

## POSTER PROGRAM

Monday 10 July

- M1:** [1561] Cochlear implants for single sided deafness: improved sound-localization performance without processing of binaural cues. [Martijn Agterberg](#), [Adriane Smit](#)
- M2:** [1612] Temporal adjustment in bimodal listeners - improvement of sound localization but not of spatial unmasking of speech. [Stefan Zirn](#), [Julian Angermeier](#), [Sebastian Roth](#), [Franz-Ullrich Mueller](#), [Werner Hemmert](#)
- M3:** [1616] Simultaneous implantation may facilitate binaural fusion better than sequential implantation for bilateral cochlear implant users. [Biao Chen](#), [Jingyuan Chen](#), [Yongxin Li](#), [John J. Galvin](#), [Qian-Jie Fu](#)
- M4:** [1617] Factors affecting binaural summation and utilization of talker sex cues in cochlear implant users and normal hearing listeners. [Jingyuan Chen](#), [Biao Chen](#), [Yongxin Li](#), [John J. Galvin](#), [Qian-Jie Fu](#)
- M5:** [1624] What you deliver is not what you get: alteration of interaural correlation post-stimulation. [Justin M. Aronoff](#), [Simin Soleimanifar](#), [Prajna BK](#)
- M6:** [1643] The effects of interaural cochleotopic asymmetry and interaural correlation on interaural time difference sensitivity. [Jordan Deutsch](#), [Mona Jawad](#), [Julia Anodenko](#), [Josephine LaPapa](#), [Justin M Aronoff](#)
- M7:** [1653] The effect of head shadow enhancement for speech understanding in bimodal cochlear implant users in a diffuse noise field. [Nienke C. Langerak](#), [H Christiaan Stronks](#), [Jeroen J. Briaire](#), [Johan H.M. Frijns](#)
- M8:** [1676] Comparisons of interaural-time-difference tuning curves using monopolar and partial tripolar configurations in adult bilateral cochlear-implant users. [Obada Jamal AlQasem](#), [Matthew Joseph Goupell](#), [Ruth Litovsky](#), [Tanvi Thakkar](#), [Alan Kan](#), [Danielle Addington](#)
- M9:** [1677] Modelling the benefit of bilateral signal processing for bimodal CI recipients. [Josef Chalupper](#), [Nicolas Furnon](#)
- M10:** [1679] Effects of impaired selective attention on binaural unmasking or interference of masked speech in bilateral and single-sided-deafness cochlear-implant users. [Matthew J. Goupell](#), [Erin Catob](#), [Sandeep Phatak](#), [Joshua G. W. Bernstein](#)
- M11:** [1692] Models for correcting interaural mismatch in bilateral and single-sided-deafness cochlear-implant listeners. [Paul G Mayo](#), [Danielle Zuckerman Schopf](#), [Miranda Cleary](#), [Kristina DeRoy Milvae](#), [Matthew J Goupell](#)
- M12:** [1703] Sensitivity of inferior colliculus to interaural time and level differences in neonatally deafened rats. [Muhammad Zeeshan](#), [Fei Peng](#), [Bruno Castellaro](#), [Shiyi FANG](#), [Nicole Rosskothén-Kuhl](#), [Jan W.H Schnupp](#)
- M13:** [1707] Design and testing of a front-end implementation of a binaural audio processing strategy inspired by the medial olivocochlear reflex. [Enrique A. Lopez-Poveda](#), [Almudena Eustaquio-Martin](#), [Milagros J. Fumero](#), [Jose Manuel Gorospe](#), [Christian Wirtz](#), [Reinhold Schatzer](#), [Joshua S. Stohl](#), [Peter Nopp](#)
- M14:** [1718] Raiders of the lost activation - exploring the bilateral CI users' localization potential. [Dietmar Michael Wohlbauer](#), [Wai Kong Lai](#), [Norbert Dillier](#)
- M15:** [1746] Binaural fusion and the effects of place of stimulation and interaural cross correlation. [Prajna BK](#), [Justin Aronoff](#)

- M16:** [1780] Relationship between peripheral spread of excitation and binaural fusion in bilateral cochlear implant users. [Lina A.J. Reiss](#), [Logan M. Remington](#), [Holden D. Sanders](#)
- M17:** [1786] Stability of electrical stimulation parameters in a large cohort of Canadian children with bilateral cochlear implants. [Carina J Sabourin](#), [Sharon L Cushing](#), [Blake C Papsin](#), [Karen A Gordon](#), [Stephen G Lomber](#)
- M18:** [1792] Can ITDs and BILDs predict EAS benefit in CI users? [Jonathan D Neukam](#), [Yibo Fan](#), [Michael Z Burchesky](#), [Rene H Gifford](#)
- M19:** [1815] The effects of monaural acoustic glimpse criteria on binaural unmasking and contralateral interference in cochlear implants. [Bobby E Gibbs II](#), [Matthew J Goupell](#)
- M20:** [1831] Characterizing the rate limit of bilateral CI users using electroencephalography. [Hongmei Hu](#), [Ben Williges](#), [Deborah Vickers](#)
- M21:** [1839] Effects of hearing aid use and residual hearing on bimodal hearing in children. [Hanne Bartels](#), [Melissa J. Polonenko](#), [Jaina Negandhi](#), [Sharon L. Cushing](#), [Blake C. Papsin](#), [Karen A. Gordon](#)
- M22:** [1842] Characterizing spatial auditory localization strategies in children who use cochlear implants. [Robel Zelalem Alemu](#), [Alan Blakeman](#), [Sharon Cushing](#), [Blake Papsin](#), [Karen Gordon](#)
- M23:** [1852] Examining the relationship between interaural asymmetry, perceptual fusion, and binaural unmasking in adults with bilateral cochlear implants. [Emily A. Burg](#), [Sean R. Anderson](#), [Ruth Y. Litovsky](#), [Matthew B. Fitzgerald](#)
- M24:** [1857] Microphone directionality in bimodal listening. [Brett Swanson](#), [Amanda Fullerton](#), [Marian Jones](#)
- M25:** [1879] Binaural-bimodal stimulation degrades neural coding of interaural time differences. [Maike Vollmer](#), [Merle Berents](#), [Andreas Schulz](#), [Andrew W. Curran](#), [Frank W. Ohl](#)
- M26:** [1901] Borderline candidacy: too bad for a conventional hearing aid and too good for a cochlear implant (CI). [Karolina Kluk](#), [Mark Sladen](#), [Iain Bruce](#), [Simone Schaefer](#), [Jaya Nichani](#), [Yuhan Wong](#)
- M27:** [1903] The benefits of bimodal hearing in children and adolescents: a systematic review and narrative synthesis. [Yuhan Wong](#), [Iain Bruce](#), [Josef Schlittenlacher](#), [Karyn L Galvin](#), [Karolina Kluk-de Kort](#)
- M28:** [1626] Clinical outcomes for adult single-sided deafness cochlear implantees exceeding the 5% candidacy criterion. [Elicia M. Pillion](#), [Joshua G. W. Bernstein](#), [Anthony M. Tolisano](#)
- M29:** [1740] Contralateral unmasking for single-sided-deafness cochlear-implant users with shifted frequency assignments to reduce interaural place mismatch. [Joshua G.W. Bernstein](#), [Megan M. Eitel](#), [Phatak A. Sandeep](#), [Kenneth Kragh Jensen](#), [Elicia M. Pillion](#), [Coral E. Dirks](#), [Matthew J. Goupell](#)
- M30:** [1753] How do family factors affect cochlear implantation in children with single-sided deafness? [Amanda Griffin](#), [Rachel Landsman](#), [David Faller](#), [Megan Herlihy](#), [Greg Licameli](#)
- M31:** [1844] Investigating the effects of peripheral spectral asymmetry using simulations of cochlear implant listening. [Lukas Suveg](#), [Tanvi Thakkar](#), [Ellen Peng](#), [Ruth Litovsky](#)
- M32:** [1850] Cochlear implantation in single-sided deafness: outcomes and its association with frequency-place mismatch. [Shaza Mahmoud Saleh](#), [Mariam Alamro](#), [Yassin Abdelsamad](#), [Fida Muhawas](#), [Salman Alhabib](#), [Abdulrahman Abdullah Hagr](#)
- M33:** [1633] A computational modeling framework for assessing information transmission with cochlear implants. [Thibaud Leclere](#), [Peter T. Johannesen](#), [Aswin Wijetilake](#), [Manuel Segovia-Martinez](#), [Enrique A. Lopez-Poveda](#)

- M34:** [1714] Automatic landmark localization in CT images using deep learning. Yifan Wang, Thomas Lenarz, Andrej Kral, Samuel John
- M35:** [1724] A computational model of the electrically and acoustically evoked compound action potential in hybrid cochlear implant users. Daniel Kipping, Yixuan Zhang, Waldo Nogueira
- M36:** [1725] Multipolar vs. monopolar stimulation in a cochlear implant: a simulation study. Albert Markus Croner, Jonas Geissdoerfer, Siwei Bai, Werner Hemmert
- M37:** [1726] Modelling of electrophysiological assessment of auditory nerve fiber damage. Werner Badenhorst, Petra van Blerk, Hanekom Tania, Johan J Hanekom
- M38:** [1756] Watching hearing with a neuro-implant: ultra-high-resolution models of neural activity in the human inner ear. Siwei Bai, Albert Croner, Carmen Marie Castaneda Gonzalez, Ali Saeedi, Rudolf Glueckert, Anneliese Schrott-Fischer, Werner Hemmert
- M39:** [1766] Model-based inference of electrode position and neuronal density from measured detection thresholds in cochlear implant listeners. Julie G. Arenberg, David J. Perkel, Joshua H. Goldwyn
- M40:** [1771] The potential of advanced deep learning models to evaluate speech information in vocoder simulations. Rahul Sinha, Mahan Azadpour
- M41:** [1798] GSP cochlea: a graph signal processing model of the cochlea with application to cochlear implants. Melia E Bonomo, Santiago Segarra, Robert M Raphael
- M42:** [1827] Parameterization and prediction of intra-cochlear structures. Joshua Thiselton, Tania Hanekom
- M43:** [1834] Neural network models clarify the role of plasticity in cochlear implant outcomes. Annesya Banerjee, Mark Saddler, Josh McDermott
- M44:** [1864] Towards next-generation scalable cochlear implants. Abraham Akinin, Erin Graf, Michael Triplett, Raziul Haque
- M45:** [1556] Signal processing strategy for cochlear implant based on feature extraction. Manuel Segovia-Martinez, Behnam Molae-Ardekani, Yue Zhang, Aswin Wijetilake, Marianna Vatti, Julian Felding
- M46:** [1594] An approach for determining individual frequency allocation map in cochlear implant users using cochlea CT-scans. Behnam Molae-Ardekani, Raabid Hussain, Marianna Vatti, Hanna Dolhopiatenko, Waldo NogueiraVazquez, Manuel Segovia Martinez
- M47:** [1619] Turning on the cochlear implant: anatomy-based fitting versus standard frequency map. Uwe Baumann, Marten Geisen, Tobias Weissgerber, Timo Stoever, Silke Helbig
- M48:** [1621] Acute effects of a Lombard effect-based sound coding strategy for cochlear implant listeners. Juliana N. Saba, John H.L. Hansen
- M49:** [1627] Phoneme-based reverberant speech enhancement for cochlear implant users. Boyla O. Mainsah, Kevin M. Chu, Leslie M. Collins
- M50:** [1634] Comparison of performance for cochlear-implant users with audio processing strategies based on short-time FFT or spectral feature extraction. Yue Zhang, Peter T. Johannesen, Behnam Molae-Ardekani, Aswin Wijetilake, Alejandro Soler Valcarcel, Manuel Segovia-Martinez, Enrique A. Lopez-Poveda
- M51:** [1657] Neural model-based fine structure coding for cochlear implants. Bernhard U. Seeber
- M52:** [1760] CCI-CLOUD: a framework for community based remote cochlear implant user experiments based on the CCI-MOBILE research platform. Hazem Younis, John Hansen
- M53:** [1705] Intelligibility and speech information of a talking agent for CI users. Samuel

Oghenetega Okei, John Hansen

**M54:** [1706] CCI-MOBILE: validation of a research platform for wireless data communication and transmission. Samuel Oghenetega Okei, John Hansen

**M55:** [1801] Non-linguistic sound source identification and localization for cochlear implant users with ecological momentary assessment. Taylor Lawson, John H. L. Hansen

**M56:** [1802] CCI-MOBILE: deep source separation and non-linguistic sound enhancement in competing scenarios: advancements for cochlear implant recipients. Ram Charan M. Chandra Shekar, John H.L. Hansen

**M57:** [1713] A cochlear implant speech coding strategy integrating temporal masking effects: Extension to realistic listening conditions and clinically used devices. Lideya Shahidi, Robert P. Carlyon, Deborah A. Vickers, Tobias Goehring

**M58:** [1735] The impact of electrode-specific compression functions on outcomes with a cochlear implant. Andreas Buechner, Lutz Gaertner, Thomas Lenarz

**M59:** [1567] Development of a machine learning system for predicting cochlear implant performance: analysis of a large retrospective dataset. Alexey Demyanchuk, Eugen Kludt, Thomas Lenarz, Andreas Buechner

**M60:**

**M61:** [1566] Cochlear implant electrode impedance subcomponents as biomarker for residual hearing. Stephan Schraivogel, Philipp Aebischer, Stefan Weder, Marco Caversaccio, Wilhelm Wimmer

**M62:** [1575] Real-time analysis of intraoperative electrocochleography with simultaneous impedance measurements using linear state-space models. Raphael Raschid Andonie, Wilhelm Wimmer, Reto Andreas Wildhaber, Marco Caversaccio, Stefan Weder

**M63:** [1605] Vcoders and objective measures: how much to trust for designing new sound coding strategies in cochlear implants? Behnam Molaei-Ardekani, Yue Zhang, Rafael Attili Chiea, Manuel Segovia Martinez

**M64:** [1636] Developing a new test-bench for screening effective next-generation speech processing algorithms for cochlear implants. Anais Donzeau, Tobias Goehring, Yue Zhang, Manuel Segovia-Martinez

**M65:** [1720] Streamlined cochlear image analysis: enhancing an ai-powered tool for large-scale population statistics and accurate 3D modelling. Jan Margeta, Raabid Hussain, Behnam Molaei-Ardekani, Reda Kamraoui, Roger Calixto, Octavio E. Martinez Manzanera, Paula Lopez Diez, Francois Patou, Chadlia Karoui, Michel Hoen, Charles Raffaelli, Clair Vandersteen, Nicolas Guevara

**M66:** [1759] Waveform morphology of intraoperative electrocochleography. Raphael Raschid Andonie, Wilhelm Wimmer, Philipp Aebischer, Reto Andreas Wildhaber, Marco Caversaccio, Stefan Weder

**M67:** [1810] Principal components analysis of amplitude envelopes from spectral channels: comparison between music and speech. Agnieszka Duniec, Olivier Crouzet, Elisabeth Delais-Roussarie

**M68:** [1811] Estimation of intracochlear electrode position from cochlear implant impedance telemetry. Christopher Bennett, Ryan O. Melman, Zachary M. Smith

**M69:** [1812] Automatic classification of congenital inner ear malformations from CT images using unsupervised deep metric learning for 3D shapes. Paula Lopez Diez, Jan Margeta, Khassan Diab, Francois Patou, Rasmus R. Paulsen

**M70:** [1896] A novel, validated CI electrode location prediction method for improved preoperative

planning. Daniel Schurzig, Felix Repp, Max E. Timm, Cornelia Batsoulis, Thomas Lenarz, Andrej Kral

## Tuesday 11 July

- T1:** [1558] Determination and comparison of two measurement paradigms of electrically evoked cochlear nerve responses and their correlation to cochlear nerve cross-section in infants with cochlear implant. Tobias Rader, Leonhard Schrank, Jennifer Lee Spiegel
- T2:** [1589] Developing cochlea-on-a-chip model for advancing cochlear implant performance and electrode-nerve interface study. Ilkem Sevgili, Iwan Roberts, Botian Huang, Manohar Bance
- T3:** [1593] Investigating the electrode-electrolyte interface modelling in cochlear implants. Behnam Molaee-Ardekani, Mary J. Donahue
- T4:** [1600] Responsiveness of the electrically stimulated cochlear nerve in children with incomplete partition type 2. Yi Yuan, Jeffery Skidmore, Shuman He
- T5:** [1613] Utility of the pitch ranking procedure in the individualized mapping of cochlear implant recipients. Margaret E Richter, Margaret T Dillon
- T6:** [1625] The assessment of electrode-neuron interface in children and adults with cochlear implants. Mohammad Maarefvand, Roya Karimipour
- T7:** [1640] Investigating electrochemical safety limits of neural stimulating electrodes. Prabhakar Sidambaram, Roger Calixto
- T8:** [1658] Getting more auditory-nerve bang for your facial-nerve buck: effects of pulse shape on loudness and facial-nerve activation in cochlear-implant listeners. John Deeks, Iwan Roberts, Simone de Rijk, Dorothee Arzounian, Manohar Bance, Robert Carlyon
- T9:** [1730] Effects of stimulus polarity on latency of the evoked potential in patients with an auditory brainstem implant. Lutz Gaertner, Anne Schroeder, Marko Takanen, Konrad Schwarz, Thomas Lenarz, Andreas Buechner
- T10:** [1752] CI stimulation parameters play a key role in reducing facial nerve stimulation. Lutz Gaertner, Bradford C. Backus, Nicolas Le Goff, Anika Morgenstern, Thomas Lenarz, Andreas Buechner
- T11:** [1748] Impact of aging and the electrode-to-neural interface on temporal processing ability in cochlear-implant users. Anhelina Bilokon, Bobby E. Gibbs II, Miranda Cleary, Matthew J. Goupell
- T12:** [1764] Assessing the neural interface and auditory functionality of ABI electrodes to inform electrode selection for speech processing. Mahan Azadpour, Rahul Sinha, Jonathan Neukam, Nicole Capach, William Shapiro, Thomas Roland, Mario Svirsky
- T13:** [1800] A novel tool for faster psychophysical tuning curve measurement in cochlear implant listeners: data from listeners with normal hearing. Meisam K. Arjmandi, Andrew J. Oxenham, Charlotte Morse-Fortier, Julie G. Arenberg
- T14:** [1830] Relating electrophysiological (auditory chance complex) and behavioral measures of amplitude modulation rate discrimination to speech in noise perception in cochlear implant users. Deborah Vickers, Nick Haywood, Marina Salorio-Corbetto, Jaime Undurraga, Ben Williges
- T15:** [1853] Electrophysiological and psychophysical tuning comparisons in adult cochlear implant listeners. Nicole T Jiam, Charles Hem, Faten Awwad, Julie Arenberg
- T16:** [1855] A large-scale analysis of speech recognition, aging, electrode location, and estimates of neural health in adult cochlear implant recipients. Kara C Schwartz-Leyzac, Carolyn M McClaskey, Kelly C Harris, Bryan E Pfingst

- T17:** [1875] An investigation of the effect of changes in IPG on the amplitude growth function in cochlear implant recipients. Greg D Watkins, Orsolya Kekesi, Ying Shen, Melvile da Cruz, Gregg J Suaning
- T18:** [1876] Electrical stimulation of cochlear implant promotes activation of macrophages and fibroblasts under inflammation. Hongzheng Zhang, Dingling Zhang
- T19:** [1881] Reaction times capture temporal interactions in electrical hearing. Ignacio Calderon De Palma, Andy J Beynon, John van Opstal, Joerg Pesch, Emmanuel EAM Mylanus, Marc M van Wanrooij
- T20:** [1885] Modelling SGN responses to non-rectangular stimuli based in patch clamp experiments of intracellular and extracellular stimulation. Sarantos Mantzagriotis, Manohar Bance, Ilkem Sevgili, Paul Charlesworth, Jeremy Marozeau, Bastian Epp
- T21:** [1654] The effects of multi-mode monophasic stimulation with capacitive discharge on the facial nerve stimulation reduction in young children with cochlear implants: intraoperative recordings. Fabiana Danieli, Miguel Angelo Hyppolito, Raabid Hussain, Jan Margeta, Chadlia Karoui, Michel Hoen, Ana Claudia Mirândola Barbosa Reis
- T22:** [1675] Interrelationships among eCAP refractory recovery, maximum amplitude, and AGF slope. Michelle L. Hughes
- T23:** [1843] Escude and Avci et. al. revisited. Cochlear microanatomy from a database of 1100 ears. Roger Calixto, Attila Frater, Nicolas Guevara, Raabid Hussain, Jan Margeta
- T24:** [1860] Pulse timing interval sensitivity in the inferior colliculus of cochlear implanted rats. Fei Peng, Shiyi Fang, Muhammad Zeeshan, Bruno Castellaro, Qinjie Zhang, Jan W.H. Schnupp
- T25:** [1886] Optimizing EEG preprocessing pipelines for cochlear implant artifact removal: challenges and solutions. Nour Alsabbagh, Francis Smith, Phillip Gander, Joel Berger, Bob McMurry, Timothy Griffiths, Inyong Choi
- T26:** [1887] Comparison of speech in noise processing in hearing impaired populations using O-15 Water PET. Laura Kiskunas, Phillip Gander, Joel Berger, Bob McMurray, Inyong Choi, Laura Ponto, Tim Griffiths
- T27:** [1629] The effect of pulse shape on pitch sensitivity of cochlear implant users. Niyazi Omer Arslan, Xin Luo
- T28:** [1641] Assessing the electrode-neural interface using focused stimulation and spatial tuning curves in cochlear-implant users. Heather A Kreft, Andrew J. Oxenham
- T29:** [1648] How do listeners with mismatched ear quality lateralize ITDs and ILDs for complex sounds? Jarett Henry Knoepker, Tanvi Thakkar
- T30:** [1660] Temporal pitch perception in CI users: channel independence in apical cochlear regions. Andreas Griessner, Reinhold Schatzer, Viktor Steixner, Gunesh P. Rajan, Clemens Zierhofer, Dayse Tavora-Vieira
- T31:** [1709] Pitch and quality of sound perception of modulated and unmodulated pulses as a function of place and rate of stimulation. Viktor Steixner, Andreas Griessner, Sonja Karg, Reinhold Schatzer, Christian Wirtz, Peter Nopp, Werner Hemmert, Clemens Zierhofer
- T32:** [1712] The upper limit of temporal pitch perception for apical stimulation in cochlear implant recipients. Evelien De Groote, John M. Deeks, Robert P. Carlyon, Olivier Macherey
- T33:** [1715] Fast, continuous estimation of spectrotemporal modulation sensitivity. Snandan Sharma, Andrea Russo, Marc Van Wanrooij
- T34:** [1757] Effects of rate training on pitch discrimination and modulation detection thresholds. Ravinder Singh, Susan Bissmeyer, Ray Goldsworthy

- T35:** [1758] Characterization of a psychophysical test battery for the evaluation of novel speech coding strategies in cochlear implants. [Bram Knipscheer](#), [Jeroen J. Briaire](#), [Johan H.M. Frijns](#)
- T36:** [1770] Spectral resolution and its effects on spectral ripple discrimination and speech understanding in a vocoder. [Sean R Anderson](#), [Sara I Duran](#), [Harish Krishnamoorthi](#), [Zachary M Smith](#), [Christopher J Long](#)
- T37:** [1777] Characterizing the effect of phase duration on pitch: is it place-pitch? [Natalia Stupak](#), [David M. Landsberger](#), [Joshua S. Stohl](#)
- T38:** [1795] Psychophysical tuning curves in cochlear implant listeners: comparing a fast, novel method to a traditional approach. [Charles Hem](#), [Andrew Oxenham](#), [Meisam Arjmandi](#), [Heather Kreft](#), [Julie G. Arenberg](#)
- T39:** [1782] Developing personalized intervention informed by the viability of the electrode-neural interface. [Jason Tzu-Hsien Lien](#), [Ben Williges](#), [Deborah Vickers](#)
- T40:** [1837] Spatial release from masking for small spatial separations between the target and the maskers for simulated cochlear implant processed speech. [Nirmal Srinivasan](#), [SaraGrace McCannon](#), [Chhyakant Patro](#)
- T41:** [1750] The impact of pulse rate, electrode location and cross-channel interaction on pitch perception and frequency discrimination in CI users. [Yue Zhang](#), [Behnam Molaei-Ardekani](#), [Rafael Attili Chiaia](#), [Peter T Johannesen](#), [Enrique A Lopez-Poveda](#), [Manuel Segovia-Martinez](#)
- T42:** [1698] Should cochlear implant loudness be more like a hearing aid? [Adam Hersbach](#), [Amanda Fullerton](#), [Zachary Smith](#)
- T43:** [1803] Transformer-based monaural speech enhancement for cochlear implant (CI) users via complex spectral mapping. [Nursadul Mamun](#), [John Hansen](#)
- T44:** [1832] Current spread and channel numbers limit disyllabic word and tonal recognition in simulated auditory brainstem implants. [Qinjie Zhang](#), [Huan Jia](#), [Haoyue Tan](#), [Qinglin Meng](#), [Sui Huang](#), [Hao Wu](#)
- T45:** [1836] Design and optimization of an end-to-end deep learning sound coding strategy for cochlear implants through a computational model and perceptual tests. [Waldo Nogueira](#), [Franklin Alvarez](#), [Tom Gajecski](#)
- T46:** [1840] Effect of microphone directionality setting on speech understanding in noise in bilateral CI recipients. [Thomas Wesarg](#), [Konstantin Wiebe](#), [Susan Arndt](#), [Antje Aschendorff](#), [Horst Hessel](#), [Maximilian Haider](#)
- T47:** [1871] A generic signal processing framework for speech redundancy manipulation algorithms in speech perception studies. [Fanhui Kong](#), [Huali Zhou](#), [Qinglin Meng](#), [Nengheng Zheng](#)
- T48:** [1882] Pitch and lexical tone perception in quiet and noise using F0-rate coding strategies. [Andrew E. Vandali](#), [Zachary M. Smith](#), [Komal Arora](#), [Lei Xu](#), [Jianfen Luo](#), [Ruijie Wang](#), [Xiuhua Chao](#), [Yi Zheng](#)
- T49:** [1883] Deep neural network-based noise reduction for cochlear implants. [Amanda Fullerton](#), [Adam Hersbach](#), [Harish Krishnamoorthi](#), [Tim Brochier](#), [Zachary Smith](#)
- T50:** [1682] Sound of metal: a real-time vocoder audio plugin for cochlear implant simulations. [Shaikat Hossain](#)
- T51:** [1719] A comparative study of music preprocessing strategies for cochlear implant listeners. [Johannes Gauer](#), [Anil Nagathil](#), [Benjamin Lentz](#), [Christiane Voelter](#), [Rainer Martin](#)
- T52:** [1734] Frequency discrimination and music enjoyment in adult cochlear implant users. [Cynthia Cheuk-Chee Lam](#), [Nicholas Haywood](#), [Brian C. J. Moore](#), [Ben Williges](#), [Deborah A.](#)

Vickers

**T53:** [1742] Exploring rate-coded pitch perception in CI users vs. a wavelet vocoder using the Oticon Medical research platform. [Bradford C. Backus](#), [Tobias Herzke](#)

**T54:** [1745] Individualized optimization of a music remixing method for cochlear implant users. [Anil Nagathil](#), [Johannes Gauer](#), [Sinnthujan Jeyachandran](#), [Rainer Martin](#)

**T55:** [1813] Melodic contour identification through CI simulations using efficient coding filter banks. [Agnieszka Duniec](#), [Olivier Crouzet](#), [Elisabeth Delais-Roussarie](#)

**T56:** [1816] Effects of manipulating channel interaction on music perception in adults with cochlear implants. [Katelyn Berg](#), [Ray Goldsworthy](#), [Jack Noble](#), [Rene Gifford](#)

**T57:** [1819] Feature information transmission analysis of musical timbre perception. [Rudolph C Uys](#), [Johan J Hanekom](#)

**T58:** [1858] Exploring melodic contour identification with spectrally reduced stimuli for improved cochlear implant music perception. [Avamarie Brueggeman](#), [Juliana N Saba](#), [John H. L. Hansen](#)

**T59:** [1888] Music emotion perception with cochlear implants. [Eleanor E Harding](#), [Etienne Gaudrain](#), [Robert Harris](#), [Barbara Tillmann](#), [Bert Maat](#), [Rolien Free](#), [Deniz Baskent](#)

**T60:**

**T61:** [1583] Optical coherence tomography for image-guided cochlear implantation and diagnostics: a near future? [Nicolas Verhaert](#), [Lore Kerkhofs](#), [Anastasiya Starovoyt](#), [Tristan Putzeys](#), [Jan Wouters](#), [Greet Kerckhofs](#)

**T62:** [1595] Impact trial: a multicenter randomized controlled trial evaluating the efficacy of a parent-implemented therapy on language development in children with cochlear implants. [Efstratia Papoutselou](#), [Trish Hepburn](#), [Jayne Ramirez-Inscoe](#), [Angela Maxwell](#), [Sarah Paganga](#), [Samantha Harrison](#), [Guangting Mai](#), [Colleen Ewart](#), [Douglas Hartley](#)

**T63:** [1662] Personalized cochlear implantation using real-time fluoroscopy and intraoperative ECAP measurements. [Nadine Buczak](#), [Eugen Kludt](#), [Silas Ewald](#), [Rolf Salcher](#), [Kerstin Willenborg](#), [Andreas Buechner](#), [Andrej Kral](#), [Thomas Lenarz](#)

**T64:** [1708] Feasibility of extracochlear stimulation to induce hearing and reduce tinnitus. [Rahel Bertschinger](#), [Leanne Sijgers](#), [Marlies Geys](#), [Lorenz Epprecht](#), [Adrian Dalbert](#), [Christof Roeoesli](#), [Flurin Pfiffner](#), [Alexander Huber](#)

**T65:** [1711] Auditory diagnostics and error-based treatment: working towards a performance-driven fitting paradigm. [Enrico Migliorini](#), [Nikki Philpott](#), [Jan-Willem Wasmann](#), [Bas van Dijk](#), [Birgit Philips](#), [Emmanuel Mylanus](#), [Wendy Huinck](#)

**T66:** [1808] Exploring the effect of change to electrical threshold setting and rate of stimulation to the perception of soft intensity speech cues and speech in experienced adult cochlear implant users. [Terry B Nunn](#), [Tim Green](#), [Dan Jiang](#), [Patrick Boyle](#), [Deborah A Vickers](#)

**T67:** [1783] Looking for a biomarker of neuroplasticity in congenital deafness treatment by cochlear implantation – is plasma level of MMP-9 a one? [Monika Matusiak](#), [Dominika Ozieblo](#), [Monika Oldak](#), [Emilia Rejmak](#), [Dominik Dobek](#), [Leszek Kaczmarek](#), [Henryk Skarzynski](#)

**T68:** [1814] An alternative method for drug-coating preparation on electrode array of cochlear implant portable electrospinning of PCL/PEO. [Haoyue TAN](#), [Qinjie ZHANG](#), [Huan JIA](#)

**T69:** [1824] Translational anatomy in cochlear implant research. [Rene Baron](#), [Tania Hanekom](#), [Andre Uys](#), [Kalisha Beehmraj](#), [Shavana Govender](#)

**T70:** [1878] Developing and validating virtual-audio clinical tools for assessing spatial-listening skills for children with bilateral cochlear implants. [Marina Salorio-Corbetto](#), [Bhavisha Parmar](#), [Jennifer Bizley](#), [Stuart Rosen](#), [Tim Green](#), [Lorenzo Picinali](#), [Ben Williges](#), [Deborah Vickers](#)



## Wednesday 12 July

- W1:** [1669] Loudness enhancement for cochlear implant users with tactile stimulation. Scott C. Aker, Kathleen F. Faulkner, Hella D. Flocken, Hamish Innes-Brown, Jeremy Marozeau
- W2:** [1680] Visual plasticity throughout rehabilitation with a cochlear implant. Andrea J DeFreese, Katelyn A Berg, Eric Larson, Adrian K.C. Lee, Mark T Wallace, Rene H Gifford
- W3:** [1744] Investigating cross-modal plasticity and speech outcomes in CI users using EEG. Brandon T. Paul, Andrew Dimitrijevic
- W4:** [1833] Effect of audiovisual asynchrony on speech intelligibility in CI users and typical hearing controls. Cailey A Salagovic, Ryan A Stevenson, Blake E Butler
- W5:** [1854] Assessing the relative benefit of real time captioning for speech in noise benefit. Gavriel D Kohlberg, Yi Shen, Adrian KC Lee, Jay T Rubinstein, Les E Atlas, Richard A Wright
- W6:** [1582] The use of frequency importance functions in predicting speech perception in adult cochlear implant and normal hearing listeners. Malia Henderson, Douglas Sladen, Adam Bosen
- W7:** [1601] Bilateral cochlear implant users have more difficulty controlling vocal intensity when using both devices. Simin Soleimanifar, Justin M Aronoff
- W8:** [1609] Effects of talker variability and linguistic content on speech-perception scores. Priya K Premkumar, Molly S Pangestu, Laurencia Santillan, Delaney J Skretta, Michelle L Hughes
- W9:** [1622] Links between perception and production of emotional prosody by prelingually deaf children with cochlear implants. Ava Feller, Aditya M Kulkarni, John J Galvin 3rd, Monita Chatterjee
- W10:** [1628] How children and adults with normal hearing or cochlear implants use voice pitch and duration cues for emotional prosody identification. Aditya M Kulkarni, Denis Fitzpatrick, Monita Chatterjee
- W11:** [1630] Does speech production relate to speech perception in adult cochlear implant users? Victoria A. Sevich, Aaron C. Moberly, Terrin N. Tamati
- W12:** [1733] Speech-in-noise ability is differentially predicted by neural responses in auditory and prefrontal cortex of cochlear implantees. Joel I Berger, Phillip E Gander, Laura L Ponto, Jae-hee Lee, Laura Kiskunas, Camille Dunn, Bruce J Gantz, Bob McMurray, Inyong Choi, Timothy D Griffiths
- W13:** [1747] Age-related temporal processing deficits in cochlear-implant listeners interact with presentation level to alter perception of speech contrasts. Anna R. Tinnemore, Erin M. Doyle, Pallavi Atluri, Chengjie G Huang, Miranda I Cleary, Matthew J Goupell
- W14:** [1762] Perception of prosodic cues for contrastive focus in sentences. Harley Wheeler, Tereza Krogseng, Matthew Winn
- W15:** [1773] Increased lexical competition during spoken word recognition by children with cochlear implants. Christina M Blomquist, Jan R Edwards, Rochelle S Newman
- W16:** [1775] Attributes of vocal emotion perceived through a cochlear implant. David M. Landsberger, Natalia Stupak, Rahul Sinha, Aaron M. Johnson, John J. Galvin
- W17:** [1787] Spectral resolution and speech production in pediatric cochlear implants users. Mackenzie A. Lighterink, Rene H. Gifford, Stephen M. Camarata, Ferenc Bunta
- W18:** [1793] Transmission of acoustic cues in consonant confusions and its relationship to spectral resolution in listeners with cochlear implants. Destinee M Halverson, Anisha Noble, Mariette S Broncheau, Olga Peskova, Jay T Rubinstein, Lynne A Werner, David L Horn

- W19:** [1805] Relationships between perception and production errors in normal hearing children, pediatric cochlear implant users and children listening to vocoder simulations. [Olga Peskova](#) , [Abbey L. Thomas](#), [Peter F. Assmann](#), [David L. Horn](#)
- W20:** [1822] Amplitude envelope cues to vocal emotion recognition with cochlear implants. [Xin Luo](#), [John J. Galvin](#), [Monita Chatterjee](#)
- W21:** [1825] The effect of bimodal hearing on speech intonation production of adult cochlear implant users. [Chang Ai](#), [Xin Luo](#)
- W22:** [1869] The contributions of harmonicity in speech-on-speech recognition with cochlear implants. [Mingyue Shi](#), [Huali Zhou](#), [Jiawen Li](#), [Yefei Mo](#), [Qinglin Meng](#), [Nengheng Zheng](#)
- W23:** [1581] Developmental effects of concurrent auditory and vestibular impairments on working memory, language, and academic abilities in children with bilateral cochlear implants. [Melissa Hazen](#), [Sharon L Cushing](#), [Karen A Gordon](#)
- W24:** [1620] Development of frequency resolution and spectral-modulation sensitivity in infants who use cochlear implants. [David Louis Horn](#), [Marianne Broncheau](#), [Destinee Halverson](#), [Jay Rubinstein](#), [Lynne Werner](#)
- W25:** [1710] Phonological discrimination for the learning of novel words: a study in children with cochlear implants. [Julia SC Chiossi](#), [Elaine HN Ng](#), [Kathleen Faulkner](#), [Lone M Percy-Smith](#), [Bjorn Lyxell](#)
- W26:** [1785] Changes in infants' and toddlers' vocal activity before and immediately after cochlear implant activation. [Margaret Cychosz](#), [Ana Marija Sola](#), [Chiara Scarpelli](#), [Jihyun Stephans](#), [Kayla Kolhede](#), [Dylan K. Chan](#)
- W27:** [1848] Pediatric cochlear implant users' speech and language performance: the role of socioeconomic factors and third-party support. [Heo yujin](#), [lee changhee](#), [moon il joon](#), [chung won-ho](#), [cho yang-sun](#), [cho young sang](#)
- W28:** [1580] Measuring the timing and duration of listening effort needed to mentally repair misperceptions in cochlear implant listeners. [Michael L. Smith](#), [Matthew B. Winn](#)
- W29:** [1584] Cochlear implant listening effort: a difference of efficiency rather than magnitude. [Matthew Brandon Winn](#)
- W30:** [1587] Measuring the timeline of retroactive sentence repair in listeners with cochlear implants. [Steven P. Gianakas](#), [Matthew B. Winn](#)
- W31:** [1608] When do cochlear implant users "give up"?: the impact of SNR, peripheral auditory sensitivity and central cognitive profile on CI users' speech recognition and listening effort. [Yue Zhang](#), [Amparo Callejon-Leblic](#), [Ana M Picazo-Reina](#), [Francois Patou](#), [Serafin Sanchez-Gomez](#)
- W32:** [1644] The role of listening effort in mitigating rollover effects of speech-in-noise perception in cochlear implant users. [Chengjie Huang](#), [Samira Anderson](#), [Matthew Goupell](#)
- W33:** [1647] Reducing listening effort with cochlear implant simulation via auditory training. [Seeon Kim](#), [Yi Zhou](#), [Xin Luo](#)
- W34:** [1665] Oscillatory alpha activity as a neuronal correlate of working memory, in adult cochlear implant recipients with different degrees of speech perception performance. [Loes Beckers](#), [Anna Ruhe](#), [Birgit Philips](#), [Wendy Huinck](#), [Emmanuel Mylanus](#), [Andreas Buechner](#), [Andrej Kral](#)
- W35:** [1691] Gated word recognition: effects of spectral resolution and electro-acoustic stimulation. [Ellen Shephard](#), [Ariana Bennaim](#), [Nirmal Srinivasan](#), [Chhayakant Patro](#)
- W36:** [1701] Dual-task performance of normal-hearing adults, cochlear implant users, and hearing aid users in a listening effort dual-task paradigm. [Dorien Ceuleers](#), [Freyja Swinnen](#), [Nele](#)

Baudonck, Katrien Kestens, Sofie Degeest, Ingeborg Dhooge, Hannah Keppler

**W37:** [1738] Differences in neural correlates of auditory working memory between cochlear implant users and normal hearing controls. [Priyanka Prince](#)

**W38:** [1739] Neural entrainment of a naturalistic conversation in varying working memory loads. [Priyanka Prince](#)

**W39:** [1779] Differences in cortical processing of meaningful and semantically anomalous sentences in adult CI users: the effects of “neural context gain” on sentence recognition scores. [Maureen J Shader](#), [Leroy Medrano](#)

**W40:** [1791] Identifying the neural responses to auditory and audiovisual speech during movie watching using optical neuroimaging. [Jonathan E Peelle](#), [Emily N Milarachi](#), [Arefeh Sherafati](#), [Michael S Jones](#), [Noel Dwyer](#), [Aahana Bajracharya](#), [Jill B Firszt](#), [Joseph P Culver](#)

**W41:** [1818] Comparing cognitive performance between individuals with cochlear implants and acoustic hearing on a neuropsychological battery with accommodations for hearing loss. [Rebecca Kelly](#), [Miranda Cleary](#), [Anjeli Inscore](#), [Dux Moira](#), [Aditya Kulkarni](#), [Nicole Nguyen](#), [Jacob Blumenthal](#), [Anna Tinnemore](#), [Matthew J Goupell](#)

**W42:** [1835] Neural mechanisms of spatial release from masking in vocoded and non-vocoded environments. [Benjamin Richardson](#), [Barbara Shinn-Cunningham](#), [Jana Kainerstorfer](#), [Christopher Brown](#)

**W43:** [1559] Variability in clinicians’ prediction accuracy for outcomes of adult cochlear implant users. [Nikki Philpott](#), [Birgit Philips](#), [Rogier Donders](#), [Emmanuel A Mylanus](#), [Wendy J Huinck](#)

**W44:** [1576] Use of machine learning to predict adult cochlear implant benefit using reliable change index. [Aaron C Moberly](#), [Patrick J Lawrence](#), [Terrin N Tamati](#), [Xia Ning](#)

**W45:** [1635] The influence of stimulus polarity on outcome prediction with measures of cochlear neural health and their relationship with age. [Heval Benav](#), [Ladan Zamaninezhad](#), [Carolyn Garnham](#), [Berkutay Mert](#), [Jochen Tillein](#), [Uwe Baumann](#)

**W46:** [1655] Comparison of tonotopic maps for cochlear implant fitting: a study on 149 patients from MHH hospital. [Raabid Hussain](#), [Anika Morgenstern](#), [Behnam Molaei-Ardekani](#), [Jan Margeta](#), [Andreas Buechner](#)

**W47:** [1700] Investigation of the auditory, visual, and cognitive abilities: differences between normal-hearing adults, hearing aid users, and cochlear implant users and the proposition of an AVC-profile. [Dorien Ceuleers](#), [Hannah Keppler](#), [Sofie Degeest](#), [Nele Baudonck](#), [Freya Swinnen](#), [Katrien Kestens](#), [Ingeborg Dhooge](#)

**W48:** [1732] Gathering ecological data to assess real-life benefits of cochlear implants. [Lelia Erscoi](#), [Yue Zhang](#), [Manuel Segovia-Martinez](#)

**W49:** [1737] Effect of frequency-to-place mismatch and frequency warp on speech and music sound quality in acoustic cochlear implant simulation. [Louis Villejoubert](#), [Lorenzo Picinali](#), [Kathleen Faulkner](#), [Deborah Vickers](#)

**W50:** [1761] An extraordinary auditory brainstem implant (ABI) user: strengths, weaknesses, and milestones. [Carolyn Herbert](#), [William G. Kronenberger](#), [Rick F. Nelson](#), [Kim Wolfert](#), [Charles Yates](#), [David Pisoni](#)

**W51:** [1778] On the development of a questionnaire towards understanding barriers to adult CI uptake: a literature review. [Jonathan D Neukam](#), [Ankita Patro](#), [Aaron C Moberly](#), [Terrin Tamati](#)

**W52:** [1784] Do social networks relate to speech recognition and real-world functioning in adult cochlear implant users? [Terrin N. Tamati](#), [Victoria A. Sevich](#), [Aaron C. Moberly](#), [Sara Conroy](#)

**W53:** [1797] Effects of inter-implant delay and auditory experience on spatial release from masking in children with bilateral cochlear implants. [Nimesha Didulani Dantanarayana](#), [Shelly P](#)

Godar, Sara M Misurelli, Ruth Y Litovsky

**W54:** [1804] A prospective, multi-center case-control trial examining factors that predict variable clinical performance in post lingual adult CI recipients (PREVA). Pam Dawson, Amanda Fullerton, Harish Krishnamoorthi, Kerrie Plant, Andreas Buchner, Robert Cowan

**W55:** [1845] Beliefs toward current and increased sound processor wear time in adult CI users. Birgit Philips, Griet Goovaerts, Cherith Campbell-Bell, Val Roman, Jim May

**W56:** [1859] Improving the CI-aided audiogram: is it worth measuring electrical thresholds? Nicole Hope Capach, Noam Zigdon, Jonathan D Neukam, William H Shapiro, Mario A Svirsky

**W57:** [1868] Effect of inner ear malformations on relationships between intraoperative ECAP responses and postoperative auditory performances. Ye-Jin Suh, Jeong-Seo Kim, Il Joon Moon

**W58:** [1872] Assessment of cochlear implant hearing outcomes using ecological momentary assessment (EMA) in both controlled and real-world settings. Zachary M. Smith, Qingqing Meng, Marisa Poulos, Jessica Monaghan, Jorge Mejia

## Thursday 13 July

**Th1:** [1565] Feasibility of interbrain synchrony between cochlear implanted children and their mother: a fNIRS study. Hilal Dogan, Douglas Hartley, Ian Wiggins, Samantha Harrison, Efstratia Papoutselou, Guanting Mai

**Th2:** [1571] Electrically evoked compound action potentials as marker for spiral ganglion neuron damage and degeneration. Wiebke Susanne Konerding, Julie G. Arenberg, Andrej Kral, Peter Baumhoff

**Th3:** [1577] Bone density-based selection of optimal stimulation sites for bone conduction implants. Emile Talon, Franca Wagner, Marco Caversaccio, Wilhelm Wimmer

**Th4:** [1585] A robust method for removing artifacts from recordings of electrically evoked compound action potentials evoked by single pulse and pulse train stimulation. Jeffrey Skidmore, Yi Yuan, Shuman He

**Th5:** [1596] Towards objective electrode-selection strategies based on neural temporal envelope encoding in cochlear-implant users. Wouter David, Elise Verwaerde, Robin Gransier, Jan Wouters

**Th6:** [1598] The effect of stimulation waveform on electrically elicited stapedius response threshold (eSRT) in neuro cochlear implants. Behnam Molaee-Ardekani, Anika Morgenstern, Lutz Gaertner, Andreas Buechner, Manuel Segovia Martinez

**Th7:** [1645] Pupillometry and subjective ratings of task difficulty yield conflicting results in CI users when using the Dutch-Flemish matrix test. H Christiaan Stronks, Annemijn L. Tops, Kwong Wing Quach, Jeroen J. Briare, Johan H. M. Frijns

**Th8:** [1656] Assessing array-type differences in current spread in cochlear implant users using the panoramic ECAP method. Charlotte Garcia, Robert P Carlyon

**Th9:** [1661] Recording of cortical potentials evoked acoustically and electrically directly through a cochlear implant. Joseph Attias, Suhail HabibAllah, Chen Chen

**Th10:** [1663] Fourier filter enhanced averaging applied on ECAP amplitude growth functions. Konrad Schwarz, Lutz Gaertner, Timo Braecker, Marko Takanen, Stefan Strahl, Angelika Dierker, Kathrin Lauss, Philipp Spitzer

**Th11:** [1664] Investigating the effect of blurring and focusing current on estimates of current spread in cochlear implant users with the panoramic ECAP method. Charlotte Garcia, Charlotte

Morse-Fortier, Francois Guerit, Tobias Goehring, Robert P Carlyon, Julie G Arenberg

**Th12:** [1672] Does simple impedance reflect intrascalar tissue in the implanted cochlea? Deborah J. Colesa, Katie L. Colesa, Yuki Low, Don L. Swiderski, Yehoash Raphael, Bryan E. Pfungst

**Th13:** [1678] Using an app-based data collection tool to measure impedances remotely in everyday life. Rene Gifford, Robert Dwyer, Time Schoof, Sridhar Kalluri, Courtney Butler, Jourdan Holder

**Th14:** [1683] Direct in vivo measurement of cochlear place coding in humans—von Békésy revisited. Amit Walia, Amanda J Ortmann, Jordan Varghese, Shannon M Lefler, Matthew A Shew, Jacques A Herzog, Craig A Buchman

**Th15:** [1695] CT-based mapping at initial activation: a longitudinal crossover study of music and speech perception. Melanie L Gilbert, Mickael L D Deroche, Patpong Jiradejvong, Charles J Limb

**Th16:** [1696] Towards using cochlear implant electrodes to record cortical responses to sustained high-rate stimulation. Charlotte Garcia, Dorothee Arzounian, Francois Guerit, John M Deeks, Robert P Carlyon

**Th17:** [1704] Predicting electrode-modiolar distances in cochlear implant recipients using monopolar, three-point and four-point impedance measurements. Leanne Sijgers, Alexander Huber, Marlies Geys, Christof Roeoesli, Norbert Dillier, Patrick Boyle, Adrian Dalbert, Flurin Pfiffner

**Th18:** [1722] New insights in the electrically evoked compound action potential. Stefan Strahl, Konrad Schwarz, Marko Takanen, Philipp Spitzer, Angelika Dierker, Henk Vink, Huib Versnel, Dyan Ramekers

**Th19:** [1723] Cortical tracking of speech perception: Effects of intelligibility and spectral degradation. Alexis Deighton MacIntyre, Robert P Carlyon, Tobias Goehring

**Th20:** [1727] Assessment of binaural interaction in SSD CI users from auditory brainstem responses. Sebastian Roth, Julian Angermeier, Antje Aschendorff, Thomas Wesarg, Werner Hemmert, Stefan Zirn

**Th21:** [1728] The potential of objective T-level determination in CI recipients using envelope following responses. Julian Schott, Robin Gransier, Marc Moonen, Jan Wouters

**Th22:** [1729] Insights from multi-level ECoChG recorded across the full electrode array. Patrick Joseph Boyle, Shaza Salec, Farid Alzahrani<sup>1</sup>, Rana Alshihri

**Th23:** [1743] Detection of changes in amplitude modulation depth and rate can predict speech understanding in cochlear implant users – a behavioral and electrophysiological study. Nina Aldag, Waldo Nogueira

**Th24:** [1763] Superior sound localization abilities with bilateral middle ear implants for patients with bilateral conductive hearing loss. Martijn Agterberg, Daniela Hollfelder, Louise Straatman, Karl-Ludwig Bruchhage, Anke Leichtle

**Th25:** [1769] Electrophysiological measures of temporal pitch processing in an animal model of cochlear electric stimulation. Matthew L Richardson, Robin Gransier, Francois Guerit, Jan Wouters, Robert P Carlyon, Harrison W Lin, John C Middlebrooks

**Th26:** [1772] Exploring the use of Otoplan to assist with planning ECOG intraoperative monitoring strategies. Rachel A Scheperle, Christine P Etlar, Camille C Dunn, Alexander D Claussen, Bruce J Gantz, Marlan R Hansen

**Th27:** [1789] Inter-brain synchrony between children with cochlear implants and their mother: an fNIRS study. Hilal Dogan, Efstratia Papoutselou, Samantha Harrison, Guangting Mai, Douglas E H

Hartley

**Th28:** [1817] Multifrequency electrocochleography and electrode scan to monitor hair cell function during cochlear implant electrode placement. Aniket A Saoji, Madison K Graham, Matthew L Carlson, Brian A Neff, Colin L W Driscoll, Weston J Adkins, Douglas C Fitzpatrick

**Th29:** [1884] Fast tracking early intervention for infants with hearing loss. Colette McKay, Tommy Peng, Julia Wunderlich, Onn Wah Lee, Gautam McKay, Darren McKay

**Th30:** [1560] The importance of hearing preservation in children with cochlear implants and preoperative residual hearing. Lisa Park, Margaret Dillon, Margaret Richter

**Th31:** [1603] Comparison of spread of activation and interaction between channels during electrical and optogenetic stimulation in the mouse cochlea. Ajmal A Azees, Alex C Thompson, Elise A Ajay, Andrew K Wise, Patrick Ruther, David Garret, Anita Quigley, James B Fallon, Rachael T Richardson

**Th32:** [1638] Predicting cochlear implant outcomes in candidates with residual hearing. David R Friedmann, David M Landsberger, Emily R Spitzer

**Th33:** [1652] Three-dimensional analysis of the effects of tissue response on hearing. Ella P Trang, James Firth, Gabriela Segal-Wasserman, Ellie Cho, Andrew Wise, James Fallon

**Th34:** [1659] Electro-vibrational stimulation results in improved speech perception in noise for cochlear implant users with residual hearing. Alexander Geerardyn , Katleen - De Voecht, Jan Wouters, Nicolas Verhaert

**Th35:** [1681] Behavioral discrimination of simple speech sounds in cats with partial hearing and a cochlear implant. James Firth, Alex C Thompson, Anu Sabu, David B Grayden, Dexter RF Irvine, James B Fallon

**Th36:** [1702] Wide-field calcium imaging for evaluating cochlear implant stimulation strategies in the auditory cortex. Bruno Castellaro

**Th37:** [1847] Determining the required number of high-frequency electrical stimulation channels to improve speech intelligibility in individuals with residual low-frequency hearing. Isabel N. Herb, Emily A. Burg, Jay Dhuldhoya, Francis Wong, Matt B. Fitzgerald

**Th38:** [1891] Towards extracochlear electric-acoustic stimulation of the auditory system. Benjamin Krueger, Aenne Grosskopf, Waldo Nogueira

**Th39:** [1721] Towards a cell-based treatment for hearing loss; exploring the views of patients and the public. Efstratia Papoutselou, Faizah Mushtaq, Rachel Haines, Douglas Hartley

**Th40:** [1693] Dendritic complexity of layer III and V pyramidal cells in the congenitally deaf auditory cortex. Lea Sollmann, Ana Bedalov, Damir Kovacic, Andrej Kral

**Th41:** [1694] Cortical development features in congenital deafness children after auditory brainstem implant. Hao Wu

**Th42:** [1717] Assessing speech processing during a functional near-infrared spectroscopy task in normal hearing listeners and cochlear implant users. Andras Balint, Wilhelm Wimmer, Marco Caversaccio, Christian Rummel, Stefan Weder

**Th43:** [1755] Neural correlates of post-activation changes in loudness perception by adult cochlear implant recipients. Dorothee Arzounian, Francois Guerit, John M. Deeks, Charlotte Garcia, Evelien de Groote, Manohar Bance, Robert P. Carlyon

**Th44:** [1781] White-matter microstructure differences between cochlear implant candidates and their hearing peers: a pilot diffusion tensor imaging study. Yingying Wang, Jordan Bollinger, Lauren Secilmis, Michelle Hughes, Hongying Daisy Dai

**Th45:** [1867] Neuroplasticity in rats and humans with cochlear implants. Ariel Edward Hight, Erin

G. Glennon, Julia Scarpa, Nicole Capach, Jonathan Neukam, Yew-Song Cheng, Michele Insanally, Robert C. Froemke, Mario A. Svirsky

**Th46:** [1890] Cochlear implant users improvising on the piano: a new method for training perception in multiple domains. Eleanor E Harding, Etienne Gaudrain, Robert Harris, Barbara Tillmann, Bert Maat, Rolien Free, Deniz Baskent

**Th47:** [1569] 3D printed cochlea model for electrode insertion bench test. Guillaume Tourrel, Julie Foncy, Renato Torres, Yann Nguyen

**Th48:** [1579] Controlled curvature electrode array with ionic electro active polymer-based micro-actuators for cochlear implantation. Ahmad Itawi, Guillaume tourrel, Renato Torres, Prabhakar Sidambaram, Sofiane Ghenna, Sebastien Grondel, Yann Nguyen, Eric Cattan

**Th49:** [1637] Oticon Medical research tools – practical examples of their utilization. Rafael Attili Chiea, Behnam Molaei-Ardekani, Yue Zhang, Manuel Segovia-Martinez

**Th50:** [1650] Development of 32-channel cochlear implant. Kyou Sik Min, Hoseung Lee, Woojin Ahn, Soowon Shin, Jeongwoo Lim

**Th51:** [1686] Visualization system for real-time monitoring of electrode array insertion into the human cochlea. Joaquin Cury, Claus-Peter Richter

**Th52:** [1688] A novel prototype: the hybrid opto-electrical cochlear implant for hearing restoration. Joaquin Cury, Matthew Joo-yoon Kim, Xiaodong Tan, Claus-Peter Richter

**Th53:** [1690] Optical properties of the human cochlea bone. Joaquin Cury, Claus-Peter Richter

**Th54:** [1684] Coding strategy for opto-electrical hybrid cochlear implant. Claus-Peter Richter, Joaquin Cury

**Th55:** [1606] In-silico evaluation of sound encoding of optogenetic cochlear implants. Lakshay Khurana, Petr Nejedly, Lukasz Jablonski, Tobias Moser

**Th56:** [1829] Robot-assisted electrode array insertion for cochlear implantation: technique note and 3-year review. Huan Jia, Haoyue Tan, Qinjie Zhang, Zhihua Zhang, Zhaoyan Wang, Mengda Jiang, Hao Wu

**Th57:** [1863] Development of novel stimulation strategies and techniques for direct electrical stimulation of the auditory nerve using a penetrating electrode array. Inderbir Sondh, Hubert Lim

**Th58:** [1877] Zwitterion modified cochlear implants resist postoperative infection and inflammation. Hongzheng Zhang, Anning Chen