Download a Speech Processor For Cochlear Implant Using A Simple

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Progress in VLSI Design and Test - Hafizur Rahaman - 2012-06-26
This book constitutes the refereed proceedings of the 16th International Symposium on VLSI Design and Test, VDAT 2012, held in Shibpur, India, in July 2012. The 30 revised regular papers presented together with 10 short papers and 13 poster sessions were carefully selected from 135 submissions. The papers are organized in topical sections on VLSI design, design and modeling of digital circuits and systems, testing and verification, design for testability, testing memories and regular logic arrays, embedded systems: hardware/software co-design

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Responses to sinusoidal modulations resembled AN responses to pure tones over a 15-25 dB range of modulation depths. Responses to complex modulations simultaneously represented several spectral components of the modulator in their temporal discharge patterns. However, for modulation depths above 10%, the representation of both sinusoidal and complex modulators was more distorted. These results demonstrate that strategies that incorporate a DPT, and that use low modulation depths to encode sounds, may evoke AN responses that more accurately represent the modulator in their temporal discharge patterns. If the central nervous system can utilize this information, then these strategies may substantially improve performance enjoyed by cochlear implant users.
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**Cochlear Implant Replacement Speech Processor** - Ontario. Assistive Devices Program - 2006

**Auditory Training** - Norman P. Erber - 1982

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**Simplifying Cochlear Implant Speech Processor Fitting** - Christina Willeboer - 2008

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**Cochlear Implants** - Graeme Clark - 2006-04-18
The cochlear implant is a device that bypasses a nonfunctional inner ear and stimulates the auditory nerve directly. Written by the "father" of the multi-electrode implant, this comprehensive text and reference gives an account of the principles underlying cochlear implants and their clinical application. For the clinician, the book will provide guidance in the
perception and production engineer and researcher it will provide the background for further research; and for the student, it will provide a through understanding of the subject.

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**Artificial Hearing, Natural Speech** - Joanna Hart Lowenstein - 2013-09-13
This book explores the interface between speech perception and production through a longitudinal acoustic analysis of the speech of postlingually deaf adults with cochlear implants (electrode and computer prostheses for the inner ear in cases of nerve deafness). The methodology is based on the work of Joseph Perkell at MIT, replicating and extending analysis to subjects with modern digital cochlear implants and processor technology. Lowenstein also examines how cochlear implants are portrayed in dramatic and documentary television programs, the scientific accuracy of those portrayals, and what expectations might be taken away by viewers, particularly given modern society's view that technology can overcome the frailties of the human body.
electrically stimulate the adults with cochlear implants (electrode and computer prostheses for the inner ear in cases of nerve deafness). The methodology is based on the work of Joseph Perkell at MIT, replicating and extending analysis to subjects with modern digital cochlear implants and processor technology. Lowenstein also examines how cochlear implants are portrayed in dramatic and documentary television programs, the scientific accuracy of those portrayals, and what expectations might be taken away by viewers, particularly given modern society's view that technology can overcome the frailties of the human body.

Cochlear implants have instigated a popular but controversial revolution in the treatment of deafness. This book discusses the physiological bases of using artificial devices to electrically stimulate the brain to interpret sounds. As the first successful device to restore neural function, the cochlear implant serves as a model for research in neuroscience and biomedical engineering. These and other auditory prostheses are discussed in the context of historical treatments, engineering, psychophysics and clinical issues as well as implications for speech, behavior, cognition and long-term effects on people.
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**Cochlear Implants** - Joseph M. Miller - 2012-12-06
This volume describes a new direction in technological and biomedical developments for profoundly deaf individuals. The first section covers topics of tissue characteristics, such as responses to electrical stimulation and computer modelling of cochlea currents. Perception of acoustic signals, responses and behavioral pattern as well as psychophysical aspects are treated in the second part. Part III is addressed to perspectives and challenges of encoding schemes. Reports on studies of acoustic and electrical encoding of temporal information, speech features with cochlear implants as well as psychophysical and speech perceptual studies will allow further strategies for cochlea implants.

**Cochlear Implants** - Susan B. Waltzman - 2014-02-14
Thieme congratulates author Dr. J. Thomas Roland, Jr. for being chosen by New York
concepts and areas of ‘Best Doctors 2015’ list. Praise for the previous edition: "Overall, the second edition of Cochlear Implants is an excellent resource for professionals and students in various disciplines (otolaryngology, audiology, education of the deaf, and basic sciences) involved with the care or understanding of hearing loss. This edition serves its purpose for learning and reference in a condensed textbook that will be well used." -- The Laryngoscope

Cochlear Implants, Third Edition, has been completely revised to include the most up-to-date information on the clinical and translational sciences related to this rapidly evolving technology. It contains chapters on the latest developments in the field, including those in: genetics, neuroplasticity, expanding criteria for implantation, the application of implant technology to tinnitus and vestibular issues, music perception, and intraoperative monitoring. Key Features: Covers basic techniques as well as new expansion, making it appropriate for beginners as well as experienced practitioners. Includes information on the latest advancements in cochlear implant programming concepts. Written by experts in the field who are spearheading advancements in cochlear implant technology. This book will be a valuable reference for otolaryngologists – head and neck surgeons, audiologists, neurotologists, speech pathologists, and all professionals involved in the design and usage of cochlear implants as well as an essential text for audiology students. Thieme eOtolaryngology is the premier online resource for otolaryngology-head and neck surgery. For a free trial, go to: thieme.com/eototrial

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Cochlear and Brainstem Implants - Aage R. Møller - 2006-01-01

Today cochlear implants are the most successful of all prostheses of the nervous system. They are used in individuals who are deaf or suffer from a severe hearing loss.
knowledge on cochlear and cochlear hair cells. Auditory brainstem implants provide stimulation of the cochlear nucleus and are used in patients with an auditory nerve dysfunction, a deformed cochlea which does not allow cochlear implantation, or traumatic auditory nerve injury. In this volume different aspects of cochlear implantation such as the role of neural plasticity, the interaction with the development of the auditory system, and the optimal time of implantation in children (sensitive periods) are discussed in detail. Further, the processors and the algorithms used in modern cochlear implants are described. The second part is devoted to auditory brainstem implants. It describes surgical techniques, methods for intraoperative testing as well as speech processing. It also deals with electrical stimulation of neural tissue and the neurophysiologic basis for cochlear and brainstem implants. The publication provides the latest scientific and clinical brainstem implants and is highly recommended to audiologists, otolaryngologists and also neurosurgeons.

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Today cochlear implants are the most successful of all prostheses of the nervous system. They are used in individuals who are deaf or suffer from a severe hearing deficiency caused by loss of cochlear hair cells. Auditory brainstem implants provide stimulation of the cochlear nucleus and are used in patients with an auditory nerve dysfunction, a deformed cochlea which does not allow cochlear implantation, or traumatic auditory nerve injury. In this volume different aspects of cochlear implantation such as the role of neural plasticity, the interaction with the development of the auditory system, and the optimal time of implantation in children (sensitive periods) are discussed in detail. Further, the processors and the
users and their parents give cochlear implants are described. The second part is devoted to auditory brainstem implants. It describes surgical techniques, methods for intraoperative testing as well as speech processing. It also deals with electrical stimulation of neural tissue and the neurophysiologic basis for cochlear and brainstem implants. The publication provides the latest scientific and clinical knowledge on cochlear and brainstem implants and is highly recommended to audiologists, otolaryngologists and also neurosurgeons.

**Cochlear Implants** - Huw Cooper - 2006-05-01
This is a comprehensive multi-author handbook covering all aspects of cochlear implantation, fully updated since its first edition was published in 1991. All aspects of this rapidly developing field are covered, from implant design, speech processing strategies, assessment and rehabilitation of children and adults to future developments. Chapters written by implant users and their parents give fascinating insight into the experience of hearing again with a cochlear implant.

**Objective Measures in Cochlear Implants** - Michelle Hughes - 2012-07-13

**Objective Measures in Cochlear Implants** - Michelle Hughes - 2012-07-13

**Programming Cochlear Implants** - Jace Wolfe - 2014-10-31
Cochlear Implants and Hearing Preservation - Paul van de Heyning - 2010
Electric acoustic stimulation (EAS) combines electric stimulation in the mid- to high-frequency regions with acoustic stimulation in the low-frequency range with the aim to preserve residual low-frequency hearing after cochlear implantation, which together particularly improves speech understanding, pitch discrimination and music appreciation. In this volume, the most experienced clinical groups share their understanding of the use of EAS in adults and children. It offers an in-depth audiological analysis related to selecting, preparing and rehabilitating EAS patients. Topics such as dead zone assessment, psychophysics of low-frequency hearing, electric-acoustic interaction, speech algorithms, music perception, as well as fitting and the patient's acceptance are discussed. Introductory chapters - illustrated with exceptional colour images - on cochlear neural reserves, molecular biology and high-technological electrode development focus on the basic scientific EAS research. Every ENT specialist, audiologist, speech therapist and scientist interested in inner ear pathology, involved in cochlear implantation or dealing with the treatment or surgery of the inner ear will benefit from the insights and experiences of the world's leading experts who contributed to this publication.

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Development of a Real-time Digital Speech Processor for Single-channel Cochlear Prostheses - Rong-Kai.* Hong - 1989

Development of a Real-time Digital Speech Processor for Single-channel Cochlear Prostheses - Rong-Kai.* Hong - 1989

Cochlear Implants - John K. Niparko - 2009

Thoroughly updated for its Second Edition, this book provides an in-depth discussion on prosthetic restoration of hearing via implantation. The text succinctly discusses the scientific principles behind cochlear implants, examines the latest technology, and offers practical advice on how to assess candidates, how to implant the devices, and what rehabilitation is most effective. The authors thoroughly examine the outcomes of cochlear implantation, the impact on the patient's quality of life, the benefits in relation to the...
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School Professionals
Working with Children
with Cochlear Implants -
Patricia M. Chute - 2006

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Cochlear Implants - Betty
Loy - 2009-02-15

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Implantable Hearing
Devices - Chris de Souza -
2017-05-23
Implantable Hearing Devices
is written for ear, nose, and
throat surgeons in training
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implantable hearing devices
as they advance in otologic
surgery. It is also a resource
for otologic surgeons desiring
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**Implantable Hearing Devices** - Chris de Souza - 2017-05-23
Implantable Hearing Devices is written for ear, nose, and throat surgeons in training who must know about implantable hearing devices as they advance in otologic surgery. It is also a resource for otologic surgeons desiring to know more about the devices available. The technology is evolving rapidly along with the criteria for covers the entire spectrum of implantable hearing devices that are available, including but not limited to cochlear implants. Complex issues are presented in an easy to understand format by a host of internationally well-respected authors. Many practitioners have to refer to multiple resources for answers to their questions because the discipline is changing so rapidly. Implantable Hearing Devices is a clear, concise, but comprehensive book that offers answers to the universal problems that otologic surgeons face. Disclaimer: Please note that ancillary content (such as documents, audio, and video, etc.) may not be included as published in the original print version of this book.

**Auditory Neuroscience** - Jan Schnupp - 2011
Every time we listen -- to speech, to music, to footsteps approaching or retreating -- our auditory perception is the result of a long chain of diverse and intricate...
in the air, in our ears, and, the source of the sound itself, in the air, in our ears, and, most of all, in our brains. Hearing is an "everyday miracle" that, despite its staggering complexity, seems effortless. This book offers an integrated account of hearing in terms of the neural processes that take place in different parts of the auditory system. Because hearing results from the interplay of so many physical, biological, and psychological processes, the book pulls together the different aspects of hearing -- including acoustics, the mathematics of signal processing, the physiology of the ear and central auditory pathways, psychoacoustics, speech, and music -- into a coherent whole.

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perturbation on melody recognition in acoustic hearing. The filter spacing currently used in the cochlear implants is larger than the musical semitone steps and hence not all musical notes can be resolved. In the current work we investigate the use of new filter spacing techniques called the 'Semitone filter spacing techniques' in which filter bandwidths are varied in correspondence to the musical semitone steps. Noise reduction methods investigated so far for use with cochlear implants are mostly pre-processing methods. In these methods, the speech signal is first enhanced using the noise reduction method and the enhanced signal is then processed using the speech processor. A better and more efficient approach is to integrate the noise reduction mechanism into the cochlear implant signal processing. In this dissertation we investigate the use of two such embedded noise reduction methods namely, the 'SNR weighting method'

Cochlear implants are prosthetic devices, consisting of implanted electrodes and a signal processor and are designed to restore partial hearing to the profoundly deaf community. Since their inception in early 1970s cochlear implants have gradually gained popularity and consequently considerable research has been done to advance and improve the cochlear implant technology. Most of the research conducted so far in the field of cochlear implants has been primarily focused on improving speech perception in quiet. Music perception and speech perception in noisy listening conditions with cochlear implants are still highly challenging problems. Many research studies have reported low recognition scores in the task of simple melody recognition. Most of the cochlear implant devices use envelope cues to provide electric stimulation.

Understanding the effect of various factors on melody recognition in the context of cochlear implants is important to improve the existing coding strategies. In the present work we investigate the effect of various factors such as filter spacing, relative phase, SNR weighting noise reduction method is an exponential weighting method that uses the instantaneous signal to noise ratio (SNR) estimate to perform noise reduction in each frequency band that corresponds to a particular electrode in the cochlear implant. The S-shaped compression technique divides the compression curve into two regions based on the noise estimate. This method applies a different type of compression for the noise portion and the speech portion and hence better suppresses the noise compared to the regular power-law compression.
reduction methods namely, frequency and phase perturbation on melody recognition in acoustic hearing. The filter spacing currently used in the cochlear implants is larger than the musical semitone steps and hence not all musical notes can be resolved. In the current work we investigate the use of new filter spacing techniques called the 'Semitone filter spacing techniques' in which filter bandwidths are varied in correspondence to the musical semitone steps. Noise reduction methods investigated so far for use with cochlear implants are mostly pre-processing methods. In these methods, the speech signal is first enhanced using the noise reduction method and the enhanced signal is then processed using the speech processor. A better and more efficient approach is to integrate the noise reduction mechanism into the cochlear implant signal processing. In this dissertation we investigate the use of two such embedded noise reduction methods namely, the 'SNR weighting method' and the 'S-shaped compression' to improve speech perception in noisy listening conditions. The SNR weighting noise reduction method is an exponential weighting method that uses the instantaneous signal to noise ratio (SNR) estimate to perform noise reduction in each frequency band that corresponds to a particular electrode in the cochlear implant. The S-shaped compression technique divides the compression curve into two regions based on the noise estimate. This method applies a different type of compression for the noise portion and the speech portion and hence better suppresses the noise compared to the regular power-law compression.

Binaural Hearing - Ruth Y. Litovsky - 2021
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**The Cochlear Story** - Veronica Bondarew - 2012
This book documents the human story behind that development. It delves into the commercial planning and implementation that led to the products success in an international, highly competitive market, and the human drama that was experienced in achieving it.

**Cochlear Implants** - Helen Cullington - 2003
The age at which children are receiving cochlear implants has dropped dramatically; some children now undergo surgery when less than 12 months old. Considerable feedback is required from the patient in order to set the device optimally. This can be difficult in very young children, who may be unable to provide any behavioral information. It is therefore vital that objective measures are available in order to evaluate the device and auditory system function, set the programming parameters, and even assess performance. This book covers
device optimally. This can be measures used before, during and after surgery. It provides a handbook for clinicians detailing the many techniques currently used, including telemetry, averaged electrode voltages, and electrically-evoked stapedial reflexes, auditory brainstem responses, compound action potentials, middle, late and event-related potentials. The internationally respected chapter authors from Europe and the USA provide coverage of the objective measures used in several commercially available cochlear implant devices. This book is required reading for clinicians in cochlear implant centers, researchers and those in the commercial implant field worldwide.

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Cochlear Implants - Blake

Cochlear Implants and Children - Nancy Tye-Murray - 1992

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Hear Now - Douglas Grady - 2009-02-03

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Effects of the Number of Speech-bands and Envelope Smoothing Condition on the Ability to Identify Intonational Partterns Through a Simulated Cochlear Implant Speech Processor - 2002

Better Hearing with - Blake Wilson - 2012-04-30

Better Hearing with Cochlear Implants provides a comprehensive account of a decades-long research effort to improve cochlear implants (CIs). The research was conducted primarily at the Research Triangle Institute (RTI) in North Carolina, USA, and the results provided key pillars in the foundation for the present-day devices. Although many of these results were reported in journal articles and other publications, many others were only reported in Quarterly and Final Progress Reports for the National Institutes of Health, which supported the RTI effort. In addition, the Progress Reports provided details that could not be included in the publications. The book is an annotated compilation of the most important sections from the most important reports that gives readers access to previously unpublished data and also a broad and logically organized overview of the research. Four main sections are included to describe the
with CIs for any user and design and evaluation of novel processing strategies; electrical stimulation on both sides with CIs; combined electric and acoustic stimulation of the auditory system; and representations of temporal information with CIs. Large advances were made in each of these areas, and readers will appreciate the significance of the research and how the different areas related to each other. Each main section includes an introduction by the authors followed by two or more chapters, and the first chapter in the book describes the work conducted at the RTI in the context of the multiple other efforts worldwide. The book may be used as a primary text on CIs, and it can serve as a multifaceted reference for physicians, audiologists, neuroscientists, designers of neural prostheses, and scientists and other specialists whose work is aimed at the remediation of hearing loss. In all, a fascinating history is presented, which began with little or no speech recognition ended with high levels of speech recognition for the great majority of users, including the ability to converse with ease via cell phones. This is a long trip in a short time, and historians of science and technological developments will be interested in knowing how such a rapid development was possible, and about the twists and turns on the way to the destination.

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A Single-processor Approach to Speech Processing Pipeline of
measurements of an
- Taher Shahbazi
Mirzahasanloo - 2014
This dissertation covers a
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with a sense of directionality.
Its non-synchronization
feature as well as low
computational and memory
requirements make it a
suitable solution for actual
deployment. A speech
enhancement framework is
developed that incorporates
different non-Euclidean
speech distortion criteria and
different noise environments.
This framework not only
allows the design of
environment-optimized
parameters but also enables a
user-specific solution where
the anthropometric
individual user are
incorporated into the training
process to obtain
individualized bilateral
parameters. The developed
techniques are primarily
meant for bilateral CIs,
however, they are general
purpose in the sense that they
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having hearing aid in one ear
and cochlear implant in the
other ear as well as dual-
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applications. Extensive
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effectiveness of the developed
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encountered noise
environments compared to a
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parameters. The developed pipeline of bilateral Cochlear Implants (CIs). The use of only a single processor to provide binaural stimulation signals overcomes the synchronization problem, which is an existing challenging problem in the deployment of bilateral CI devices. The developed single-processor speech processing pipeline provides CI users with a sense of directionality. Its non-synchronization feature as well as low computational and memory requirements make it a suitable solution for actual deployment. A speech enhancement framework is developed that incorporates different non-Euclidean speech distortion criteria and different noise environments. This framework not only allows the design of environment-optimized parameters but also enables a user-specific solution where the anthropometric measurements of an individual user are incorporated into the training process to obtain individualized bilateral techniques are primarily meant for bilateral CIs, however, they are general purpose in the sense that they are also applicable to binaural hearing aids, bimodal devices having hearing aid in one ear and cochlear implant in the other ear as well as dual-channel speech enhancement applications. Extensive experiments have shown the effectiveness of the developed solution in six commonly encountered noise environments compared to a similar one-channel pipeline when using two separate processors or when using independent sequential processing.

**Cochlear Implants** - J. Thomas Roland - 2006

The second edition of Cochlear Implants provides a comprehensive review of the state-of-the-art techniques for evaluating and selecting the cochlear implant candidate. Clear descriptions of surgical techniques guide the reader through implantation procedures, and chapters address important issues such
Cochlear Implants - J. Thomas Roland - 2006
The second edition of Cochlear Implants provides a comprehensive review of the state-of-the-art techniques for evaluating and selecting the cochlear implant candidate. Clear descriptions of surgical techniques guide the reader through implantation procedures, and chapters address important issues such as speech production, language development, and education in implant recipients. This second edition features: New chapters on the genetics of hearing loss, sound processing, binaural hearing, and electroacoustic stimulation Complete discussion of the most recent advances in evaluation procedures, surgery, programming methods, speech processing strategies, and more Precise, easy-to-follow tables and figures enhance comprehension of the basic science, research and clinical concepts covered in the text Coverage of the medical and surgical complications of cochlear implantation Insights from an interdisciplinary team of experts in otolaryngology, audiology, the basic sciences, speech pathology, and education Ideal for learning and reference, Cochlear Implants synthesizes the key information needed by practitioners, researchers, and students in a range of disciplines. Readers will benefit from both the scope and thoroughness of this authoritative reference. Dr. Roland honored in Best Doctors 2012 issue of New York Magazine
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**Pediatric Cochlear Implantation** - Nancy M Young - 2016-09-16

This book will move the field of pediatric cochlear implantation forward by educating clinicians in the field as to current and emerging best practices and inspiring research in new areas of importance, including the relationship between cognitive processing and outcomes. The book discusses communication practices, including sign language for deaf children with cochlear implants and the role of augmentative/alternative communication for children with multiple disabilities. Focusing exclusively on cochlear implantation as it applies to the pediatric population, this book also discusses music therapy, minimizing the risk of meningitis in pediatric implant recipients, recognizing device malfunction and failure in children, perioperative anesthesia and analgesia considerations in children, and much more. Cochlear Implants in Children is aimed at clinicians, including neurotologists, pediatric otolaryngologists, audiologists and speech-language pathologists, as well as clinical scientists and educators of the deaf. The book is also appropriate for pre-and postdoctoral students, including otolaryngology residents and fellows in Neurotology and
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Cochlear Implantation for Infants and Children - Graeme Clark - 1997
Cochlear implantation in children is a rapidly expanding area and recent clinical advances and research studies in the field have confirmed the extent of its benefits for children. This timely book brings together contributions from a group of experts who work with cochlear implantations at the Melbourne Clinic in Australia, which has been at the forefront of recent advances in instrumentation and clinical management of
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Adult Cochlear Implant Rehabilitation - Karen Pedley - 2005
This book provides information and resources to assist in all stages of a client's implant program, building on a transdisciplinary model of practice. It includes material covering a wide variety of topics including assessment, switch-on, client focused auditory rehabilitation, techniques for telephone training, communication therapy for social interactions, speech-language therapy intervention and psychosocial aspects of implant work. This is a practical text, and should appeal to a range of professionals new to cochlear implants including audiologists, hearing therapists and psychologists while providing the experienced clinician with new insights and fresh materials. The text's structure makes it ideal as a training tool for students.
This dissertation, "Postoperative Strategies to Improve the Benefit of Cochlear Implantation in a Cantonese-speaking Population" by Hao, Jin, 金昊, was obtained from The University of Hong Kong (Pokfulam, Hong Kong) and is being sold pursuant to Creative Commons: Attribution 3.0 Hong Kong License. The content of this dissertation has not been altered in any way. We have altered the formatting in order to facilitate the ease of printing and reading of the dissertation. All rights not granted by the above license are retained by the author.

Abstract: Abstract of thesis entitled "Postoperative Strategies to Improve the Benefit of Cochlear Implantation in a Cantonese-Speaking Population" Submitted by JIN Hao for the degree of Master of Philosophy at The University of Hong Kong in December 2003 The present study contains two parts. In the first part, the changes in psychophysical levels of
trend was relatively stable maximum comfortable level (MCL) over time were retrospectively analyzed to evaluate the feasibility of "early switch-on" of speech processor after implantation. The second part aimed at evaluating the effects of two independent parameters, stimulation rate and electrode insertion depth, on Cantonese tone perception in quiet and against a background noise in Cantonese-speaking cochlear implant (CI) users. The first part included 24 adults and 33 children implanted with the MED-EL Tempo+ CI system between August 1999 and December 2001. They had an initial mapping of speech processor on the next day after implantation. Subsequent mappings were scheduled on 7, 14, 21, 28, 60, 90, 120, and 180 days after implantation. In adults, there was a rapid increase in THR over the first 7 days, after which followed by a decreasing period up to 21 days after implantation. After that, THR remained stable. In children, THR increased gradually with time and the without fluctuations. MCL in adults increased significantly within the first 7 days and then showed a slow steady rise in the subsequent days. In children, MCL increased in a slower rate within the first 7 days compared to adults but increased continuously up to 90 days after implantation. Except for the fluctuation of THR within the initial 3 weeks in adults, no prolonged periods with fluctuations in psychophysical THR and MCL were observed and the levels changed steadily. The second part consists of two independent experiments conducted in 18 postlingually deafened adults implanted with the MED-EL Tempo+ CI system. In Experiment I, stimulation rates of 1515, 800, and 400 pulses per second per channel (pps/ch) were selected to represent high, moderate, and low stimulation rate conditions, respectively. For tone discrimination, significant improvements in correct percent were observed when stimulation rate was increased from low to high at
the cochlea does no
of 0, +5, and +10, and from
low to moderate at SNR of
+5. For tone identification,
significantly better scores
were achieved at high
stimulation rate compared to
low at SNRs of -5, and 0. In
Experiment II, electrode
insertion depths of 31.3, 25.5,
and 18.3 mm were simulated
to represent deep, medium,
and shallow electrode
insertion conditions,
respectively. The results of
both tone discrimination and
tone identification did not
show any significant changes
as electrode insertion depth
varied. However, better sound
quality was reported with the
electrode insertion depths to
25 mm. The overall results
from this study indicate that
both adults and children could
adapt to early electrical
stimulation. "Early switch-on"
after implantation is feasible
and may be able to facilitate
earlier rehabilitation. High
stimulation rate of 1515
pps/ch is recommended,
which significantly benefits
Cantonese tone perception
against a background noise.
Deep electrode insertion into

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Cantonese tone perception. However, the sound quality
can be im

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2017-01-27
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adapt to early electrical stimulation. "Early switch-on" after implantation is feasible and may be able to facilitate earlier rehabilitation. High stimulation rate of 1515 pps/ch is recommended, which significantly benefits Cantonese tone perception against a background noise. Deep electrode insertion into the cochlea does no significant effect on Cantonese tone perception. However, the sound quality can be im

Cochlear Implant Rehabilitation in Children and Adults - Dianne Allum - 1996
This is the first book to provide a global non-device-specific overview of service delivery and rehabilitation strategies for cochlear implant users. The contributors to the book have experience with most of the commercially available devices and several experimental ones. There are approaches from 17 different clinics representing four continents, 13 different countries and eight different
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Advances in the Spoken-Language Development of Deaf and Hard-of-Hearing Children - Patricia Elizabeth Spencer - 2006
Contributors present the latest information on both the new world evolving for deaf & hard-of-hearing children & the improved expectations for their acquisition of spoken language.

Physiology, Psychoacoustics and Cognition in Normal and Impaired Hearing - Pim van Dijk - 2016-04-14
The International Symposium on Hearing is a prestigious, triennial gathering where world-class scientists present and discuss the most recent advances in the field of human and animal hearing research. The 2015 edition
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