the areas of cochlear prostheses (for the NIH), hearing aids (NIH), and biological effects of non-ionizing radiation (DVA).
 Invited guest scientist at the Coleman Memorial Laboratory, University of California at San Francisco (various times in the years 1983-1986).
 Member of the NIDCD/DVA Advisory Committee on Hearing Aid Research and Development (1993-1996).
 Member of the Subcommittee on Microwave and Laser Exposure, North Carolina Radiation Protection Commission (1981-1986)
 Chair of sessions or focus groups at 34 international conferences since 1987.
 Invited speaker for the NIH Consensus Development Conference on Cochlear Implants, May 2-4, 1988; member of the planning committee for the 1995 NIH Consensus Development Conference on Cochlear Implants in Adults and Children; and invited speaker at that Conference, May 15-17, 1995.
 Keynote, Guest of Honor (GOH), or named Distinguished Speaker at 49 international conferences and at three national conferences (in the UK, South Korea, and the USA). (The GOH and some of the named speeches also are noted in the preceding section on “Major Awards and Honors.”)
 Invited speaker at more than 160 other national and international conferences.
 Faculty member for many continuing-education courses on cochlear implants.
 Consultant for the past 3+ decades for many NIH projects on cochlear implants and related topics.

Senior Member of the IEEE and the IEEE Engineering in Medicine and Biology Society (Wilson was promoted from the Member grade to the Senior Member grade in April 2006).

Member of the Acoustical Society of America, American Association for the Advancement of Science, the New York Academy of Sciences, the Association for Research in Otolaryngology, and Sigma Xi.

Member of Steering Committees for the biennial *Conference on Implantable Auditory Prostheses* for the years 1987, 1989, 1993, 1995, 1997, 1999, 2001, 2003, and 2005.

Member of the Planning Committee for the *Vth International Cochlear Implant Conference*, New York, NY, 1997.

Member of the Steering Committee for the *VIII International Cochlear Implant Conference*, Indianapolis, IN, May 10-13, 2004.

Member of the Faculty Board for the *7th European Symposium on Paediatric Cochlear Implantation*, Geneva, Switzerland, May 2-5, 2004.

Member of the Faculty Board for more than 100 other conferences on cochlear implants and related topics.

Organizer (with Professors Rainer Klinke, Ph.D., and Rainer Hartmann, Ph.D.) of a special one-day symposium on *Future Directions for the Further Development of Cochlear Implants*, Frankfurt, Germany, October 15, 2003.

Co-Organizer (with Prof. Henryk Skarżyński, M.D., Ph.D.) of the *Fourth Hearing Preservation Workshop*, Warsaw-Kajetany, Poland, October 2005.

Co-Organizer (with Donald K. Eddington, Ph.D.) of a special retreat on *Future Directions for Cochlear Implants*, Boston, MA, March 17-19, 2006.

Co-Organizer (with Peter S. Roland, M.D.) of a special meeting on *The Future of Cochlear Implants: Roles of the Brain in Implant Outcomes and Design*, Dallas, TX, August 17, 2007.

Organizer (with Debara Tucci, M.D.) of the Grand Opening of the Duke Hearing Center, with a keynote speech by Prof. Michael M. Merzenich of the University of California at San Francisco, Durham, NC, January 29, 2009.

Organizer (with Dale Purves, M.D.) of a special Roundtable in honor of Prof. Michael M. Merzenich, on *A 'Top-Down' or 'Cognitive Neuroscience' Approach to Cochlear Implant Designs*, Durham, NC, January 30, 2009.

Organizer (with David Fitzpatrick, Ph.D., Elizabeth Johnson, Ph.D., and Debara Tucci, M.D.) of a Duke Institute for Brain Sciences (DIBS) “Transcending the Boundaries” Workshop on *Listening with the Brain: New Approaches to Optimizing the Effectiveness of Cochlear Prosthetics*, Durham, NC, February 26-27, 2010.

Organizer (with Eva Karltorp, M.D., and Josef Miller, Ph.D.) of a Special Symposium on “The Listening Brain” at the *11th International Conference on Cochlear Implants and Other Auditory Implantable Technologies*, held in Stockholm, Sweden, June 30 through July 3, 2010.

Organizer (with Emily Tobey, Ph.D., and Peter Roland, M.D.) of a Workshop on *Brain Centric Considerations for Cochlear Implantation*, held in Dallas, TX, August 27, 2012.

Co-Organizer (with Jane Opie, Ph.D., Christoph von Ilberg, M.D., and René Gifford, Ph.D.) of a Conference on *Hearing Implants for Older Adults*, held in New York City, January 16-18, 2014.

Organizer (with Michael Dorman, Ph.D.) of two special sessions at the *Annual Spring Meeting of the Acoustical Society of America*, Pittsburgh, PA, USA, May 18-22, 2015, celebrating the development of the modern cochlear implant and the 2013 Lasker-DeBakey Award for that achievement. (The sessions were contiguous and were a day-long event.)

Member of the selection committees for the 2019 and 2021 Russ Prizes.

Member of the Duke Cornerstone Society, recognizing 30+ years of continuous financial support for the University.

Editorial Positions and Service as a Reviewer for Journals

Member of the inaugural editorial board of *Cochlear Implants International*, the first international, peer-reviewed journal devoted to cochlear implants (2000-present).

Member of the International Advisory Board for the *Journal of Hearing Science* (2011-present).

Member of the editorial board for the *International Journal of Otolaryngology* (2011-present).

Reviewer for the following journals: *Journal of the Acoustical Society of America*; *Journal of Speech & Hearing Research*; *Audiology*; *Hearing Research*; *American Journal of Otology*; *Otology & Neurotology*; *Annals of Otology, Rhinology & Laryngology*; *Ear & Hearing*; *ORL – Journal for Oto-Rhino-Laryngology, Head and Neck Surgery*; *British Journal of Audiology*; *Cochlear Implants International*; *International Journal of Pediatric Otorhinolaryngology*; *Canadian Medical Association Journal*; *Audiology & Neuro-otology*; the *Journal of Neural Engineering*; the *Anatomical Record*; the *IEEE Transactions on Biomedical Engineering*, and *Nature Scientific Reports*, among others.

Areas of Research and Special Interest

Cochlear implants; auditory neuroscience; auditory physiology; speech processing and analyses; speech production and reception; mathematical modeling of physiological systems; design of auditory prostheses; design of neural prostheses; cognitive hearing science; auditory learning; brain plasticity; global hearing healthcare

Peer-Reviewed Publications

1. Wright D, Hebrank JH, Wilson BS: Pinna reflections as cues for localization. *J Acoust Soc Am* 56: 957-962, 1974.
2. Wilson BS, Scott SM: Hemodynamic design considerations for an improved artery shunt prosthesis. In DJ Schneck (Ed.), *Bio-Fluid Mechanics*, VPI Press, Blacksburg, VA, 1978, pp. 93-98.
3. Scott SM, Wilson BS: The mechanical design of vascular prostheses. In P Puel, H Boccalon and A Enjalbert (Eds.), *Hemodynamics of the Limbs*, Institut National de la Sante et de la Recherche Medicale, Paris, 1979, pp. 251-259.
4. Wilson BS, Zook JM, Joines WT, Casseday JH: Alterations in activity at auditory nuclei of the rat induced by exposure to microwave radiation: Autoradiographic evidence using [¹⁴C]-2-deoxy-D-glucose. *Brain Res* 187: 291- 306, 1980.
5. Joines WT, Wilson BS: Field-induced forces at dielectric interfaces as a possible mechanism of rf hearing effects. *Bull Math Biol* 43: 401-413, 1981.
6. Kobler JB, Wilson BS, Henson OW Jr., Bishop AL: Echo intensity compensation by echolocating bats. *Hear Res* 20: 99-108, 1985.
7. Wilson BS, Joines WT: Mechanisms and physiologic significance of microwave action on the auditory system. *J Bioelect* 4: 495-525, 1985.
8. Henson OW Jr., Bishop A, Keating A, Kobler J, Henson M, Wilson B, Hansen R: Biosonar imaging of insects by *Pteronotus p. parnellii*, the Mustached bat. *National Geographic Res* 3: 82-101, 1987.
9. Wilson BS, Finley CC, Farmer JC Jr., Lawson DT, Weber BA, Wolford RD, Kenan PD, White MW, Merzenich MM, Schindler RA: Comparative studies of speech processing strategies for cochlear implants. *Laryngoscope* 98: 1069-1077, 1988.
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Some Highlights from the Previously Listed Publications

- The publication in *Nature*, reference 17, has been the most highly cited publication in the specific field of cochlear implants since the end of 1999. As of 21 February 2013, it had 505 citations according to the Web of Science (WoS) and 680 citations according to Google Scholar (GS). The next most highly cited publication in the field according to the WoS had 279 citations; its GS count was 311. (That next most highly cited publication is Otte J, Schunknecht HF, Kerr AG: Ganglion cell populations in normal and pathological human cochleae: Implications for cochlear implantation. *Laryngoscope* 88: 1231-1246, 1978.)
- The publication in the *British Journal of Audiology*, reference 26, is an invited Guest Editorial in celebration of the journal's 30th Anniversary. The paper is among the more highly cited publications in the field of cochlear implants.
- The publication in *Hearing Research*, reference 55, is the lead article in the special issue of the journal on "Frontiers of Auditory Prosthesis Research: Implications for Clinical Practice," edited by Guest Editor Bryan Pflugst. The article is highly cited and is among the most heavily downloaded articles from the journal's web site since the article was published in September 2008.
- The publication in the *Journal of Rehabilitation Research and Development*, reference 56, is a feature article in the special issue of the journal on "Cochlear Implants," and was the most heavily downloaded article from the journal's web site for a substantial part of 2011.
- Many other publications in the list also are highly cited. For example, in addition to the references 17, 26, 55, and 56 mentioned above, references 1, 6, 8, 9, 14, 21, 23, 25, 28, 30, 31, 36, 38, 39, 42, and 53 have each been cited at least 50 times according to the 21 February 2013 search using GS.
- References 93 and 94 are parts of special issues of *Nature Medicine* and *Hearing Research* celebrating the 2013 Lasker Awards.

Books

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3. Wilson BS, Dorman MF: *Better Hearing with Cochlear Implants: Studies at the Research Triangle Institute*, Plural Publishing, Inc., San Diego, CA, 2012. (A review of this book by Prof. Mario Svirsky has been published in the journal *Ear and Hearing*, vol. 35, p. 137, 2014, and two additional published reviews are presented at https://www.pluralpublishing.com/publication_hciirrti.htm.)

Editorials

1. Wilson BS, Brackmann DE, Zeng F-G: Editorial – Remembering William House, DDS, MD. *Hear J* 66(2): 2, 2013.
2. O'Donoghue GM, Tucci DL, Wilson BS: The mounting burden of hearing loss worldwide: gearing up global collaboration. *ENT & Audiology News* 26(5): 65-66, 2017.

Papers in Conference Proceedings

1. Joines WT, Wilson BS, Sharp S: Temperature-controlled heating of tumors by microwaves. In *Proc IEEE Southeastern Conf*, IEEE Press, New York, 1977, pp. 124-128.
3. Cornett RO, Beadles RL, Wilson BS: Automatic cued speech. In JM Pickett (Ed.), *Speech-Processing Aids for the Deaf*, Gallaudet Research Institute, Gallaudet College, Washington, DC, 1981, pp. 224-239.

4. Finley CC, Wilson BS, White MW: A finite-element model of bipolar field patterns in the electrically stimulated cochlea – A two-dimensional approximation. In *Proc Ninth Ann Conf Engineering in Medicine and Biology*, IEEE Press, New York, 1987, pp. 1901-1903.
5. White MW, Finley CC, Wilson BS: Electrical stimulation model of the auditory nerve: Stochastic response characteristics. In *Proc Ninth Ann Conf Engineering in Medicine and Biology*, IEEE Press, New York, 1987, pp. 1906-1907.
6. Wilson BS, Finley CC, White MW, Lawson DT: Comparisons of processing strategies for multichannel auditory prostheses. In *Proc Ninth Ann Conf Engineering in Medicine and Biology*, IEEE Press, New York, 1987, pp. 1908-1910.

Magazine Articles

1. Dorman MF, Wilson BS: Restaurer l'audition avec des implants [Restoration of hearing with implants]. *Pout la Science* 329: 68-74, 2005. (This article is a summary in French of the 2004 article in English by Dorman and Wilson published in the *American Scientist*.)
2. Wilson BS, Dorman MF: Les implants cochléaires: un passé remarquable et un brillant avenir. *Sécurité routière et surdité* 25(5): 46-49, 2012. (This article is a summary in French of the 2008 article in English by Wilson and Dorman published in *Hearing Research*.)
3. Wilson BS: The significance of the 2013 Lasker~DeBakey Clinical Medical Research Award to the field of cochlear implants and for fulfilling the mission of the American Cochlear Implant Alliance. *ACI Alliance Calling* (e-magazine) 2(1): 7, 2014. (Published by the American Cochlear Implant Alliance, McLean, VA, USA.)
4. Wilson BS: A quest for quality: closing contrasts between prosthetic and normal hearing. *Hear J* 69(8): 10-12, 2016; available online at <http://journals.lww.com/thehearingjournal/blog/OnlineFirst/pages/post.aspx?PostID=11>.
5. Wilson BS: The modern cochlear implant: A triumph of biomedical engineering and the first substantial restoration of a human sense using a medical intervention. *IEEE Pulse* 8(2): 29-32, 2017.
6. Wilson BS: The remarkable cochlear implant and possibilities for the next large step forward. *Acoustics Today* 15(1): 53-61, 2019.

Major Reports

Major reports include Quarterly Progress Reports (QPRs) and Final Reports for most of the projects listed above, under the heading of “Funding History.” Only the reports in the “speech processors” series of projects are listed in this present section. Each of those 91 reports has a title of the form “Speech Processors for Auditory Prostheses: Special Topic(s).” The tables below include the special topic(s) for each report. Wilson is the first author for 51 of the reports. The reports are publicly available from the United States National Institutes of Health and also are posted at <http://www.rti.org/capr/caprqrpr.html>. In addition, key sections from 18 of the reports are presented in the book by Wilson and Michael F. Dorman, *Better Hearing with Cochlear Implants: Studies at the Research Triangle Institute*, Plural Publishing, Inc., San Diego, CA, 2012.

The reports have been frequently cited in the open literature on cochlear implants and related topics. According to a search using Google Scholar, the aggregate number of citations for the reports that have been cited is 199 as of March 2012.

NIH project N01-NS-3-2356

September 26, 1983 through September 25, 1985

Report	Topic(s)	Authors
QPR 1	Development of plans for collaborative studies with UCSF; Development of tools for such studies at UCSF; Initial plans for an additional collaborative program with Duke University Medical Center	Wilson and Finley

Report	Topic(s)	Authors
QPR 2	Model of field patterns in the implanted cochlea; Collaboration among UCSF, Storz, DUMC and RTI; Hardware interface for communication between an Eclipse computer and patient electrodes; Design of software for a block-diagram compiler; Discussion on the possibility of recording intracochlear evoked potentials	Wilson and Finley
QPR 3	Hardware interface; Computer-based stimulator; Digital Control Unit (DCU) software for real-time communication between an Eclipse computer and stimulating hardware; Incorporation of a Frankenhauser-Huxley description of node dynamics in an integrated field-neuron model	Wilson and Finley
QPR 4	Overview of first-year effort	Wilson, Finley and Lawson
QPR 5	Further development and application of a field-neuron model	Finley and Wilson
QPR 6	Development of portable, real-time hardware; Software for support of the RTI patient stimulator; Software for support of basic psychophysical studies and speech testing; Subject testing at UCSF	Wilson, Finley and Lawson
QPR 7	Speech reception studies with a UCSF/Storz subject; Present status and functional description of the block-diagram compiler	Wilson, Finley and Lawson
QPR 8	Ensemble models of neural responses to intracochlear electrical stimulation	Wilson, Finley and Lawson
Final Report	Hardware interface; Computer-based simulator of speech processors; Integrated field-neuron model; Ensemble models of neural responses evoked by intracochlear electrical stimulation; Design of a portable speech processor; Evaluation of processing strategies in tests with a UCSF patient fitted with a percutaneous connector; Reporting activity for the project	Wilson, Finley and Lawson

NIH project N01-NS-5-2396

September 26, 1985 through April 30, 1989

Report	Topic(s)	Authors
QPR 1	Psychophysical and speech reception studies with an initial DUMC/Storz percutaneous subject	Wilson, Finley and Lawson
QPR 2	Psychophysical and speech reception studies with a second DUMC/Storz percutaneous subject; Further development of an interleaved pulses (IP) processor	Wilson, Finley and Lawson
QPR 3	Initial development of a portable, real-time processor; Measurements of intracochlear electric field patterns using a percutaneous cable	Finley, Wilson and Lawson
QPR 4	Evaluation of idealized implementations of the processing strategy used in the Nucleus cochlear prosthesis	Wilson, Finley and Lawson
QPR 5	Studies of loudness and pitch perception with monopolar or radial-bipolar stimulating electrodes	Wilson, Finley and Lawson
QPR 6	Direct comparisons of analog and pulsatile coding strategies with six cochlear implant patients	Wilson, Finley and Lawson
QPR 7	A portable processor for IP processing strategies	Finley, Wilson and Lawson
QPR 8	Evaluation of two-channel "Breeuwer/Plomp" processors for cochlear implants	Wilson, Lawson and Finley
QPR 9	Studies with 6 UCSF/Storz subjects	Wilson, Finley and Lawson

Report	Topic(s)	Authors
QPR 10	Review of clinical trial results for 6 UCSF/Storz subjects, including learning effects with extended use	Wilson, Lawson and Finley
QPR 11	Extension of cochlear implant laboratory capabilities; Collaborative development of a next-generation auditory prosthesis	Wilson, Lawson and Finley
QPR 12	Representations of speech features with cochlear implants	Wilson, Finley and Lawson
QPR 13	Models of neural responsiveness to electrical stimulation	Finley, Wilson and Lawson
QPR 14	Binary comparisons of speech processor performance	Lawson, Wilson and Finley
Final Report	Direct comparisons of analog and pulsatile coding strategies; Design and evaluation of a two-channel “Breeuwer/Plomp” processor; Additional processor comparisons; Psychophysical studies; Development of a next-generation auditory prosthesis; Reporting activity for the project	Wilson, Finley and Lawson

NIH project N01-DC-9-2401

May 1, 1989 through July 31, 1992

Report	Topic(s)	Authors
QPR 1	Comparison of analog and pulsatile coding strategies for multichannel cochlear implants (6 UCSF/Storz subjects and 2 Ineraid subjects)	Wilson, Finley and Lawson
QPR 2	New levels of speech perception with cochlear implants; Computer interface for testing patients implanted with the Nucleus device	Wilson, Finley and Lawson
QPR 3	Evaluations of alternative implementations of CIS, IP and Peak-Picker strategies; Finite-element model of radial bipolar field patterns in the electrically stimulated cochlea	Wilson, Finley and Lawson
QPR 4	Comparison of CA and CIS processors in tests with seven Ineraid subjects	Wilson, Lawson and Finley
QPR 5	Further evaluation of CIS processors	Wilson, Finley and Lawson
QPR 6	Parametric variations and the fitting of speech processors for single-channel brainstem prostheses	Lawson, Finley and Wilson
QPR 7	A wearable speech processor platform for auditory research	Finley, Wilson, Zerbi, Hering, van den Honert and Lawson
QPR 8	Importance of patient and processor variables in determining outcomes with cochlear implants	Wilson, Lawson and Finley
QPR 9	Evaluation of a prototype for a portable processor; Evaluation of components in the MiniMed cochlear prosthesis; evaluation of automatic gain control; Preliminary studies of modulation perception; Measures of dynamic range for a variety of pulse durations and rates	Wilson, Lawson, Finley and Zerbi
QPR 10	Randomized update orders; Slow rate CIS implementations; channel number manipulations; Evaluation of other promising processing strategies; Performance of CIS and CA processors in noise; Use and possible development of new test materials	Wilson, Lawson, Finley and Zerbi
QPR 11	Efficacy of CIS processors for patients with poor clinical outcomes	Wilson, Lawson, Finley and Zerbi

Report	Topic(s)	Authors
QPR 12	Completion of “poor performance” series; Summary of studies with 11 Ineraid subjects; Auditory brainstem implant (ABI) studies	Wilson, Lawson, Zerbi and Finley
Final Report	Comparisons of CA and CIS processors for multichannel cochlear implants; Additional aspects of CIS performance; Evaluation of other promising strategies; Auditory brainstem implant; Record of reporting activity for the project; Suggestions for future research	Wilson, Lawson, Finley and Zerbi

NIH project N01-DC-2-2401

August 1, 1992 through July 31, 1995

Report	Topic(s)	Authors
QPR 1	Virtual channel interleaved sampling (VCIS) processors: Initial studies with subject SR2	Wilson, Lawson, Zerbi and Finley
QPR 2	Single parameter variation studies for CIS processors	Lawson, Wilson and Zerbi
QPR 3	Identification of virtual channels on the basis of pitch	Wilson, Zerbi and Lawson
QPR 4	Representation of complex tones by sound processors for implanted auditory prostheses	Lawson, Zerbi and Wilson
QPR 5	Transfer and dissemination of CIS processor technology; Parametric and control studies with CIS processors	Wilson, Lawson and Zerbi
QPR 6	Evaluation of VCIS processors	Wilson, Lawson and Zerbi
QPR 7	Temporal representations with cochlear implants: Modeling, psychophysical, and electrophysiological studies	Wilson, Finley, Zerbi and Lawson
QPR 8	Further studies of complex tone perception by implant patients	Lawson, Wilson and Zerbi
QPR 9	Strategies for the repair of distortions in temporal representations with implants	Wilson, Finley, Zerbi and Lawson
QPR 10	A channel-specific tool for analysis of consonant confusion matrices	Lawson, Wilson and Zerbi
QPR 11	Intracochlear evoked potentials for sustained electrical stimuli	Wilson, Finley, Lawson and Zerbi
Final Report	Importance of the patient variable in determining outcomes with cochlear implants; Parametric studies with CIS processors; Importance of processor fitting; “Virtual Channel” and “Sharpened Field” CIS processors; Nucleus percutaneous study; Design for an inexpensive but effective cochlear implant system; Representation of complex tones by sound processors for implanted auditory prostheses; Temporal representations with cochlear implants; Record of reporting activity for the project; Suggestions for future research	Wilson, Lawson, Zerbi and Finley

NIH project N01-DC-5-2103

August 1, 1995 through September 29, 1998

Report	Topic(s)	Authors
QPR 1	Learning effects with extended use of CIS processors; Review of results from studies with the first subject in the 22-electrode percutaneous study; Upward extension of the CIS processed frequency spectrum	Lawson, Wilson, Zerbi and Finley
QPR 2	Manipulations in spatial representations with implants	Wilson, Lawson and Zerbi

Report	Topic(s)	Authors
QPR 3	22 electrode percutaneous study: Results for the first five subjects	Lawson, Wilson, Zerbi and Finley
QPR 4	New stimulator system for the speech reception laboratory	Van den Honert, Zerbi, Finley and Wilson
QPR 5	Bilateral cochlear implants controlled by a single speech processor	Lawson, Wilson, Zerbi and Finley
QPR 6	Intracochlear evoked potentials in response to pairs of pulses: Effects of pulse amplitude and interpulse interval	Finley, Wilson, van den Honert and Lawson
QPR 7	High rate studies, subject SR2	Wilson, Finley, Zerbi, Lawson and van den Honert
QPR 8	Relationships between temporal patterns of nerve activity and pitch judgments for cochlear implant patients	Wilson, Zerbi, Finley, Lawson and van den Honert
QPR 9	Development of the evoked potentials laboratory	van den Honert, Finley and Wilson
QPR 10	Effects of upward extension of the frequency range analyzed by CIS processors	Zerbi, Lawson and Wilson
QPR 11	Design of new speech test materials and comparisons with standard materials	Lawson, Wilson and Zerbi
Final Report	Summary of major activities and achievements for the project; New directions in implant design; Summary of reporting activity for the project	Wilson, Lawson, Zerbi, Finley and van den Honert

NIH project N01-DC-8-2105

September 30, 1998 through March 31, 2002

Report	Topic(s)	Authors
QPR 1	Pitch discrimination among electrodes for each of three subjects with bilateral cochlear implants; Measurement of interaural timing and amplitude difference cues for those same subjects	Lawson, Zerbi and Wilson
QPR 2	Measures of performance over time following substitution of CIS for CA speech processors	Lawson, Wilson and Zerbi
QPR 3	Effects of manipulations in mapping functions on the performance of CIS processors	Wilson, Lawson, Zerbi and Wolford
QPR 4	Speech reception with bilateral cochlear implants; Update on longitudinal studies	Lawson, Wilson, Zerbi and Finley
QPR 5	Comprehensive review of strategies for representing speech information with cochlear implants	Wilson, Lawson, Wolford and Brill
QPR 6	Effects of changes in stimulus rate and envelope cutoff frequency for CIS processors	Wilson, Wolford and Lawson
QPR 7	Further studies to evaluate effects of changes in stimulus rate and envelope cutoff frequency for CIS processors	Wilson, Wolford and Lawson
QPR 8	Combined electric and acoustic stimulation of the same cochlea	Lawson, Wilson, Wolford, Brill and Schatzer

Report	Topic(s)	Authors
QPR 9	Binaural cochlear implant findings: Summary of initial results with eleven subjects	Lawson, Brill, Wolford, Wilson and Schatzer
QPR 10	New tools, including (a) evaluation of the TIMIT Speech Database for use in studies with implant subjects, (b) processing of speech and other sounds using head-related transfer functions, and (c) an Access database of speech processor designs and study results	Cox, Wolford, Schatzer, Wilson and Lawson
QPR 11	Further studies to evaluate combined electric and acoustic stimulation	Brill, Lawson, Wolford, Wilson and Schatzer
QPR 12	Further studies regarding benefits of bilateral cochlear implants	Lawson, Wolford, Brill, Schatzer and Wilson
QPR 13	Cooperative electric and acoustic stimulation of the peripheral auditory system – Comparison of ipsilateral and contralateral implementations	Lawson, Wolford, Brill, Wilson and Schatzer
Final Report	Summary of major activities and achievements for the project; Some likely next steps in the further development of cochlear prostheses; Summary of reporting activity for the project	Wilson, Brill, Cartee, Cox, Lawson, Schatzer and Wolford

NIH project N01-DC-2-1002

April 1, 2002 through March 31, 2006

Report	Topic(s)	Authors
QPR 1	Pitch-matched and pitch-distinct electrode pairs in bilaterally implanted arrays	Lawson, Wolford, Wilson and Schatzer
QPR 2	Longitudinal studies of improvement in performance with early experience using binaural cochlear implants	Lawson, Wolford, Wilson and Schatzer
QPR 3	Additional perspectives on speech reception with combined electric and acoustic stimulation	Wilson, Wolford, Lawson and Schatzer
QPR 4	Measurements of interaural timing differences; update on longitudinal studies of early performance improvements with binaural cochlear implants	Wolford, Lawson, Schatzer, Sun and Wilson
QPR 5	Recent enhancements of the speech laboratory system	Schatzer, Zerbi, Sun, Cox, Wolford, Lawson and Wilson
QPR 6	Signal processing strategy for a closer mimicking of normal auditory functions	Schatzer, Wilson, Wolford and Lawson
QPR 7	Combined use of dual-resonance nonlinear (DRNL) filters and virtual channels	Wilson, Wolford, Schatzer, Sun and Lawson
QPR 8	Representation of fine structure or fine frequency information with cochlear implants	Wilson, Sun, Schatzer and Wolford
QPR 9	Intracochlear potentials evoked by electrical stimulation with phase-separated balanced biphasic pulses	Cartee, Wilson, Cox, Wolford and Lawson

Report	Topic(s)	Authors
QPR 10	Pitch ranking of electrodes for 22 subjects with bilateral implants; melody recognition tests for cochlear implant research	Lawson, Wilson, Welford, Sun and Schatzer
QPR 11	Laboratory interface for the new Med-El PULSARCI ¹⁰⁰ implant; further development of the streaming mode tools	Schatzer, Zerbi, Wilson, Cox, Lawson and Sun
QPR 12	Initial studies with a recipient of the PULSAR implant	Lawson, Wilson, Schatzer and Sun
QPR 13	Progress in Nucleus percutaneous studies	Lawson, Wilson and Sun
QPR 14	Further progress in the Nucleus percutaneous studies	Lawson, Sun and Wilson
QPR 15	Results from the Nucleus percutaneous studies	Lawson, Sun and Wilson
Final Report	Major areas of research under this contract and suggested future directions	Wilson and Lawson

Patents

A policy was developed at the Research Triangle Institute (RTI) in the mid 1980s to donate all results from its NIH-sponsored research on cochlear implants (CIs) to the public domain. Thus, patent protection was not sought for the great majority of Wilson's inventions. More information about the policy and its highly positive impact on humanity is presented in Chapter 1 of the recent book by Wilson and Dorman, *Better Hearing with Cochlear Implants: Studies at the Research Triangle Institute* (Plural, 2012).

The policy was approved by the RTI President in 1985 and remained in effect until Wilson retired from RTI in 2007. Patent protection has been sought for some of Wilson's inventions that were conceived following the expiration of the policy. In addition, patent protection was sought for an invention by Jay T. Rubinstein and Wilson while the policy was in force, as: (1) Jay was not a member of the RTI staff and therefore not covered by the policy and (2) the invention arose outside of the NIH-sponsored research. At present, two patents have been issued to Wilson and two applications for other patents are currently under review.

The issued patents are:

Speech processing system and method using pseudospontaneous stimulation

Inventors: Jay T. Rubinstein and Blake S. Wilson

US Patent 6,907,130; June 14, 2005

Low pulse rate cochlear implant stimulation in conjunction with a separate representation of fundamental frequencies and voiced/unvoiced distinctions

Inventor: Blake S. Wilson

US Patent 9,463,319; October 11, 2016

Australian Patent AU2010292140; July 11, 2013

European Patent Specification EP 2 475 420 B1

Lectures as a Guest of Honor

1. Wilson BS: High rate coding strategies. *International Workshop on Cochlear Implants*, Vienna, Austria, October 24-25, 1996.
2. Wilson BS: Speech coding strategies. *5th Int. Cochlear Implant Workshop and 1st Auditory Brainstem (ABI) Workshop*, Würzburg, Germany, June 30 through July 4, 1999.
3. Wilson BS, Lawson DT: Experiments in bilateral implanted patients using the CIS strategy. *5th Int. Cochlear Implant Workshop and 1st Auditory Brainstem (ABI) Workshop*, Würzburg, Germany, June 30 through July 4, 1999.
4. Wilson BS: The future of cochlear implants. *5th Int. Cochlear Implant Workshop and 1st Auditory Brainstem (ABI) Workshop*, Würzburg, Germany, June 30 through July 4, 1999.
5. Wilson BS, Brill SM, Lawson DT, Schatzer R, Wolford RD, Zerbi M, Müller J, Schön F, Tyler R: Psychophysical and speech reception results from studies with recipients of bilateral cochlear implants. *Wullstein Symposium*, Würzburg, Germany, April 26-30, 2001. (The *Wullstein Symposium* included the *2nd Conference on Bilateral Cochlear Implantation and Signal Processing*, the *6th International Cochlear Implant Workshop*, and the *2nd Auditory Brainstem Implant (ABI) Workshop*.)
6. Wilson BS: The RTI's perspective on bilateral cochlear implantation. *Wullstein Symposium 2002*, Würzburg, Germany, December 12-17, 2002. (This second *Wullstein Symposium* included the *3rd Conference on Bilateral Cochlear Implantation and Bilateral Signal Processing*, the *7th International Cochlear Implant Workshop*, and the *1st Workshop on Binaural Rehabilitation*.)
7. Wilson BS: Evaluation of combined EAS in studies at the Research Triangle Institute. *Hearing Preservation Workshop II*, Frankfurt, Germany, October 17-18, 2003.
8. Wilson BS: Speech coding for bilateral cochlear implants. *Fifth Wullstein Symposium on Bilateral Cochlear Implants and Binaural Signal Processing*, Würzburg, Germany, December 2-5, 2004.
9. Wilson BS, et al.: EAS and possible mechanisms underlying benefits. *Hearing Preservation Workshop IV*, Warsaw-Kajetany, Poland, October 14-15, 2005.
10. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. *Ninth International Cochlear Implant Conference*, Vienna, Austria, June 14-17, 2006.
11. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. *Workshop on the Present Status and Future Directions of Cochlear Implants*, Nano Bioelectronics & Systems Research Center, Seoul National University, Seoul, Korea, August 25, 2006.
12. Wilson BS: My vision for a cochlear implant in five years. *Sixth Wullstein Symposium 2006: New Developments in Hearing Technology*, Würzburg, Germany, December 7-10, 2006.
13. Wilson BS: Acceptance of the Distinguished Alumnus Award. *Annual Awards Banquet and Ceremony*, Pratt School of Engineering, Durham, NC, USA, April 21, 2007.
14. Wilson BS: Cochlear implants: Present results and future possibilities. *Friedberger Cochlear Implant Symposium*, Bad Nauheim, Germany, June 28-30, 2007.
15. Wilson BS: Partial deafness cochlear implantation (PDCI) and electro-acoustic stimulation (EAS). *9th European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009. (This lecture also is listed as one of the four keynote speeches in the Program for the Symposium.)
16. Wilson BS: Two opportunities for the further development and broader application of cochlear implants. *Munich Hearing Implant Symposium: Reaching New Heights*, Ludwig-Maximilians-Universität München, Munich, Germany, December 8-10, 2011. (This lecture also is listed as one of the four keynote speeches in the Program for the Symposium.)
17. Wilson BS: Possibilities for narrowing the remaining gaps between prosthetic and normal hearing. *4th Munich^{LMU} Hearing Implant Symposium 2015: Hearing Implants Around the World*, Ludwig-Maximilians-Universität München, Munich, Germany, December 10-13, 2015. (This lecture also is listed as one of the keynote speeches in the Program for the Symposium.)
18. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. *149th Annual Meeting of the American Otological Society*, Chicago, IL, USA, May 18-22, 2016.

Nalli Family Distinguished Lecture

1. Wilson BS: Where are we and where are we headed with cochlear implants? Nalli Family Lecture, The Hospital for Sick Children, University of Toronto, Toronto, Canada, February 17, 2005.

Neel Distinguished Research Lectureship

1. Wilson BS, Miyamoto RT: How basic science has influenced the design of cochlear implants? *112th Annual Meeting of the American Academy of Otolaryngology, Head and Neck Surgery*, Chicago, IL, USA, September 21-24, 2008. (This meeting was attended by more than 8,500 physicians and other professionals; the Neel Distinguished Research Lectureship is among the highest honors conferred by the *American Academy*. The prior lecture in the series was by Elias Zerhouni, M.D., the then Director of the United States' National Institutes of Health.)

Chandra Sekhar Lecture

1. Wilson BS: Thinking about the hearing brain in designs and applications of cochlear implants. The *Chandra Sekhar Lecture*, New York University School of Medicine, NYU Langone Medical Center, New York, NY, USA, April 10, 2013. (The Chandra Sekhar lectures honor Dr. Hosakere K. Chandra Sekhar for his work in temporal bone histology and for his contributions to education and clinical care during his distinguished career at the NYU School of Medicine, which began in 1971. The lectures are supported by a fund established by his family upon his retirement in 2008; the present lecture by Wilson was the second in the series of lectures.)

Hopkins Medicine Distinguished Speaker Lecture

1. Wilson BS: Do you hear what I hear? – Cochlear implants & the past, present, and future of prosthetic hearing. Johns Hopkins University School of Medicine, Baltimore, MD, USA, February 4, 2014. (The following is a description of the Distinguished Speakers Series: “The Distinguished Speaker Series was established by a group of medical students at Johns Hopkins to inform and inspire medical scientists, clinicians, public health leaders, and students through scholarly exchange with the world’s foremost visionaries and thinkers. Our inaugural event brought together seven recipients of the MacArthur “Genius Grant” for a lively dialogue on the ways in which creative minds engage the public. Since then, we have hosted Lasker Award recipient Dr. Anthony S. Fauci, noted bioethicist Dr. Charles Bosk, and Dr. Francoise Barré-Sinoussi, recipient of the Nobel Prize in Physiology or Medicine and co-discoverer of HIV. Our most recent events featured Dr. K. Anders Ericsson, cognitive psychologist and expert on expertism, Dr. Robert Langer, head of the largest biomedical engineering laboratory in the world, and five exceptional faculty at Johns Hopkins presenting their personal and professional journeys in medicine.”)

Vanderbilt University Medical Center Flexner Discovery Lecture

1. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Vanderbilt University Medical Center, Nashville, TN, USA, March 13, 2014. (The following is a description of the Flexner Discovery Lectures: “The Flexner Discovery Lecture Series features the world’s most eminent scientists, who speak on the highest-impact research and policy issues in science and medicine today. Prior speakers have included multiple Nobel Laureates and members of the United States’ Institute of Medicine.”)

2014 Lasker Lecture

1. Wilson BS: Toward better representations of sound with cochlear implants. Keck School of Medicine, University of Southern California, Los Angeles, CA, USA, April 10, 2014.

Göttingen Sensory Lecture

1. Wilson BS: Brain centric approaches to designs and applications of cochlear implants. Georg-August-Universität Göttingen, Göttingen, Germany, June 24, 2014. (The Lecture was jointly supported by the collaborative sensory research grant on Cellular Mechanisms of Sensory Processing and the Bernstein Center for Computational Neuroscience.)

Duke Engineering 75th Anniversary Lecture

1. Wilson BS: The development of the modern cochlear implant. Duke University, Durham, NC, USA, March 5, 2015.

Graham Fraser Memorial Lecture

1. Wilson BS: Possible ways forward for cochlear implants and building on the grand legacy of Graham Fraser, M.D. Lecture presented in conjunction with the *Annual Meeting of the British Cochlear Implant Group*, Bristol, UK, March 19-20, 2015. (The Graham Fraser Memorial Lectures celebrate his life and achievements and are the most prestigious lectures in the fields of cochlear implants and remediation of severe losses in hearing. More information about the lectures is presented at <http://www.grahamfraserfoundation.org.uk/memlects.htm>.)

RTI Fellows Distinguished Lecture

1. Wilson BS: Toward better representations of sound with cochlear implants. *RTI International Distinguished Lecture Series*, Research Triangle Foundation, Research Triangle Park, NC, USA, April 14, 2015. (This talk was the inaugural lecture in the series.)

Distinguished BME Lecture

1. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. University of California at Irvine, Irvine, CA, USA, April 22, 2016.

C. Paul and Beth K. Stocker Lecture

1. Wilson BS: The modern cochlear implant – A triumph of biomedical engineering and the first substantial restoration of a human sense using a medical intervention. Ohio University, Athens, OH, USA, February 23, 2017. (This lecture is one in a series by winners of the Russ Prize and is supported by the Fritz J. and Dolores H. Russ College of Engineering and Technology and the Robe Leadership Institute at Ohio University.)

Honored Special Guest Address

1. Wilson BS, Schatzer R, Wolford RD, Sun X: Two new directions in implant design. *Eighth International Cochlear Implant Conference*, Indianapolis, IN, USA, May 10-13, 2004.

Dean's Leadership in Innovation Seminar

1. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. Faculty of Engineering and Information Technology, University of Technology, Sydney, Sydney, Australia, October 27, 2011.

Distinguished Guest Address

1. Wilson BS: A designer's perspective of cochlear implants. *Fourth Workshop on Transcanal Techniques for Cochlear Implants*, New Delhi, India, February 4-5, 2012.

Invited Address for the President's Symposium within the 2012 Meeting of the ARO

1. Wilson BS, Dorman MF, Woldorff MG, Tucci DL: A "top down" or "cognitive neuroscience" approach to cochlear implant designs and fittings. Presidential Symposium on *Listening with the Brain: Cochlear Implants and Central Auditory System Plasticity*, 35th Midwinter Meeting, Association for Research in Otolaryngology, San Diego, CA, USA, February 25-29, 2012.

Inaugural (Opening) Plenary Addresses

1. Wilson BS: Cochlear implants: Matching the prosthesis to the brain and facilitating desired plastic changes in brain function. *2nd Congress of Spanish-America on Cochlear Implants and Related Sciences*, Cartagena, Columbia, December 1-3, 2010.
2. Wilson BS: The significance of the 2013 Lasker~DeBaakey Clinical Medical Research Award to the field of cochlear implants and for fulfilling the mission of the American Cochlear Implant Alliance. *CI 2013 Conference – American Cochlear Implant Alliance*, Washington DC, USA, October 24-26, 2013.
3. Wilson BS: Global hearing health care and ways to improve it. *15th Annual International Conference on Cochlear Implants and Other Implantable Auditory Technology*, Antwerp, Belgium, June 27-30, 2018.

Sole Plenary Address

1. Wilson BS, Tucci DL, Merson MH, O'Donoghue GM: Global hearing health care: new findings and perspectives. *31st Politzer Society Meeting and 2nd Global Otology Research Forum*, Las Palmas, Gran Canaria, Spain, February 21-24, 2018. (The talk was presented by GM O'Donoghue.)

Presentation to the Duke University Board of Trustees

1. Wilson BS: The 2013 Lasker~DeBaakey Award and the first substantial restoration of a human sense using a medical intervention. Duke University, Durham, NC, USA, December 6, 2013.

Distinguished Speaker Address

1. Wilson BS: Progress and remaining problems in the development of the cochlear implant. *Future of Hearing Symposium*, sponsored by the Cluster of Excellence "Hearing4all," Oldenburg, Germany, November 6-7, 2014.

Inauguration Speech for the Institute for Auditory Neuroscience at the University of Göttingen

1. Wilson BS: Auditory neuroscience: The prosthetic's perspective. One of three lectures to inaugurate the Institute for Auditory Neuroscience at the University of Göttingen, Göttingen, Germany, March 21, 2015. (The other two speakers were Tobias Moser, M.D., Director of the new Institute, and Benedikt Grothe, Ph.D., Chair of the Division of Neurobiology and Dean of the Faculty of Biology, Ludwig-Maximilians-Universität München, Munich, Germany.)

Virginia Tech Carilion Research Institute (VTCRI) Pioneers in Biomedical Research Program

1. Wilson BS: The modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Roanoke, VA, USA, March 16, 2018.

Grand Rounds Presentations

1. Farmer JC Jr., Kenan PD, Wilson BS: Cochlear implants. Surgical Grand Rounds, Duke University Medical Center, Durham, NC, USA, November, 1985.
2. Farmer JC Jr., Javel E, McElveen JT Jr., Wilson BS: Advances in cochlear implants. Surgical Grand Rounds, Duke University Medical Center, Durham, NC, USA, December 13, 1989.
3. Wilson BS: Advances in cochlear implant research. Grand Rounds presentation, Department of Otolaryngology, University of Toronto, Toronto, Canada, February 18, 2005.
4. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Surgical Grand Rounds, Duke University Medical Center, Durham, NC, USA, March 5, 2014.
5. Wilson BS: Thinking about the hearing brain in designs and applications of cochlear implants. Grand Rounds presentation, Department of Otolaryngology – Head & Neck Surgery and Department of Hearing and Speech Sciences, Vanderbilt University Medical Center, Nashville, TN, USA, March 14, 2014.
6. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Surgical Grand Rounds, Department of Otolaryngology – Head & Neck Surgery, Northwestern University Medical Center, Evanston, IL, USA, April 16, 2015.
7. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. ENT Grand Rounds, Department of Otolaryngology – Head & Neck Surgery, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA, June 19, 2019.

Keynote Speeches

1. Wilson BS: Suggestions for the future development of cochlear implants. *Third European Symposium on Paediatric Cochlear Implantation*, Hannover, Germany, June 6-8, 1996. (This presentation was the penultimate summary lecture for the Symposium, preceding the concluding lecture by Professor Lenarz, General Chair.)
2. Wilson BS: New directions in implant design. *4th European Symposium on Paediatric Cochlear Implantation*, 's-Hertogenbosch, The Netherlands, June 14-17, 1998.
3. Wilson BS: Some likely next steps in the further development of cochlear implants. *6th European Symposium on Paediatric Cochlear Implantation*, Las Palmas, Canary Islands, February 24-27, 2002.
4. Wilson BS: Future directions for cochlear implants. *7th International Cochlear Implant Conference*, Manchester, England, September 4-6, 2002.
5. Wilson BS: Where are we and where can we go with cochlear implants? *Annual Meeting of the British Cochlear Implant Group: Pushing the Boundaries of Cochlear Implantation*, Birmingham, UK, April 18-19, 2005. (This was the single keynote speech for this conference.)

6. Wilson BS: Present results and future possibilities for bilateral cochlear implants. *Sixth International Meeting on Bilateral Cochlear Implants and Binaural Signal Processing*, Bern, Switzerland, March 29-30, 2007.
7. Wilson BS: Cochlear implants. *International Workshop on Advances in Audiology*, Salamanca, Spain, May 25-26, 2007.
8. Wilson BS: The past, present, and future of cochlear implants. *Nemours Cochlear Implant Symposium*, Wilmington, Delaware, USA, October 12-13, 2009. (This was the single keynote speech for this conference.)
9. Wilson BS: The listening brain: Roles of the “auditory brain” in outcomes and designs for cochlear implants. *Perth Auditory Implant Workshop*, University of Western Australia, Perth, Australia, October 28-30, 2010.
10. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. *Conference on Hearing Implants: A Remarkable Past and a Brilliant Future*, Frankfurt am Main, Germany, December 9-11, 2010.
11. Wilson BS: Cochlear implantation: A remarkable past and a brilliant future. *10th European Symposium on Paediatric Cochlear Implantation*, Athens, Greece, May 12-15, 2011.
12. Wilson BS: Cochlear implants: Matching the prosthesis to the brain and facilitating desired plastic changes in brain function. *12th International Conference on Cochlear Implants and Other Implantable Auditory Technologies*, Baltimore, MD, USA, May 3-5, 2012.
13. Wilson BS: Present and future of cochlear implants. *VI International Meeting on Advances in Audiology*, Salamanca, Spain, June 7-9, 2012.
14. Wilson BS: The four large steps forward that led to the present-day cochlear implants. *Perth Auditory Implant Workshop*, Perth, Australia, November 8-10, 2012.
15. Wilson BS: Future possibilities for combined electric and acoustic stimulation. *3rd Munich Hearing Implant Symposium: Comprehensive Hearing Implant Solutions*, Ludwig-Maximilians-Universität München, Munich, Germany, December 12-15, 2013.
16. Wilson BS: Toward better representations of sound with cochlear implants. Special session honoring the development of the modern cochlear implant and the winners of the 2013 Lasker-DeBakey Clinical Medical Research Award, *13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses*, Munich, Germany, June 18-21, 2014.
17. Wilson BS: Evolution of electrical stimulation in the cochlea; single to multichannel to deep insertion to EAS – A historical perspective. *Conference on the APEX of the Cochlea – From Neuroanatomy to Electrical Stimulation*, Chapel Hill, NC, USA, September 4-7, 2014.
18. Wilson BS: Possibilities for narrowing the remaining gaps between prosthetic and normal hearing. *10th Asia Pacific Symposium on Cochlear Implants and Related Sciences*, Beijing, China, April 30 through May 3, 2015. (This presentation was the opening plenary address for the conference.)
19. Wilson BS: Remaining challenges for cochlear implants. *Perth Auditory Implant Workshop*, University of Western Australia, Perth, Australia, October 28-31, 2015.
20. Wilson BS: 20 years of bilateral implants: what have we learned? *BICI 2016 – Binaural hearing with hearing implants, a tribute to 20 years of bilateral cochlear implantation*, Ludwig-Maximilians-Universität München, Munich, Germany, September 8-11, 2016.
21. Wilson BS, Tucci DL, Merson MH, O’Donoghue GM: Global hearing healthcare: new findings and perspectives. *Duke-Hadassah International Otolaryngology Global Health Conference*, Jerusalem, Israel, July 20-21, 2017.
22. Wilson BS, Tucci DL, Merson MH, O’Donoghue GM: Global hearing healthcare: new findings and perspectives. *8th Annual Coalition for Global Hearing Health Conference*, University of Miami, Coral Gables, FL, USA, October 12-14, 2017.
23. Wilson BS: Cochlear implants: past, present, and future. *6th Munich^{LMU} Hearing Implant Symposium: Hearing Implants Explained*, Ludwig-Maximilians-Universität München, Munich, Germany, December 6-9, 2018.

24. Wilson BS: The interface between hearing and technology. *First Meeting of the World Hearing Forum*, World Health Organization, Geneva, Switzerland, December 4-5, 2019.

Banquet Address

1. Wilson BS: How my education in engineering at Duke helped me to contribute to the development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. *Annual Workshop for the Graduate Program in Electrical and Computer Engineering*, Pratt School of Engineering, Duke University, Durham, NC, USA, January 23, 2014.

Additional Invited Presentations

1. Wilson BS: Speech processors for auditory prostheses. *14th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1983.
2. Wilson BS: Speech processors for auditory prostheses. *15th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1984.
3. Wilson BS: Coding strategies for multichannel auditory prostheses. *Gordon Research Conference on Implantable Auditory Prostheses*, Tilton, NH, USA, August 19-23, 1985.
4. Finley CC, Wilson BS: An integrated field-neuron model of intracochlear stimulation. *Gordon Research Conference on Implantable Auditory Prostheses*, Tilton, NH, USA, August 19-23, 1985.
5. Finley CC, Wilson BS: A simple finite-difference model of the field patterns produced by bipolar electrodes of the UCSF array. *IEEE Bioengineering Conference*, September 27-30, 1985.
6. Wilson BS, Finley CC: Speech processors for auditory prostheses. *IEEE Bioengineering Conference* (special session on "Signal Processing for the Hearing Impaired"), September 27-30, 1985.
7. Finley CC, Wilson BS: Models of neural stimulation for electrically-evoked hearing. *Annual Conference on Engineering in Medicine and Biology*, September 30 through October 2, 1985.
8. Wilson BS: Speech processors for auditory prostheses. *16th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1985.
9. Wilson BS: Comparison of strategies for coding speech with multichannel auditory prostheses. *Conference on Speech Recognition with Cochlear Implants*, New York University, New York, NY, USA, April 17-19, 1986.
10. Wilson BS: Coding strategies for cochlear implants. Kresge Hearing Research Institute, University of Michigan, Ann Arbor, MI, USA, May 22, 1986.
11. Wilson BS: Ensemble models of neural discharge patterns evoked by intracochlear electrical stimulation. *International Union of Physiological Scientists (IUPS) Satellite Symposium on Advances in Auditory Neuroscience*, San Francisco, CA, USA, July 8-11, 1986.
12. Wilson BS: Processing strategies for cochlear implants. *Annual Meeting of the American College of Otolaryngologists*, San Antonio, TX, USA, September 18-19, 1986.
13. Kenan PD, Farmer JC Jr., Weber BA, Wilson BS: Cochlear implants. *Annual Meeting of the Mecklenburg County Otolaryngology, Head and Neck Surgery Society*, Charlotte, NC, fall, 1986.
14. Wilson BS: Speech processors for auditory prostheses. *17th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1986.
15. Wilson BS: Cochlear implants. *First North Carolina Workshop on Bioelectronics* (session on "Auditory Signal Processing"), Quail Roost, NC, USA, October 24-26, 1986.
16. Wilson BS: The RTI/Duke cochlear implant program. Executive committee of the Research Triangle Institute (RTI) Board of Governors, June 17, 1987.
17. Farmer JC Jr., Wilson BS: Cochlear implantation for the profoundly deaf. Department of Physiology, Duke University Medical Center, June 18, 1987.
18. Wilson BS: Factors in coding speech for auditory prostheses. *Gordon Research Conference on Implantable Auditory Prostheses*. New London, NH, USA, June 29 through July 3, 1987.

19. Schindler RA, Wilson BS: Present status and future enhancements of the UCSF/RTI/Duke cochlear implant. *International Cochlear Implant Symposium 1987*, Düren, Germany, September 7-11, 1987.
20. Wilson BS: Speech processors for auditory prostheses. *18th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1987.
21. Wilson BS: Review of RTI research on coding strategies for cochlear prostheses. 3M Company, St. Paul, MN, USA, November 12, 1987.
22. Wilson BS, Finley CC, White MW, Lawson DT: Comparisons of processing strategies for multichannel auditory prostheses. *Ninth Annual Conference on Engineering in Medicine and Biology* (special session on cochlear implants), Boston, MA, USA, November 13-16, 1987.
23. White MW, Finley CC, Wilson BS: Electrical stimulation model of the auditory nerve: Stochastic response characteristics. *Ninth Annual Conference on Engineering in Medicine and Biology* (special session on cochlear implants), Boston, MA, USA, November 13-16, 1987.
24. Finley CC, Wilson BS, White MW: A finite-element model of bipolar field patterns in the electrically stimulated cochlea – A two dimensional approximation. *Ninth Annual Conference on Engineering in Medicine and Biology* (special session on cochlear implants), Boston, MA, USA, November 13-16, 1987.
25. Finley CC, Wilson BS, White MW: Models of afferent neurons in the electrically stimulated ear. *Ninth Annual Conference on Engineering in Medicine and Biology* (special session on cochlear implants), Boston, MA, USA, November 13-16, 1987.
26. Wilson BS: Various coding schemes used. *Cochlear Implant Consensus Development Conference*, National Institutes of Health, Bethesda, MD, USA, May 2-4, 1988.
27. Wilson BS: Comparison of encoding schemes. *25th Anniversary Symposium of the Kresge Hearing Research Institute*, Ann Arbor, MI, USA, October 3-5, 1988.
28. Wilson BS: Speech processors for auditory prostheses. *19th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1988.
29. Soli SD, Wilson BS: Within-subject comparisons of analog and pulsatile speech processors for cochlear implants. *Annual Meeting of the Acoustical Society of America* (special session on “Speech Processing Aids for the Handicapped”), Honolulu, Hawaii, USA, November 14-18, 1988. (Abstract published in J Acoust Soc Am 84: S41, 1988)
30. Wilson BS: Within-patient evaluation of speech processors. *Engineering Foundation Conference on Implantable Auditory Prostheses*, Potosi, MO, USA, July 30 through August 4, 1989.
31. Wilson BS: Comparison of analog and pulsatile coding strategies for multichannel cochlear prostheses. University of Iowa, Iowa City, IA, USA, August 28, 1989.
32. Wilson BS: Speech processors for auditory prostheses. *20th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1989.
33. Wilson BS: Processing strategies for cochlear implants. *Third Symposium on Cochlear Implants in Children*, Indianapolis, IN, USA, January 26 and 27, 1990.
34. Wilson BS: Recent advances in the design of cochlear prostheses. Richards Medical, Memphis, TN, USA, February 5, 1990.
35. Wilson BS: Design of cochlear prostheses. *AAAS Meeting* (special session on "Cochlear Implants in Children"), New Orleans, LA, USA, February 15-20, 1990.
36. Shannon RV (moderator), Wilson BS, Eddington DK, Walliker J, Pfingst BE, Patrick JF, Rosen S (panelists): Round table discussion on "Future directions in Speech Processing." *Second International Cochlear Implant Symposium*, Iowa City, IA, USA, June 4-8, 1990.
37. Wilson BS: Speech processors for auditory prostheses. *21st Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1990.
38. Wilson BS: Strategies for representing speech with cochlear implants. *Meeting of the Acoustical Society of America* (special session on “Speech Perception and Hearing Handicap”), Baltimore, MD, USA, April 29 to May 3, 1991. (Abstract published in J Acoust Soc Am 89, Suppl. 1, p. 1957, 1991)
39. Wilson BS: New levels of speech recognition with cochlear implants. *1991 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, June 2-7, 1991.

40. Wilson BS, Lawson DT, Finley CC: A new processing strategy for multichannel cochlear prostheses. *International Symposium on Natural and Artificial Nervous Control of Hearing and Balance*, Rheinfelden, Switzerland, September 4-8, 1991. (Lecture presented by Lawson)
41. Wilson BS: A new coding strategy for cochlear implants. *Annual Meeting of the American Neurotology Society*, Kansas City, MO, USA, September 21, 1991.
42. Wilson BS: Speech processors for auditory prostheses. *22nd Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October, 1991.
43. Wilson BS: Processing strategies for multichannel cochlear implants. *Fourth Symposium on Cochlear Implants in Children*, Kansas City, MO, USA, February 14 and 15, 1992.
44. Wilson BS: Speech processing for auditory prostheses. Lecture for the course on "Current Status of Multichannel Cochlear Implants," *96th Meeting of the American Academy of Otolaryngology -- Head & Neck Surgery*, Washington DC, USA, September 13, 1992.
45. Wilson BS: Processing strategies for multichannel cochlear implants. *First European Symposium on Paediatric Cochlear Implantation*, Nottingham, England, September 24-27, 1992.
46. Wilson BS: Panelist, round table on Programming. *First European Symposium on Paediatric Cochlear Implantation*, Nottingham, England, September 24-27, 1992.
47. Wilson BS: Speech processors for auditory prostheses. *23rd Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 13-15, 1992.
48. Wilson BS: Representations of envelope information with CIS and VCIS processors. *Mini Symposium on Envelope Representations with Cochlear Implants*, House Ear Institute, Los Angeles, CA, USA, February 25-28, 1993.
49. Wilson BS: Optimizing performance with new processing strategies. *1993 Cherry Blossom Conference: Current and New Applications in Hearing and Equilibrium*, American Academy of Otolaryngology -- Head & Neck Surgery, Washington DC, USA, April 2, 1993.
50. Wilson BS: Recent developments with the CIS strategies. *Third International Cochlear Implant Conference*, Innsbruck, Austria, April 4-7, 1993.
51. Wilson BS, Lawson DT, Zerbi M, Finley CC: CIS and "virtual channel" CIS (VCIS) processors. *1993 Conference on Implantable Auditory Prostheses*, Smithfield, RI, USA, July 11-15, 1993.
52. Wilson BS, Lawson DT, Zerbi M, Finley CC, Wolford RD: New processing strategies in cochlear implantation. *Annual Meeting of the American Neurotology Society* (special session on "Basic Science Update"), Minneapolis, MN, USA, October 1, 1993.
53. Wilson BS: Speech processors for auditory prostheses. *24th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 13-15, 1993.
54. Wilson BS: Introduction to speech processor design and testing. *1993 Zhengzhou International Symposium on Electrical Cochlear Hearing and Linguistics*, Zhengzhou, China, October 23-26, 1993.
55. Wilson BS: New processing strategies for cochlear prostheses. *1993 Zhengzhou International Symposium on Electrical Cochlear Hearing and Linguistics*, Zhengzhou, China, October 23-26, 1993.
56. Wilson BS: Further studies with CIS and related processors. *1993 Zhengzhou International Symposium on Electrical Cochlear Hearing and Linguistics*, Zhengzhou, China, October 23-26, 1993.
57. Wilson BS: Review of speech processor studies. University of Iowa, Department of Otolaryngology -- Head & Neck Surgery, Iowa City, IA, USA, January 18, 1994.
58. Wilson BS: Progress in speech processor design. *Fifth Symposium on Cochlear Implants in Children*, New York, NY, USA, February 4, 1994.
59. Wilson BS: Review of speech processor studies. Indiana University School of Medicine, Department of Otolaryngology -- Head & Neck Surgery, Indianapolis, IN, USA, March 9, 1994.
60. Wilson BS: Progress in the development of speech processors for cochlear prostheses. *127th Meeting of the Acoustical Society of America* (special session on "Electro-Auditory Prostheses"), Cambridge, MA, USA, June 8, 1994. (Abstract published in J Acoust Soc Am 95: 2905, 1994.)

61. Wilson BS: Cochlear modeling studies. *25th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 18-21, 1994.
62. Wilson BS: Speech processors for auditory prostheses. *25th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 18-21, 1994.
63. Wilson BS, Lawson DT, Zerbi M, Finley CC: New developments in speech processors. Lecture for the "Workshop on Auditory Prosthetics," *18th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg, FL, USA, February 5-9, 1995. (Abstract published in ARO Abstracts, p. 97, 1995.)
64. Wilson BS: Future directions in speech processing. *CIS Workshop* (sponsored by Med El GmbH and held in conjunction with the *IIIrd International Congress on Cochlear Implant*), Paris, France, April 26, 1995.
65. Wilson BS: Continuous Interleaved Sampling and related strategies. *NIH Consensus Development Conference on Cochlear Implants in Adults and Children*, May 15-17, 1995.
66. Wilson BS: Temporal representations with cochlear implants. *1995 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 20-24, 1995.
67. Wilson BS: Speech processors for auditory prostheses. *26th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 18-20, 1995.
68. Wilson BS: Strategies for representing speech information with cochlear implants. *6th Symposium on Cochlear Implants in Children*, Miami Beach, FL, USA, February 2-3, 1996.
69. Wilson BS, Finley CC, Lawson DT, Zerbi M: Temporal representations with cochlear implants. *Third European Symposium on Paediatric Cochlear Implantation*, Hannover, Germany, June 6-8, 1996.
70. Wilson BS: Progress in the development of speech processing strategies for cochlear implants. University of Iowa, Department of Otolaryngology – Head and Neck Surgery, Iowa City, IA, USA, July 29, 1996.
71. Wilson BS, Lawson DT: Speech processors for auditory prostheses. *27th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 16-18, 1996.
72. Wilson BS: Possibilities for the further development of speech processor designs. *Fifth International Cochlear Implant Conference*, New York, NY, USA, May 1-3, 1997.
73. Lawson DT, Wilson BS, Zerbi M, Roush PA, van den Honert C, Finley CC, Tucci DL, Farmer JC Jr.: Within patient comparisons among processing strategies for cochlear implants. *130th Annual Meeting of the American Otological Society*, Scottsdale, AZ, USA, May 10-11, 1997. (Lecture presented by Wilson)
74. Lawson DT, Wilson BS, Zerbi M, van den Honert C, Finley CC, Farmer JC Jr., McElveen JT, Roush PA: Bilateral cochlear implants controlled by a single speech processor. *130th Annual Meeting of the American Otological Society*, Scottsdale, AZ, USA, May 10-11, 1997.
75. Wilson BS: Design of speech processors for cochlear prostheses. Johns Hopkins University, Department of Biomedical Engineering, May 30, 1997.
76. Wilson BS, Finley CC, Zerbi M, Lawson DT, van den Honert C: Representations of temporal information in responses of the human auditory nerve to electrical stimuli. *1997 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-21, 1997.
77. Finley CC, Wilson BS, van den Honert C: Fields and EP responses to electrical stimulation: Spatial distributions, electrode interactions and regional differences along the tonotopic axis. *1997 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-21, 1997.
78. Lawson DT, Wilson BS, Zerbi M, Finley CC: Design differences and parametric adjustments among CIS and related processors. *1997 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-21, 1997.
79. Wilson BS: Speech processors for auditory prostheses. *28th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 15-17, 1997.
80. Wilson BS: Review of studies at RTI with recipients of bilateral cochlear implants. University of Iowa, Department of Otolaryngology, Head & Neck Surgery, Iowa City, IA, USA, January 27, 1998.

81. Wilson BS, Pierschalla M: Development of cochlear prostheses. *NIH Bioengineering Symposium on "Building the Future of Biology and Medicine,"* National Institutes of Health, Bethesda, MD, USA, February 27 and 28, 1998. (This was one of five invited poster presentations to represent bioengineering research supported by the NIDCD.)
82. Wilson BS: Possibilities for improving the performance of cochlear prostheses. University of Innsbruck, Innsbruck, Austria, June 18, 1998.
83. Wilson BS: Speech processors for auditory prostheses. *29th Annual Neural Prosthesis Workshop,* National Institutes of Health, Bethesda, MD, USA, October 28-20, 1998.
84. Finley CC, van den Honert C, Wilson BS, Miller RL, Cartee LA, Smith DW, Niparko JK: Factors contributing to the size, shape, latency, and distribution of intracochlear evoked potentials. *1999 Conference on Implantable Auditory Prostheses,* Pacific Grove, CA, USA, August 29 through September 3, 1999.
85. Wilson BS, Zerbi M, Finley CC, Lawson DT, van den Honert C: Relationships among electrophysiological, psychophysical and speech reception measures for implant patients. *1999 Conference on Implantable Auditory Prostheses,* Pacific Grove, CA, USA, August 29 through September 3, 1999.
86. Lawson DT, Wilson BS, Zerbi M, Finley CC: Future directions in speech processing for cochlear implants. *1999 Conference on Implantable Auditory Prostheses,* Pacific Grove, CA, USA, August 29 through September 3, 1999. (Wilson presented the talk for Lawson, who could not attend the conference due to illness.)
87. Wilson BS: Speech processors for auditory prostheses. *30th Annual Neural Prosthesis Workshop,* National Institutes of Health, Bethesda, MD, USA, October 12-14, 1999.
88. Wilson BS: Psychophysical measures and speech understanding in bilaterally implanted patients. *Bilateral Research Meeting,* Frankfurt, Germany, December 3, 1999. (This meeting was sponsored by Med El GmbH.)
89. Wilson BS: New directions in cochlear implants. *6th International Cochlear Implant Conference,* Miami Beach, FL, USA, February 3-5, 2000.
90. Wilson BS, Lawson DT, Brill SM, Wolford RD, Schatzer R: Binaural cochlear implants. *Conference on Binaural Hearing, Hearing Loss, Hearing Aids, & Cochlear Implants,* Iowa City, IA, USA, June 22-24, 2000.
91. Tyler R, Parkinson A, Gantz B, Rubinstein J, Wilson B, Witt S, Wolaver A, Lowder M: Independent binaural cochlear implants. *Conference on Binaural Hearing, Hearing Loss, Hearing Aids, & Cochlear Implants,* Iowa City, IA, USA, June 22-24, 2000.
92. Wilson BS, Lawson DT, Brill SM, Wolford RD, Schatzer R: Speech processors for auditory prostheses. *31st Annual Neural Prosthesis Workshop,* National Institutes of Health, Bethesda, MD, USA, October 25-7, 2000.
93. Lawson DT, Wilson BS, Wolford RD, Brill SM, Schatzer R: Initial work to restore binaural hearing with bilateral cochlear implants. *4th International Surgical Workshop on Aesthetic Rhinoplasty, Middle Ear Surgery, and State of Art Symposium,* Mumbai, India, November 14, 2000.
94. Lawson DT, Wilson BS, Wolford RD, Brill SM, Schatzer R: Next steps in the further development of cochlear implants. *4th International Surgical Workshop on Aesthetic Rhinoplasty, Middle Ear Surgery, and State of Art Symposium,* Mumbai, India, November 15, 2000.
95. Lawson DT, Wilson BS, Wolford RD, Brill SM, Schatzer R: Next steps in the continuing development of cochlear prostheses: Bilateral implants and combined electrical and acoustic stimulation. *International Ear Surgery Workshop and The Millennium State of Art Symposium,* Indore, India, November 17, 2000.
96. Wilson BS, Lawson DT, Wolford R, Brill SM, Schatzer R, Müller J, Schön F, Tyler RS, Zerbi M: Bilateral cochlear implants. *First Investigators' Meeting on Bilateral Cochlear Implantation,* Stans, Austria, November 29, 2000.

97. Helms J (moderator), Baumgatner W-D, Fitzgerald D, Heusler R, Hildmann H, Hockman M, van Hoesel R, Müller J, Vischer M, Wilson B: Round table discussion on bilateral cochlear implantation. *Wullstein Symposium*, Würzburg, Germany, April 26-30, 2001. (The *Wullstein Symposium* included the *2nd Conference on Bilateral Cochlear Implantation and Signal Processing*, the *6th International Cochlear Implant Workshop*, and the *2nd Auditory Brainstem Implant (ABI) Workshop*.)
98. Lawson DT, Brill SM, Wolford RD, Wilson BS, Schatzer R: Speech processors for binaural stimulation. *2001 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 19-24, 2001.
99. Wilson BS, Brill SM, Cartee LA, Lawson DT, Schatzer R, Wolford RD: Some likely next steps in the further development of cochlear prostheses. *2001 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 19-24, 2001.
100. Wilson BS, Lawson DT, *et al.*: Speech processors for auditory prostheses. *32nd Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 17-19, 2001.
101. Wilson BS, Lawson DT, Brill SM, Wolford RD, Schatzer R (RTI); Kiefer J, Pfennigdorff T, Tillein J, Gstöttner W (J. W. Goethe Universität, Frankfurt); Pillsbury H, Gilmer C (UNC Chapel Hill): Combined electric and acoustic stimulation (EAS) studies at the Research Triangle Institute. *2nd Focus Meeting on Electric-Acoustic Stimulation (EAS)*, Las Palmas, Canary Islands, February 24, 2002. (This workshop was sponsored by Med El GmbH.)
102. Cooper H, Tyler RS (moderators), Graham J, Wilson BS, Plant G, Saeed S (panelists): Panel on the future for adults. *7th International Cochlear Implant Conference*, Manchester, England, September 4-6, 2002.
103. Wilson BS: Speech processors for auditory prostheses. *33rd Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 16-18, 2002.
104. Wilson BS: Evaluation of combined EAS in studies at the Research Triangle Institute. *Hearing Preservation Workshop*, Indiana University School of Medicine, Indianapolis, IN, USA, November 8-10, 2002.
105. Brill SM, Wilson BS: Speech coding strategies for binaural cochlear implants. *6th Annual Conference of the German Audiological Society (DGA)*, Würzburg, Germany, March 26-29, 2003.
106. Wilson BS: Recent progress and likely next steps in the development of cochlear implants. *VII International Conference on Cochlear Implants and Related Audiological Sciences*, Warsaw – Kajetany, Poland, May 22-25, 2003.
107. Wilson BS: Results from speech reception studies. Satellite Symposium on “Partial deafness cochlear implantation,” *VII International Conference on Cochlear Implants and Related Audiological Sciences*, Warsaw – Kajetany, Poland, May 22-25, 2003.
108. Wilson BS: Recent and future cochlear implant stimulation strategies. Conference celebrating 25 *Years of Cochlear Implants in Vienna*, Vienna, Austria, June 19, 2003.
109. Wilson BS, Wolford RD, Lawson DT, Schatzer R, Brill SM: Evaluation of combined EAS in studies at the Research Triangle Institute. *2003 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-22, 2003.
110. Tyler R, Witt S, Dunn C, Kane D, Kenworthy M, Wilson B, Rubinstein J, Gantz B, Preece J, Parkinson A: A framework for cochlear implantation guidelines in the case of monaural and binaural fittings. *2003 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-22, 2003.
111. Wilson BS, Lawson DT, Cartee LA, Wolford RD, Schatzer R, Sun X, Cox JH, Lopez-Poveda E, Zerbi M: Speech processors for auditory prostheses. *34th Annual Neural Prosthesis Workshop*, National Institutes of Health, Bethesda, MD, USA, October 21-3, 2003. (Presented by Dewey Lawson and Reinhold Schatzer)
112. Wilson BS: Future developments of CI. *II Meeting Consensus on Auditory Implants*, Valencia, Spain, February 19-21, 2004.

113. Wilson BS: Recent progress and some possible next steps with cochlear implants. Symposium in honor of Franz Schön, Ph.D., on the occasion of his retirement, Würzburg, Germany, March 20, 2004.
114. Wilson BS, Wolford RD, Lawson DT, Schatzer R, Brill S, *et al.*: Combined electric-acoustic stimulation (EAS) of the auditory system. *Med-El Satellite Meeting, Eighth International Cochlear Implant Conference*, Indianapolis, IN, USA, May 10-13, 2004. (Honorary Speaker presentation)
115. Wilson BS: Update on EAS studies at the Research Triangle Institute. *Hearing Preservation Workshop III*, Dallas, TX, USA, October 15-16, 2004.
116. Wilson BS: The auditory prosthesis as a paradigm for successful neural interfaces. *Neural Interfaces Workshop*, National Institutes of Health, Bethesda, MD, USA, November 15-17, 2004.
117. Wilson BS, Lorens A, *et al.*: Evaluation of combined electric and acoustic stimulation of the auditory system in studies at the Research Triangle Institute. *8th International Conference on Advances in Diagnosis and Treatment of Auditory Disorders*, Kajetany, Poland, May 19-21, 2005. (Presented by Artur Lorens)
118. Wilson BS: Moderator's overview and introduction, session on Signal Processing and Speech in Noise. *2005 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, July 30 to August 4, 2005.
119. Wilson BS, Müller JM, Wolford RD, Lawson DT: Signal processing for binaural devices. *International Binaural Symposium 2005*, Manchester, UK, October 29-31, 2005.
120. Wilson BS: The auditory prosthesis as a paradigm for successful neural interfaces. *Ninth Annual Meeting of the North American Neuromodulation Society*, Washington DC, USA, November 10-12, 2005.
121. Gstöttner W (Moderator), Wilson B, Lorens A, Kiefer J, Gantz B, James C, Baumgartner W-D: Roundtable on Electric Acoustic Stimulation. *Ninth International Cochlear Implant Conference*, Vienna, Austria, June 14-17, 2006.
122. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. *World Congress on Medical Physics and Biomedical Engineering 2006*, Seoul, Korea, August 27 through September 1, 2006.
123. Wilson BS: Cochlear implants: A remarkable past and a brilliant future. University lecture sponsored by the Hearing and Speech Research Laboratory and the Departments of Cognitive Neuroscience, Bioengineering, and Otolaryngology, Head and Neck Surgery, University of California at Irvine, Irvine, CA, USA, November 8, 2006.
124. Wilson BS, Dorman MF: A new "top down" or "cognitive neuroscience" approach to cochlear implant design. The National Academics and Keck Futures Initiative on *Smart Prosthetics: Exploring Assistive Devices for the Body and Mind*, Arnold & Mabel Beckman Center, Irvine, CA, USA, November 9-11, 2006. (invited poster presentation)
125. Wilson BS: The surprising performance of present-day cochlear implants. *Symposium in Honor of Prof. Dr. Jan Helm's 70th Birthday*, Würzburg, Germany, March 3, 2007.
126. Wilson BS: The surprising performance of present-day cochlear implants. *Special Guest Address*, International Centre of Hearing and Speech, Warsaw-Kajetany, Poland, April 26, 2007.
127. Wilson BS: Cochlear implants from past to present. *Symposium in Celebration of 15 Years of Cochlear Implants in Poland*, International Centre of Hearing and Speech, Warsaw-Kajetany, Poland, July 13, 2007.
128. Wilson BS: A new "top down" or "cognitive neuroscience" approach to the design of cochlear implants. Special meeting on *The Future of Cochlear Implants: Roles of the Brain in Implant Outcomes and Design*, Dallas, TX, USA, August 17, 2007.
129. Lorens A, Wilson BS, Piotrowska A, Skarzynski H: The surprising benefits of cochlear implantation for persons with high levels of residual hearing. *7th Wullstein Symposium*, Würzburg, Germany, December 4-7, 2008. (Presented by Wilson by invitation.)
130. Wilson BS: Cochlear implants: Design aspects. Invited lecture for Duke University course BME 265 on Neural Prosthetic Systems, Pratt School of Engineering, March 19, 2009.

131. Wilson BS: The past, present, and future of cochlear implants. Invited lecture for the Hearing and Chemical Senses Program, Kresge Hearing Research Institute, University of Michigan, April 29, 2009.
132. von Ilberg Ch, Lorens A (moderators), Uziel A, Podskarbi-Fayette R, Lenarz T, Baumgartner W-D, Wilson B, Kiefer J, Batman C, Bebear JP: Round Table on Treatment of Partial Deafness. 9th *European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009.
133. Wilson BS: Partial deafness cochlear implantation (PDCI) and electro-acoustic stimulation (EAS). *Hearing Preservation Workshop VIII*, Vienna, Austria, October 15-18, 2009.
134. Wilson BS: Signal processing and binaural integration of cochlear implant and normal contralateral hearing. 8th *Wullstein Symposium: Treatment of Unilateral Deafness*, Würzburg, Germany, December 11-12, 2009.
135. Müller J (moderator), Kleine Punte A, Hagan R, Brill S, Walger M, Wilson B, Aschendorff A, McKinnon B: Concluding discussion and consensus statement on treatment of unilateral deafness. 8th *Wullstein Symposium: Treatment of Unilateral Deafness*, Würzburg, Germany, December 11-12, 2009.
136. Wilson BS: A “top-down” or “cognitive neuroscience” approach to cochlear implant designs. Duke Institute for Brain Sciences workshop on *Listening with the Brain: New Approaches to Optimizing the Effectiveness of Cochlear Prosthetics*, Duke University, Durham, NC, USA, February 26-27, 2010.
137. Wilson BS: Worldwide developments and availabilities of low-cost cochlear implants. *Coalition for Global Hearing Health Conference*, American Academy of Otolaryngology – Head and Neck Surgery Foundation, Alexandria, VA, USA, June 14-15, 2010.
138. Tucci DL, Wilson BS: Global priorities for hearing loss. *Coalition for Global Hearing Health Conference*, American Academy of Otolaryngology – Head and Neck Surgery Foundation, Alexandria, VA, USA, June 14-15, 2010.
139. Rask-Andersen H (President), Baumgartner W-D, Colletti V, Gantz B, Giovannini M, Lenarz Th, Martini A, Olgun L, Ramsden R, Shannon R, Vischer M, Wilson B: Round Table conference on “Future Developments of Auditory Implants.” *ABI 2010 – State of the Art Symposium on Auditory Brainstem Implants*, Uppsala, Sweden, June 29, 2010.
140. Wilson BS: Processing strategies for central auditory prostheses. Presented in the Round Table session on “Future Developments of Auditory Implants.” *ABI 2010 – State of the Art Symposium on Auditory Brainstem Implants*, Uppsala, Sweden, June 29, 2010.
141. Wilson BS: Introduction to the Special Symposium on “The Listening Brain.” 11th *International Conference on Cochlear Implants and Other Auditory Implantable Technologies*, Stockholm, Sweden, June 30 through July 3, 2010.
142. Wilson BS: The listening brain. Medizinische Hochschule Hannover, Hannover, Germany, July 8, 2010.
143. Wilson BS: Cochlear implants: Matching the prosthesis to the brain and facilitating desired plastic changes in brain function. *Symposium on Brain Machine Interfaces – Implications for Science, Clinical Practice and Society*, Ystad Saltsjöbad, Sweden, August 26-29, 2010. (This Symposium was supported by the Nobel Foundation among others.)
144. Wilson BS: Cochlear implants for the restoration of hearing. Invited lecture for Duke University course BME 265 on Neural Prosthetic Systems, Pratt School of Engineering, October 14, 2010.
145. Wilson BS: The surprising benefits of cochlear implantation for persons with high levels of residual hearing. 2nd *Congress of Spanish-America on Cochlear Implants and Related Sciences*, Cartagena, Columbia, December 1-3, 2010.
146. Baumgartner W-D, Wilson BS: Vienna experience of electrical acoustic surgery. 2nd *Congress of Spanish-America on Cochlear Implants and Related Sciences*, Cartagena, Columbia, December 1-3, 2010.

147. Wilson BS (moderator), Baumgartner W-D, Labadie R, Manrique M, Özgirgin N: Round Table on “Future trends in implantation.” *2nd Congress of Spanish-America on Cochlear Implants and Related Sciences*, Cartagena, Columbia, December 1-3, 2010.
148. Rajan G, Kleine Punte A, Schatzer R, Wie OB, Wilson BS, McKinnon B, Streitberger C: Round Table on “Cochlear implants in unilateral deafness.” *Conference on Hearing Implants: A Remarkable Past and a Brilliant Future*, Frankfurt am Main, Germany, December 9-11, 2010.
149. Schatzer R, Wilson BS, Lopez-Poveda E, Wolford RD, Zerbi M, Cox JH: A bio-inspired coding strategy for cochlear implants: Concept and results. *Conference on Hearing Implants: A Remarkable Past and a Brilliant Future*, Frankfurt am Main, Germany, December 9-11, 2010.
150. Wilson BS, Lorens A, Piotrowska, Skarzynski H: The surprising benefits of cochlear implantation for persons with high levels of residual hearing. *10th European Federation of Audiology Societies (EFAS) Congress*, Warsaw, Poland, June 22-25, 2011. (Presented by Artur Lorens in the special session on “International collaboration projects – 15th Anniversary of the Institute of Physiology and Pathology of Hearing.”)
151. Wilson BS: Cochlear implants: a remarkable past and a brilliant future. Seminar presentation at the University of Warwick, Coventry, UK, October 17, 2011.
152. Wilson BS: The surprising benefits of cochlear implantation for persons with high levels of residual hearing. *Presbycusis Research Meeting*, Munich, Germany, January 12-14, 2012.
153. Briand P, Buchman C, Caraway T, Gantz B, Hochmair I, Hodges A, Janssen J, Lenarz T, Luntz, M, Luxford W, Mueller J, Nedzelski J, Roehrienin G, van de Heyning P, Wilson B, Zwolan T (panelists and industry representatives): The future of cochlear implant care and technology. *12th International Conference on Cochlear Implants and Other Implantable Auditory Technologies*, Baltimore, MD, USA, May 3-5, 2012.
154. Wilson BS, Lorens A, Piotrowska, Skarzynski H: Evaluation of the relative benefits of cochlear implantation according to the level of residual hearing. *Scientific Congress in Celebration of the Grand Opening of the World Hearing Center*, Kajetany, Poland, May 10-11, 2012. (This talk was presented by Artur Lorens.)
155. Wilson BS: Cochlear implants: matching the prosthesis to the brain and facilitating desired plastic changes in brain function. One-day meeting on *Brain Centric Considerations for Cochlear Implantation*, Dallas, TX, USA, August 27, 2012.
156. Wilson BS: Design and engineering aspects of cochlear implants. Invited lecture for Duke University course BME 515 on Neural Prosthetic Systems, Pratt School of Engineering, October 30, 2012.
157. Wilson BS (moderator), Nicoletti M, Schatzer R, Visser D, Zirn S, Hemmert W, Nopp P, Stohl J: Round Table discussion on “Challenges in cochlear implants today.” *2nd Munich Hearing Implant Symposium: Hearing Implants Around the World*, Ludwig-Maximilians-Universität München, Munich, Germany, December 6-9, 2012.
158. Wilson BS: Brain centric approaches for the design, fitting, and application of cochlear implants. Guest Address at the *Annual Conference of the British Cochlear Implant Group*, on “The Hearing Brain,” Ayrshire, Scotland, March 21-22, 2013.
159. Wilson BS: Acceptance remarks. *Awards Luncheon for the 2013 Lasker Awards*, New York, NY, September 20, 2013. (This speech is posted at http://www.laskerfoundation.org/awards/2013_c_accept_wilson.htm.)
160. Wilson BS: Importance of the hearing brain in cochlear implant designs and outcomes. *Brain Plasticity and Cochlear Implant Use 2013 Workshop*, New York University School of Medicine, NYU Langone Medical Center, New York, NY, USA, September 23, 2013.
161. Wilson BS: Future possibilities for combined electric and acoustic stimulation. *Hearing Preservation Workshop XII*, Heidelberg, Germany, October 10-13, 2013.
162. Wilson BS: Getting a decent, but sparse, signal to the brain of cochlear implant patients. *Workshop on Neural Imaging: From the Cochlea to the Cortex*, Arizona State University, Tempe, AZ, USA, November 4, 2013.

163. Wilson BS: Importance of the hearing brain in cochlear implant designs and outcomes. Seminar presentation at the UCL Ear Institute, University College London, London, UK, December 10, 2013.
164. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Seminar presentation at the Instituto de Neurociencias de Castilla y León, University of Salamanca, Salamanca, Spain, December 16, 2013.
165. Wilson BS: Evaluation of the relative benefits of cochlear implantation according to the level of residual hearing. *Conference on Hearing Implants for Older Adults*, New York, NY, USA, January 16-18, 2014.
166. Wilson BS: Cochlear implants: Matching the prosthesis to the brain and facilitating desired plastic changes in brain function. Seminar presentation for the Department of Biomedical Engineering and the Center for Hearing and Balance, Johns Hopkins University, Baltimore, MD, USA, February 5, 2014.
167. Wilson BS, Stohl JS: A simple but fast and useful model of the electrically stimulated auditory periphery. *Bernstein Sparks Workshop on Modeling and Signal Processing for Auditory Implants*, held in conjunction with the 13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses, Munich, Germany, June 20, 2014.
168. Wilson BS: Cochlear implants – A remarkable past and a brilliant future. *Berufsverband cochlear implants & hearing implants – Compact, structured session & round table (*program only provided in German)*, held in conjunction with the 13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses, Munich, Germany, June 21, 2014.
169. Wilson BS: Thinking about the hearing brain in designs and applications of cochlear implants. Ludwig Maximilians Universität, Munich, Germany, June 23, 2014.
170. Wilson BS: Cochlear implants: One of the great success stories in modern medicine. *Cochlear Implants and Deafness: Symposium in Honor of Ingeborg Hochmair-Desoyer*, Vienna, Austria, September 19, 2014. (The Symposium was a part of the celebration for the award of the 2014 Wittgenstein Preis to Dr. Hochmair-Desoyer.)
171. Wilson BS: Design and engineering aspects of cochlear implants. Invited lecture for Duke University course BME 515 on Neural Prosthetic Systems, Pratt School of Engineering, October 28, 2014.
172. Wilson BS, Pätzold J: Cochlear implants, music, and the hearing brain. Invited lecture for Duke University course NEUROSCI 290-01/MUSIC 290-01, “Music and the Brain,” February 5, 2015.
173. Wilson BS: Possible ways forward for hearing prostheses. Medizinische Hochschule Hannover, Hannover, Germany, March 23, 2015.
174. Gantz B (moderator), Hochmair I, Wilson BS, Dowell R, Zeng F-G: Round Table Discussion on “Recent challenges in cochlear implantation.” 10th Asia Pacific Symposium on Cochlear Implants and Related Sciences, Beijing, China, April 30 through May 3, 2015.
175. Wilson BS (moderator), Büchner A, Landsberger D, Yuen K, Zeng F-G: Round Table Discussion on “New directions in sound coding and pre-processing strategies.” 10th Asia Pacific Symposium on Cochlear Implants and Related Sciences, Beijing, China, April 30 through May 3, 2015.
176. Wilson BS: Combined EAS – One of Prof. von Ilberg’s many gifts to humanity. *Symposium in Honor of Prof. Dr. Christoph von Ilberg on the Occasion of his 80th Birthday*, J. W. Goethe Universität, Frankfurt, Germany, May 8, 2015.
177. Wilson BS: Acceptance remarks on the occasion of receiving an honorary doctorate in medicine from the University of Salamanca. University of Salamanca, Salamanca, Spain, May 11, 2015. (The remarks are posted at [http://saladeprensa.usal.es/webusal/files/Discurso%20Blake%20S.%20Wilson%20-%20Honoris%20Causa%20Blake%20S.%20Wilson%20\(ingl%C3%A9s\).pdf](http://saladeprensa.usal.es/webusal/files/Discurso%20Blake%20S.%20Wilson%20-%20Honoris%20Causa%20Blake%20S.%20Wilson%20(ingl%C3%A9s).pdf).)
178. Wilson BS: The punctuation mark in an equilibrium state: modern signal processing. Special session on cochlear implants sponsored by the Committees on Psychological and Physiological Acoustics, Biomedical Acoustics, Speech Communication, and Signal Processing in Acoustics, *Annual Spring Meeting of the Acoustical Society of America*, Pittsburgh, PA, USA, May 18-22, 2015.

179. Wilson BS: Possibilities for narrowing the remaining gaps between prosthetic and normal hearing. University of Texas at Dallas, Dallas, TX, USA, May 26, 2015.
180. Lopez-Poveda EA, Eustaquio-Martin A, Stohl JS, Wolford RD, Schatzer R, Wilson BS: Mimicking the unmasking benefits of the contralateral medial olivocochlear reflex with cochlear implants. *2015 Conference on Implantable Auditory Prostheses*, Tahoe City, CA, USA, July 12-17, 2015.
181. Cerf VG (moderator), Pisoni DB, Wilson BS, Zeng F-G: Special Synergy Session on “Hearing restoration and neuroscience: how hearing affects thought and how the brain perceives sound.” *CI 2015 Conference – American Cochlear Implant Alliance*, Washington DC, USA, October 15-17, 2015.
182. Wilson BS, Pätzold J: Cochlear implants, music, and the hearing brain. Invited lecture for Duke University course NEUROSCI 290/MUSIC 290, “Music and the Brain,” March 31, 2016.
183. Wilson BS: The development of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. *11th Annual Biomedical Forum of the Sino-American Biotechnology & Pharmaceutical Professionals Association*, Irvine, CA, USA, April 23, 2016.
184. Hochmair ES, Wilson BS, Hochmair IJ: Das moderne Cochlea Implantat. Special Colloquium Lecture preceding the Award Ceremony for the 2016 Eduard Rhein Technology Award to the three speakers, Technische Universität München, Munich, Germany, October 7, 2016.
185. Wilson BS: Acceptance remarks for the three winners of the Eduard Rhein Technology Prize. Ceremony for the Prize, Deutsches Museum, Hall of Fame Room, Munich, Germany, October 8, 2016.
186. Wilson BS: Design and engineering aspects of cochlear implants. Invited lecture for Duke University course BME 515 on Neural Prosthetic Systems, Pratt School of Engineering, March 21, 2017.
187. Wilson BS: Remediation of hearing loss for adults in their fourth decade and beyond. In the Clinical Roundtable Discussion on “Hearing Loss, Brain Function, and Healthy Aging,” at the *Annual Meeting of the Society for Neuroscience*, Washington DC, USA, November 13-15, 2017.
188. Wilson BS: The modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. *Josef Miller Symposium 2018*, Kresge Hearing Research Institute, University of Michigan, April 23, 2018.
189. Wilson BS: Speech coding for cochlear implants explained. *6th Munich/LMU Hearing Implant Symposium: Hearing Implants Explained*, Ludwig-Maximilians-Universität München, Munich, Germany, December 6-9, 2018.
190. Wilson BS: Recognizing and retaining faculty. *Leading an Academic Unit at Duke (LAUD) Series, Number 6*, Duke University, Durham, NC, USA, February 12, 2019. (Wilson was one of three panelists for the seminar.)
191. Wilson BS: Design and engineering aspects of cochlear implants. Invited lecture for Duke University course BME 515 on Neural Prosthetic Systems, Pratt School of Engineering, March 19, 2019.

Additional Presentations

1. Wilson, BS: Problems and opportunities in the design of speech processors for cochlear implant prostheses. *Annual Meeting of the Association for the Advancement of Medical Instrumentation*, 1978. (Abstract published in Proc. AAMI Annual Meeting 13: 295, 1978)
2. Wilson BS, Joines WT, Casseday JH, Kobler JB: Identification of sites in brain tissue affected by nonionizing radiation. *2nd Annual Meeting of the Bioelectromagnetics Society*, 1980. (Abstract published in Bioelectromagnetics 1: 208, 1980)
3. Wilson BS, Joines WT, Casseday JH, Kobler JB: Responses in the auditory nerve to pulsed, continuous wave, and sinusoidally-amplitude-modulated microwave radiation. *2nd Annual Meeting of the Bioelectromagnetics Society*, 1980. (Abstract published in Bioelectromagnetics 1: 237, 1980)
4. Blackman CF, Wilson BS: Distribution of label in studies on the effects of nonionizing radiation on the association of calcium ions with brain tissue. *5th Annual Meeting of the Bioelectromagnetics Society*, 1983. (Abstract published in Bioelectromagnetics Abstracts, p. 73, 1983)

5. Wilson BS, Kobler JB, Casseday JH, Joines, WT: Spectral content of microwave-induced auditory stimuli as demonstrated by [¹⁴C]-2-deoxy-D-glucose uptake at the inferior colliculus. *5th Annual Meeting of the Bioelectromagnetics Society*, 1983. (Abstract published in *Bioelectromagnetics Abstracts*, p. 46, 1983)
6. Henson OW Jr., Kobler JB, Wilson BS, Bishop AL: Echo frequency and intensity optimization by mustache bats. *7th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1984.
7. Henson OW Jr., Wilson BS, Kobler JB, Bishop AL, Henson MM, Hanson R: Radiotelemetry and computer analysis of biosonar signals emitted by the free-flying bat. *8th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1985. (Abstract published in *ARO Abstracts*, p. 70, 1985)
8. Wilson BS, Finley CC: A computer-based simulator of speech processors for auditory prostheses. *8th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1985. (Abstract published in *ARO Abstracts*, p. 109, 1985)
9. Finley CC, Wilson BS: An integrated field-neuron model of electrical stimulation by intracochlear scala-tympani electrodes. *8th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1985. (Abstract published in *ARO Abstracts*, p. 105, 1985)
10. Finley CC, Wilson BS: Sampling of electric fields by myelinated intracochlear neurons. *9th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1986. (Abstract published in *ARO Abstracts*, p. 170, 1986)
11. Wilson BS, Finley CC: Latency fields in electrically-evoked hearing. *9th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February, 1986. (Abstract published in *ARO Abstracts*, pp. 170-171, 1986)
12. Finley CC, Wilson BS: Field patterns in electrically-stimulated human cochlea. *International Union of Physiological Scientists (IUPS) Satellite Symposium on Advances in Auditory Neuroscience*, San Francisco, CA, USA, July 8-11, 1986.
13. Wilson BS, Finley CC, Farmer JC Jr., Weber BA, Lawson DT, Wolford RD, Kenan PD, White MW, Merzenich MM, Schindler RA: Comparative studies of speech processing strategies for cochlear implants. *90th Annual Meeting of the Triological Society*, Denver, CO, USA, April 28-20, 1987.
14. Finley CC, Wilson BS: Spiral ganglion cell body effects on neural response latency in the electrically stimulated cochlea. *13th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg, FL, USA, February 4-8, 1990. (Abstract published in *ARO Abstracts*, pp. 331-332, 1990)
15. Wilson BS, Finley CC, Lawson DT, Wolford RD: A new processing strategy for multichannel cochlear implants. *Second International Cochlear Implant Symposium*, Iowa City, IA, USA, June 4-8, 1990.
16. Wilson BS, Finley CC, Lawson DT, Wolford RD: New levels of speech recognition with cochlear implants. *14th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg, FL, USA, February 3-7, 1991. (Abstract published in *ARO Abstracts*, p. 35, 1991)
17. Zerbi M, Wilson BS, Finley CC, Lawson DT: A flexible speech processor for cochlear implant research. *1992 Digital Signal Processing Workshop*, Utica, IL, USA, September 13-16, 1992.
18. Loeb GE, Shannon RV, Wilson BS, Zeng F-G, Rebscher S: Design for an inexpensive but effective cochlear implant system: Recommendations of an expert panel from the 1993 Zhengzhou International Symposium on Electrical Cochlear Hearing and Linguistics. *International Cochlear Implant, Speech and Hearing Symposium*, Melbourne, Australia, October 23-28, 1994
19. Finley CC, Wilson BS: Responses of the auditory nerve to repetitive electrical stimuli as demonstrated with recordings of intracochlear evoked potentials. *18th Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg, FL, USA, February 5-9, 1995. (Abstract published in *ARO Abstracts*, p. 178, 1995)

20. Wilson BS, Finley CC: Temporal representations with cochlear implants. *IIIrd International Congress on Cochlear Implant*, Paris, France, April 27-29, 1995.
21. Finley CC, Wilson BS: Spatial distribution of stimulus fields and intracochlear evoked potentials as recorded from unstimulated electrodes of implanted cochlear prostheses. *19th Midwinter Research Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February 4-8, 1996. (Abstract published in ARO Abstracts, p. 108, 1996)
22. Tucci DL, Roush PA, Lawson DT, Wilson BS, Zerbi M: Modified percutaneous Nucleus cochlear implant: Surgical experience and speech recognition results. *Vth International Cochlear Implant Conference*, New York, NY, USA, May 1-3, 1997.
23. Rubinstein JT, Wilson BS, Abbas PJ: Restoration of acoustic-like patterns of auditory nerve activity with electrical stimulation. *4th European Symposium on Paediatric Cochlear Implantation*, 's-Hertogenbosch, The Netherlands, June 14-17, 1998.
24. Rubinstein JT, Miller CA, Abbas PJ, Wilson BS: Emulating physiologic firing patterns of auditory neurons with electrical stimulation. *22nd Midwinter Meeting of the Association for Research in Otolaryngology*, St. Petersburg Beach, FL, USA, February 13-17, 1999. (Abstract published in ARO Abstracts, p. 8, 1999)
25. van den Honert C, Finley CC, Wilson BS: Measurement of intracochlear evoked potentials. *1999 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 29 through September 3, 1999. (This was a poster presentation.)
26. van den Honert C, Finley CC, Wilson BS: Measurement of intracochlear evoked potentials. *6th International Cochlear Implant Conference*, Miami Beach, FL, USA, February 3-5, 2000.
27. Tyler RS, Parkinson A, Wilson BS, Witt S, Gantz B, Rubinstein J, Wolaver A, Lowder M: Binaural cochlear implants and hearing aids and cochlear implant: Speech perception and localization. *6th International Cochlear Implant Conference*, Miami Beach, FL, USA, February 3-5, 2000. (Wilson's participation in this effort was jointly supported by the Program Project Grant on Cochlear Implants at the University of Iowa and by one the "speech processors" projects at RTL.)
28. Tyler RS, Gantz BJ, Rubinstein JT, Preece JP, Wilson BS, Parkinson AJ, Wolaver A: Distance, localization and speech perception pilot studies with bilateral cochlear implants. *3rd Congress of Asia Pacific Symposium on Cochlear Implant and Related Sciences*, Osaka, Japan, April 5-7, 2001.
29. Cartee LA, Finley CC, Wilson BS: A model of the intracochlear evoked potential. *2001 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, August 19-24, 2001.
30. Tyler RS, Gantz BJ, Rubinstein JT, Witt S, Bryant D, Wilson BS: What we have learned about binaural hearing? *7th International Cochlear Implant Conference*, Manchester, England, September 4-6, 2002.
31. Schatzer R, Wilson BS, Lopez-Poveda EA, Zerbi M, Wolford RD, Lawson DT: A novel CI speech processing structure for closer mimicking of normal auditory functions. *2003 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-22, 2003. (poster presentation)
32. Skarzynski H, Wilson BS, Lorens A, Piotrowska A: Electroacoustic stimulation in patients with partial deafness. *XXXI Congress of the European Society for Artificial Organs*, Warsaw, Poland, September 8-11, 2004.
33. Adunka A, Unkelbach M, Radeloff A, Wilson BS, Gstottner W: Outcomes of hearing preservation and cochlear vulnerability in cochlear implant recipients. *10th Symposium on Cochlear Implants in Children*, Dallas, TX, USA, March 15-19, 2005.
34. Lorens A, Wilson BS, Piotrowska A, Skarzynski H: Electric and acoustic pitch perception after Partial Deafness Cochlear Implantation (PDCI). *8th International Conference on Advances in Diagnosis and Treatment of Auditory Disorders*, Kajetany, Poland, May 19-21, 2005.
35. Cartee LA, Finley CC, van den Honert C, Lawson DT, Wilson BS: Intracochlear evoked potential responses to biphasic pulses with an interphase gap. *2005 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, July 30 to August 4, 2005. (poster presentation)

36. Wilson BS, Dorman MF: A new “top down” or “cognitive neuroscience” approach to the design of cochlear implants. *2007 Conference on Implantable Auditory Prostheses*, Lake Tahoe, NV, USA, July 15-20, 2007. (poster presentation)
37. An SK, Park S-I, Lee CJ, Byun KM, Min KS, Lee JM, Wilson BS, Lawson DT, Rebscher SJ, Oh SH, Kim SJ: Design for a simplified cochlear implant system. *2007 Conference on Implantable Auditory Prostheses*, Lake Tahoe, NV, USA, July 15-20, 2007. (poster presentation)
38. Tucci DL, Wilson BS, Kaylie DM: Worldwide hearing impairment: A need for action. *9th European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009.
39. Schatzer R, Wilson BS, Lopez-Poveda EA, Zerbi M, Wolford RD, Cox JH, Lawson DT, Zierhofer CM: A bio-inspired nonlinear filter bank for cochlear implant speech processors. *Conference on Implantable Auditory Prostheses*, Asilomar, CA, USA, July 24-29, 2011. (poster presentation)
40. Stohl JS, Wolford RD, Wilson BS: Improving place-pitch in the apex via manipulations in phase duration. *Conference on Implantable Auditory Prostheses*, Lake Tahoe, CA, USA, July 14-19, 2013. (poster presentation)
41. Stohl JS, Wolford RD, Wilson BS: Improving channel independence before selecting electrodes for deactivation. *13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses*, Munich, Germany, June 19-21, 2014.
42. Stohl JS, Wolford RD, Wilson BS: Using a customized model of the auditory periphery to predict individual psychophysical data. *Conference on Implantable Auditory Prostheses*, Lake Tahoe, CA, USA, July 16-21, 2017. (poster presentation)
43. Stohl JS, Wolford RD, Wilson BS: Limiting temporal information on middle and basal channels. *Conference on Implantable Auditory Prostheses*, Lake Tahoe, CA, USA, July 16-21, 2017. (poster presentation)

Chaired Conferences

1. Wilson BS (Chair): *1991 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, June 2-7, 1991.
2. Wilson BS (Chair): *Mini Symposium on Cochlear Implants*, Research Triangle Park, NC, USA, February 7, 2000. (This symposium included three international speakers and one speaker from the RTI/Duke team.)
3. Miyamoto RT, Wilson BS (Co-Chairs): *Hearing Preservation Workshop*, Indiana University School of Medicine, Indianapolis, IN, USA, November 8-10, 2002.
4. Roland PS, Wilson BS (Co-Chairs): *Third Hearing Preservation Workshop*, Dallas, TX, USA, October 15-16, 2004.
5. Wilson BS, Dorman MF (Co-Chairs): *Hearing Preservation Workshop V*, Research Triangle Park, NC, USA, October 13-14, 2006.
6. von Ilberg C, Wilson BS (Co-Chairs): *Presbycusis Research Meeting*, Munich, Germany, January 12-14, 2012.

Chaired Track

1. Wilson BS, Kim SJ (Co-Chairs): Track on Neural Systems and Engineering, *World Congress on Medical Physics and Biomedical Engineering 2006*, Seoul, Korea, August 27 through September 1, 2006 (see <http://www.wc2006-seoul.org/index.htm>). Professor Kim is the Director of the Nano-Bioelectronics and Systems Research Center at Seoul National University in Seoul, Korea. The Neural Systems and Engineering track included seven sessions: (1) Neural Networks and Brain-Computer Interfaces; (2) Invited Talk I, on “Cochlear implants: A remarkable past and a brilliant future;” (3) Auditory Prosthesis; (4) Invited Talk II, on “The optic nerve visual prosthesis;” (5) Visual Prosthesis; (6) Neural Signal Processing; and (7) a poster session.

Chaired Sessions

1. Wilson BS (Chair): Session on "Cardiovascular Fluid Dynamics." *2nd Mid-Atlantic Conference on Bio-Fluid Mechanics*, Blacksburg, VA, USA, April, 1980.
2. Wilson BS (Discussion Leader): *Gordon Research Conference on Implantable Auditory Prostheses*, Tilton, NH, USA, August 19-23, 1985.
3. Wilson BS (Moderator), Dent LJ, Dillier N, Eddington DK, Hochmair-Desoyer IJ, Pfingst BE, Patrick J, Sürth W, Walliker J (Panelists): Round table discussion on speech coding. *International Cochlear Implant Symposium 1987*, Düren, Germany, September 7-11, 1987.
4. Wilson BS (Moderator): Session on "Speech Processing." *Second International Cochlear Implant Symposium*, Iowa City, IA, USA, June 4-8, 1990.
5. Wilson BS (Chair): Session on "Audiological Assessment and Device Programming." *First European Symposium on Paediatric Cochlear Implantation*, Nottingham, England, September 24-27, 1992.
6. Wilson BS, Dillier N (Co-Chairs): Session on "Speech Coding." *Third International Cochlear Implant Conference*, Innsbruck, Austria, April 4-7, 1993.
7. Wilson BS (Chair), Cazals Y, Dillier N, MacLeod P, McDermott H, Pelizzone M (Panelists): Round Table on "Sound Signal Processing." *IIIrd International Congress on Cochlear Implant*, Paris, France, April 27-29, 1995.
8. Wilson BS (Chair): Focus group on "Speech Processing." *1995 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 20-24, 1995.
9. Wilson BS (Chair): Session on "Basic Science and Technical Aspects." *Third European Symposium on Paediatric Cochlear Implantation*, Hannover, Germany, June 6-8, 1996.
10. Wilson BS (Discussion Leader), Böex-Spano C (Discussion Co-Leader), Svirsky M (Discussion Co-Leader): Focus group on "Issues in Speech Processor Design." *1997 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, August 17-21, 1997.
11. Wilson BS (Session Moderator): Evaluation of combined electric and acoustic stimulation of the auditory system. *Hearing Preservation Workshop*, Indiana University School of Medicine, Indianapolis, IN, USA, November 8-10, 2002.
12. Hochmair E, Wilson B, Lenhardt M, Czyzewski A (Co-Chairs): Session on "Cochlear and Brain Stem Implants and Related Audiological Problems." *VII International Conference on Cochlear Implants and Related Audiological Sciences*, Warsaw – Kajetany, Poland, May 22-25, 2003.
13. Wilson B, Skarzynski H (Co-Chairs): Satellite Symposium on "Partial deafness cochlear implantation." *VII International Conference on Cochlear Implants and Related Audiological Sciences*, Warsaw – Kajetany, Poland, May 22-25, 2003.
14. Wilson BS, Hartmann R, Klinke R (Co-Chairs): Special session on "Future directions for cochlear implants," Department of Physiology, Institute of Physiology III, JW Goethe Universität, Frankfurt, Germany, October 16, 2003. (This session was held the day before the *Hearing Preservation Workshop II*, also held in Frankfurt. The session included approximately 30 participants.)
15. Wilson BS (Chair): Session on "Clinical Issues." *Hearing Preservation Workshop II*, Frankfurt, Germany, October 17-18, 2003.
16. Wilson BS, Talavage TM (Co-Chairs): Session 2C. *Eighth International Cochlear Implant Conference*, Indianapolis, IN, USA, May 10-13, 2004.
17. Wilson BS (Chair): Session on "Neural Enhancement." *Hearing Preservation Workshop III*, Dallas, TX, USA, October 15-16, 2004.
18. Wilson BS (Moderator): Session on "Signal Processing and Speech in Noise." *2005 Conference on Implantable Auditory Prostheses*, Pacific Grove, CA, USA, July 30 to August 4, 2005.
19. Wilson BS (Chair): Session on "Hearing Preservation, Partial Deafness Cochlear Implantation, and EAS." *Hearing Preservation Workshop IV*, Warsaw-Kajetany, Poland, October 14-15, 2005.
20. Wilson BS (Chair): Session NP1: Auditory Prosthesis. *World Congress on Medical Physics and Biomedical Engineering 2006*, Seoul, Korea, August 27 through September 1, 2006.

21. Wilson BS (Co-Chair with R Schatzer): Session on "Speech Processing – Temporal Coding, Preprocessing, and New Designs." *11th International Conference on Cochlear Implants in Children*, Charlotte, NC, USA, April 11-14, 2007.
22. Wilson BS (Co-Chair with R Schatzer): Session on "Speech Processing – Current Steering." *11th International Conference on Cochlear Implants in Children*, Charlotte, NC, USA, April 11-14, 2007.
23. Wilson BS: Session on "Novel Stimulation and Signal Processing Strategies and Modeling." *2007 Conference on Implantable Auditory Prostheses*, Lake Tahoe, NV, USA, July 15-20, 2007.
24. Wilson BS: Session on "Electric Acoustic Stimulation." *Hearing Preservation Workshop VI*, Antwerp, Belgium, October 19-20, 2007.
25. Wilson BS (First Chair), Vermeire K: Session on "Coding Strategies 1." *9th European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009.
26. Wilson BS (First Chair), von Ilberg Ch: Session on "Results of Electric Acoustic Stimulation." *9th European Symposium on Paediatric Cochlear Implantation*, Warsaw, Poland, May 14-17, 2009.
27. Wilson BS: Afternoon session for Friday, February 26. Duke Institute for Brain Sciences workshop on *Listening with the Brain: New Approaches to Optimizing the Effectiveness of Cochlear Prosthetics*, Duke University, Durham, NC, USA, February 26-27, 2010.
28. Wouters J, Wilson BS: Second session on "Coding Strategies and Electrode Designs." *11th International Conference on Cochlear Implants and Other Auditory Implantable Technologies*, Stockholm, Sweden, June 30 through July 3, 2010.
29. Wilson BS: Chairman for the invited lecture by Prof. Marco Pelizzzone, "Beyond cochlear implants: vestibular and retinal implants. *10th European Symposium on Paediatric Cochlear Implantation*, Athens, Greece, May 12-15, 2011.
30. Coninx F, Lorens A, Wilson B, McPherson D: Special session on "International collaboration projects – 15th Anniversary of the Institute of Physiology and Pathology of Hearing," *10th European Federation of Audiology Societies (EFAS) Congress*, Warsaw, Poland, June 22-25, 2011.
31. Wilson BS: Chairman of the session on "Outcomes Assessments," *10th Hearing Preservation Workshop*, London, UK, October 13-16, 2011.
32. Wilson BS: Chairman of the session on "Physiological Assessment – from Periphery to Cortex," *Hearing Preservation Workshop*, Toronto, Canada, October 18-20, 2012.
33. Wilson BS: Chairman of the session on "Outcome prediction and improvement," *Hearing Preservation Workshop XII*, Heidelberg, Germany, October 10-13, 2013.
34. Wilson BS, Helms J: Chairpersons for the Round Table on "Cochlear implants: A remarkable past and a brilliant future – The past presidents panel," *13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses*, Munich, Germany, June 19-21, 2014.
35. Visser D, Wilson BS: Chairpersons for the keynote session on "Binaural hearing," *13th International Conference on Cochlear Implants and Other Implantable Auditory Prostheses*, Munich, Germany, June 19-21, 2014.
36. Wilson BS: Chairman of the session on "Perception and Performance in the APEX," *Conference on the APEX of the Cochlea – From Neuroanatomy to Electrical Stimulation*, Chapel Hill, NC, USA, September 4-7, 2014.
37. Wilson BS, Dorman MF: Celebration of the modern cochlear implant and the first substantial restoration of a human sense using a medical intervention. Special sessions sponsored by the Committees on Psychological and Physiological Acoustics, Biomedical Acoustics, Speech Communication, and Signal Processing in Acoustics, *Annual Spring Meeting of the Acoustical Society of America*, Pittsburgh, PA, USA, May 18-22, 2015.
38. Wilson BS: Moderator for Session 3: "Outcome prediction and improvement," *14th Hearing and Structure Preservation Workshop*, Nashville, TN, USA, October 8-11, 2015.
39. Wilson BS: Moderator for Session 6: "Assessment – From cortex to periphery," *14th Hearing and Structure Preservation Workshop*, Nashville, TN, USA, October 8-11, 2015.