



INTERNATIONAL CONFERENCE FOR
VESTIBULAR REHABILITATION

Sponsored by Academy of Neurologic Physical Therapy

OCTOBER 15-17 MINNEAPOLIS, MN **2022**

TRANSLATING RESEARCH TO ADVANCE PRACTICE



OCTOBER 15-17, 2022
MINNEAPOLIS, MINNESOTA
Hyatt Regency Downtown

www.neuropt.org

SCHEDULE



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TRANSLATING RESEARCH TO ADVANCE PRACTICE

Saturday, October 15, 2022

5:30- 7:30 pm Poster Presentation Reception with Exhibitors in Exhibit Hall with light appetizers and cash bar

Sunday, October 16, 2022

6:45 - 7:45 Breakfast in Exhibit Hall

OPENING KEYNOTE

8:00-8:30 *Moritz Romberg and His Famous Test; What Does It Mean Now? (pre-recorded)*
C. Michael Halmagyi, MD

VESTIBULAR PERCEPTION AND COGNITION SESSION

8:30-9:00 *Linking Vestibular Function, Balance, and Fall Risk*
Dan Merfeld, PhD

9:00-9:30 *Spatial Vestibular Perception: Implications for Rehabilitation*
Eric Anson, PT, PhD

9:30-10:00 Break

10:00-10:30 *Cognitive Considerations in Vestibular Physical Therapy*
Brooke Klatt, PT, DPT, PhD, NCS

CERVICAL SPINE SESSION

10:30-11:00 *Dizziness and the Neck: Why Should it be Considered in Vestibular, Neurological, and Post Traumatic Populations?*
Julia Treleaven, PhD, BPhy

11:00-11:30 Panel Discussion with all morning speakers

11:30-12:45 Lunch On Your Own

BENIGN PAROXYSMAL POSITIONAL VERTIGO SESSION

12:45-1:15 *Importance of Orientation and Weight of the Cupula in Atypical PC-BPPV*
Janet Helminski, PT, PhD

1:15-1:45 *Telemedicine for Benign Paroxysmal Positional Vertigo*
Ji-Soo Kim, MD, PhD

1:45-2:15 *BPPV of the Horizontal Canal*
Francisco Carlos Zuma e Maia, MD, PhD

2:15-2:45 Break

CENTRAL VESTIBULAR DISORDERS SESSION

2:45-3:15 *Management of Cerebellar Ataxia*
Joanna Jen, MD, PhD, Professor of Neurology, Icahn School of Medicine at Mount Sinai

3:15-3:45 *Combined Cerebellar and Vestibular Diseases*
David Szmulewicz, MB BS (Hons) PhD FRACP

3:45-4:15 *Gaze and Postural Stability in Multiple Sclerosis: Characterizing Function and Response to Rehabilitation*
Lee Dibble, PT, PhD, ATC, FAPTA

4:15-4:45 *The Link Between Vestibular Agnosia and Imbalance in Brain Disease and Implications for Therapy*
Barry Seemungal, MD, PhD

4:45-5:15 Panel Discussion with all afternoon speakers

5:15-7:15 Poster Presentation Reception with Exhibitors in Exhibit Hall with light appetizers and cash bar

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Monday, October 17, 2022

5:45-6:45 Breakfast in Exhibit Hall

7:00-7:30 *Overview of the International Classification of Vestibular Disorders and its Meaning for Clinical Practice*
Alexandre Bisdorff, MD, PhD, Chair of the Classification Committee of the Barany Society

CONCUSSION SESSION

7:30 – 8:00 *Balance After Mild Traumatic Brain Injury*
Laurie A. King, PhD, PT, MCR

8:00-8:30 *Dizziness and Concussion – What Can We Do?*
Kathryn Schneider, BHScPT, BKIN(Hon), DSc, PhD, DipManipPT

MOTOR LEARNING IN THE VESTIBULAR SYSTEM SESSION

8:30-9:00 *Neural Substrates Underlying Vestibular Compensation: Implications for Rehabilitation*
Kathleen Cullen, PhD

9:00-9:30 *Incremental VOR Adaptation Clinical Trial Results*
Michael Schubert, PT, PhD, FAPTA

9:30-10:00 Break

REMOTE MONITORING AND CHILDREN WITH VESTIBULAR DISORDERS

10:00-10:30 *Remote Assessment and Management of Patients with Dizziness using a Vestibular App*
Courtney Hall, PT, PhD

10:30-11:00 *Vestibular and Balance Dysfunction in Children with Hearing Loss: What does it mean, what are we missing?*
Sharon Cushing, MD, MSc, FRCSC

11:00 – 11:30 Panel Discussion with all morning speakers

11:30 – 12:45 Lunch On Your Own

VESTIBULAR IMPLANT SESSION

12:45-1:15 *Haptic Stimulation by a Balance Belt to Improve Balance and Mobility in Patients with Severe Bilateral Vestibular Loss*
Herman Kingma, PhD, ENT Dept, Maastricht University, The Netherlands and Aalborg University,
Denmark

1:15-1:45 *The Vestibular Implant: Latest Results*
Raymond van de Berg, MD, PhD

1:45-2:15 Break

2:15-2:45 *Long-term Safety and Efficacy Outcomes for a First-in-Human Clinical Trial of Vestibular Implantation to treat*

Adult-onset Bilateral Vestibular Hypofunction

Charles C. Della Santina, PhD, MD, Professor of Otolaryngology - Head & Neck Surgery and Biomedical Engineering, Johns Hopkins School of Medicine

CLOSING KEYNOTE

2:45-3:15 *Recent Evidence in Vestibular Rehabilitation: The use of Apps and Beyond*
Susan L. Whitney, DPT, PhD, NCS, ATC, FAPTA

3:15 – 3:45 Panel Discussion with the afternoon speakers

POSTER SCHEDULE



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Saturday, October 15 5:30-7:30 pm

Format: Traditional **Format: Better#**

Traditional posters are the type historically presented at professional conferences. They tend to be content rich and text dense.

Better# posters use User Experience Design principles to create posters that enhance the translation of information and engagement. They tend to be less content and text dense.

Poster #1

Machine Learning Accurately Provides Feedback during App-Based Vestibular Rehabilitation Gaming

Authors: Linda D'Silva, PT, PhD; Paulien Roos, PhD; Karen Skop, PT, DPT, MS; Timothy Zehnbauer, PhD; Jackson Cornelius, PhD; Alan Register, PhD

Poster #3

Comparing Performance on a Vestibular Virtual Environment Task that Involves Upper Extremity Reaching While Walking

Authors: Pooja Patel, PT; Kerry Rosen, PhD; Sarah Kruger, MS; Vrajeshri Ordek, PhD; Jacob VanDehy, MS; Dawn Bodell, DPT

Poster #5

Balance deficits after mild Traumatic Brain Injury differ across timeframes of recovery

Authors: Jennifer Wilhelm, PT, DPT; Kody Campbell, PhD; Robert Peterka, PhD; Natalie Pettigrew, PT, DPT; Laurie King, PT, PhD, MCR

Poster #7

Virtual Environments vs. Traditional Vestibular Rehabilitation: A Pilot Randomized Controlled Trial

Authors: Jennifer Kelly, DPT; Brittani Morris, DPT; Santosh Krishnamoorthy; Gene Fu, DPT; Anat Lubetzky, PT, PhD; Daphna Harel, PhD; Sarah Mischianti, SPT; Andrew Medlin, SPT; John Sutura, DPT; Maura Cosetti, MD

Poster #9

Examining Gait During Vestibular Tasks That Involve Walking an Augmented Reality Head Mounted Display or On the CAREN Virtual Reality System

Authors: Dawn Bodell, PT; Vrajeshri Ordek, Dr; Jacob VanDehy, MS; Kerry Rosen, Dr; Pooja Patel, DPT; Douglas Brungart, Dr

Poster #11

Vestibular rehabilitation delivered via telehealth vs. in-person equally effective at dizziness symptom reduction

Authors: Rachel Wellons, PT, DPT; Sydney Duhe, PT, DPT; John Hood, BS; Elizabeth Levitzky, PhD; Sara MacDowell, PT, DPT; Sara Oxborough, PT

Poster #13

Validation of a novel wearable head sensor for use during vestibular rehabilitation

Authors: Dara Meldrum, PhD; Deirdre Murray, PhD; Roisin Scallan, MSc, BioEng; Conor Hayden, BEng; Blas Molina, MEng; Ella Walter, BSc

Poster #15

The video-based Visual Vertigo Analogue Scale: a new way of assessing visual vertigo for people with Persistent Postural-Perceptual Dizziness: a pilot study

Authors: Elizabeth Dannenbaum, MScPT; Tsun-Ai Jasper Chen, MScPT; Marie-Li Dion-Parenteau, MScPT; Kirby Marchand, MScPT; Hong Zhang, MScPT; Anouk Lamontagne, PhD; Joyce Fung, PhD

POSTER SCHEDULE

Poster #19

The Prefrontal and Vestibular Cortex Activation during Concurrent Visual and Auditory Cognitive Tasks

Authors: Chia-Cheng Lin, PT, MSPT, PhD; Rui Wu, PhD; Shanyue Guan, PhD; Brian Sylcott, PhD

Poster #21

Psychometrics of Inertial Heading Perception

Authors: Eric Anson, PT, PhD; Benjamin Crane, MD, PhD; Kyle Critelli, BS, MBA; Olivia Geno, SBA

Poster #23

Differences in Head Kinematics between individuals with Bilateral and Unilateral Hearing Loss

Authors: Brittani Morris, DPT; Jennifer Kelly, DPT; Maura Cosetti, MD; Anat Lubetzky, PT, PhD, CSCS; Daphna Harel, PhD; Junhui Yang, MS; Andrew Medlin, SPT; Sarah Mischianti, SPT; Katherine Scigliano, AUD

Poster #25

Machine Learning-Based Vestibular Gait Screening: Examining the Discriminative Ability of Gait-Related Balance Tasks

Authors: Safa Jabri, BS, PhD Candidate; Wendy Carender, PT, MPT, NCS; Jenna Wiens, BS, MS, PhD; Kathleen Sienko, BS, MS, PhD

Poster #27

Changes in Head Kinematics Post Vestibular Rehabilitation

Authors: Anat Lubetzky, PT, PhD; Brittani Morris, DPT; Santosh Krishnamoorthy, PT, DPT, MS; Gene Fu, DPT; Jennifer Kelly, DPT; Daphna Harel, PhD; Andrew Medlin, SPT; Sarah Mischianti, SPT; Junhui Yang, MS; Bryan Hujsak, DPT

Poster #29

Development of Person-Centered Reference Values for Computerized Dynamic Visual Acuity to Support Customized Treatment Decisions in Vestibular Rehabilitation

Authors: Andrew Kittelson, PT, PhD; Michael Schubert, PhD; Dale Roberts, MS; Brian Loyd, PhD

Poster #31

A Beta Test of DizzyDx, an Innovative Clinical Decision Support Tool

Authors: Nicole Miranda, PT, DPT; Heather Campbell, PT, DPT, MA

Poster #35

Canal-Otolith Integration Influences Self-Motion Perception and Balance

Authors: Andrew Wagner, PT, DPT; Megan Kobel, AuD; Daniel Merfeld, PhD

Poster #37

Changes in Perceived Sense of Direction in Persons with Vestibular Disorders

Authors: Fai Alradady, PT, MSPT; Pamela Dunlap, DPT, PhD; Patrick Sparto, PT, PhD, FAPTA; Joseph Furman, MD, PhD; Susan Whitney, DPT, PhD, NCS, ATC, FAPTA

Poster #39

Determining Validity and Reliability in a newly developed Motion Sensitivity Test for Individuals with Vestibular Disorders

Authors: Lisa Heusel-Gillig, PT, DPT; Courtney Hall, PhD PT; Vincent Santucci, PT DPT NCS

Poster #41

Optic Flow Considerations for the Person with Visual Motion Hypersensitivity

Authors: Jaimy Wahab, PT, DPT; Katherine Deines, PT, DPT

Poster #43

Vestibular Rehabilitation Treatment Protocol in a Patient with Chemo-Induced Peripheral Neuropathy: A Case Study

Authors: Lisa Brekke, PT, DPT

POSTER SCHEDULE

Poster #45

Vestibular retraining and gaze stability following electroconvulsive therapy induced dizziness: a case report

Authors: Kara Tucker Balun, PT, DPT, NCS, CSRS; Kristen Black Bain, PT, DPT, NCS

Poster #47

Never too late for a vestibular tune up: Case study of successful fall risk reduction for a patient with acute on chronic vestibular dysfunction

Authors: Elizabeth Garcia, PT, DPT; Sean Stone, PT, DPT; Jennifer Vincenzo, PT, MPH, PhD

Poster #49

Exercise for Treatment of Otolith Dysfunction: A Case Series

Authors: Marcy Pape, PT, DPT; Paula Kodosky, PT, DPT

Poster #51

Effectiveness of vestibular rehabilitation: The influence of exercise adherence on categorical and continuous outcomes

Authors: Nick Hill, BSc (Hons) MRes; Jeremy Corcoran, BSc (Hons), PhD; Naiya Daji, BSc (Hons); Sinéad Greenan, BSc (Hons); Claire Potter, BSc (Hons); Lauren Shelvey, BSc (Hons)

Poster #53

Evaluating the Efficacy of Pre-Surgical Vestibular Physical Therapy in Patients Undergoing Vestibular Schwannoma Removal

Authors: William Conley, BS, MD Candidate; Alexia Miles, Masters of Physical Therapy; Michael Martens, PhD, Biostatistics; Igli Arapi, Masters, Certified Clinical Research Professional; Joseph Bovi, MD; Michael Harris, MD

Poster #55

The Feasibility of Physical Therapy Diagnosis and Treatment of BPPV in an Emergency Room Setting: A Case Report

Authors: Erin Greenler, PT, DPT, NCS; Kristen Andrew, PT, DPT, NCS

Poster #57

The Red Herring: How Vestibular Testing Led to a Medical Emergency

Authors: Anna Mangano, PT, DPT; Andrew Senchak, DO; Paige Stivers, PT, DPT

Poster #59

This Pattern of Nystagmus Does Not Correlate with Benign Paroxysmal Positional Vertigo: A Case Study

Authors: Wendy Carender, PT, MPT

Poster #61

Gastroenteritis, Vestibular Neuritis & Secondary Bilateral Benign Paroxysmal Positional Vertigo: An Acute Care Case Study

Authors: Rachael Arabian, PT, DPT

POSTER SCHEDULE

Sunday, October 16 5:15-7:30 pm

Poster #2

A Description of Patient Characteristics and Predictors for Vestibular Therapy Referral Following Concussion

Authors: Sheri Fedor, PT, DPT; RJ Elbin, PhD; Melissa Womble, PhD

Poster #4

Could vestibular-ocular dysfunction contribute to exercise intolerance after mild Traumatic Brain Injury?

Authors: Jennifer Wilhelm, PT, DPT; Prokopios Antonellis, PhD; Kody Campbell, PhD; James Chesnutt, MD; Natalie Pettigrew, PT, DPT; Laurie King, PT, PhD, MCR

Poster #6

Benign Paroxysmal Positional Vertigo in acute traumatic brain injury - Data from a randomised mixed methods feasibility study

Authors: Rebecca M. Smith, MSc, MRes; Caroline Burgess, PhD; Abby Newdick, BSc; Jenna Beattie, BSc; Bill Tahtis, Mres; Jonathan Marsden, Professor

Poster #8

Utilization of Bi-Temporal Occlusion to Restore VOR Function in a Competitive Baseball Player Post Concussion

Authors: Rebecca Bliss, PT, DPT, DHSc; Elizabeth Fuemmeler, Audiologist; Michael Rippee, MD; Lindsay Holland, MPT

Poster #10

Determining the validity of the Ability Lab Vestibular Screening Tool (AVEST+) in moderate to severe TBI patients in an acute IP Rehab Setting

Authors: Holly Paczan, PT; David Ripley, MD, MS, CRC, FAAPM&R; Nick McCombs, BS; Sam Hollon, PT, DPT, NCS; Jenny Sampras, PT, DPT; Hannah King, PT, DPT, NCS

Poster #12

Impact of mild traumatic brain injury on performance of a vestibular exercise using wearable sensors

Authors: Natalie Pettigrew, PT, DPT; Jennifer Wilhelm, PT, DPT, NCS; Prokopios Antonellis, PhD; Douglas Martini, PhD; James Chesnutt, MD; Laurie King, PT, PhD, MCR

Poster #14

Facilitating growth in skills and confidence through interprofessional collaboration between students of physical therapy and optometry to improve care for individuals with traumatic brain injury

Authors: Jennifer Penn, DPT, NCS; Amy Crocker, PT, DPT, OCS, FNAP; Yutaka Maki, OD, MS; Russ Coates, OD, M.Ed; Allan McCleary, OD; Raelyn Ottenbreit, OD, FAAO, FCOVD; Susan Smith, PT, DPT, PCS

Poster #18

PROMIS outcomes: physical function impacts mental health in vestibular physical therapy

Authors: Eric Anson, PT, PhD

Poster #20

Clinical Decision-Making Algorithms for Use of the Updated Clinical Practice Guideline for Peripheral Vestibular Hypofunction: From Research to Practice

Authors: Holly Roberts, PT, DPT, PhD; Amy Yorke, PT, PhD, NCS; Connie Weglarz, PT, DPT, NCS; Elizabeth Dannenbaum, Pht, MSc; Lisa Heusel-Gillig, PT, DPT, NCS; Erin Greenler, PT, DPT, NCS

Poster #22

Utilizing the Updated Vestibular Hypofunction Clinical Practice Guidelines: A case series

Authors: Lisa Heusel-Gillig, PT, DPT; Holly Roberts, PT DPT Phd NCS GCS; Connie Weglarz, PT DPT NCS

POSTER SCHEDULE

Poster #24

Transdisciplinary Approach to Vestibular Rehabilitation Decreases Cost and Improves Recovery Time

Authors: Anna Mangano, PT, DPT; Andrew Senchak, DO; Paige Stivers, PT, DPT

Poster #26

The Influence of a Multidisciplinary Decision Tree to Optimize Clinical Outcomes in Individuals with Vestibular Pathology

Authors: Allison Nogi, PT, DPT; Hayley Haaf, DPT; John Carey, MD; Dan Gold, MD; Ken Johnson, PT; Jennifer Millar, DPT

Poster #28

A Survey of Clinical Readiness for Practice in Vestibular Rehabilitation by Entry-level Physical Therapist Graduates

Authors: Andrew Littmann, PT, PhD; Anne Galgon, PT, MPT, PhD; Lisa Heusel-Gillig, PT, DPT; Charles Plishka, PT, DPT, NCS; Holly Roberts, PT, DPT, PhD; Diane Wrisley, PT, PhD

Poster #30

Evaluator Position Influences the Dix-Hallpike Test: A Cross-Sectional Repeated Measures Design

Authors: Dalerie Lieberz, PT, DPT, PhD; Alexandra Borstad, PT, PhD; Jon Nelson, PT, PhD

Poster #34

Motor learning of the video Head Impulse Test by novice and experienced physical therapist.

Authors: Anne Galgon, PT, MPT, PhD; Nijiera Addison, PT; Phillip Chen, PT; DeJ'a Crippin, PT; Jobin Tharakan, PT

Poster #36

Applying Principles of Intensity Training to a Patient with cerebellar ataxia, neuropathy and vestibular areflexia (CANVAS)

Authors: Grace Ademski, PT, DPT

Poster #38

CANVAS: A Case Presentation

Authors: Amy Cassidy, PT

Poster #40

Vestibular Rehabilitation and Ampyra for an individual with Cerebellar Degeneration and Down Beat Nystagmus: a Case Report

Authors: Elizabeth Cornforth, PT

Poster #42

Report of oscillopsia in ataxia patients correlates with activity, not vestibular ocular reflex gain

Authors: Jennifer Millar, MSPT; Michael Schubert, PhD

Poster #44

Prehabilitation to minimize Persistent Postural Perceptual Dizziness risk in Meniere's Disease pre and post gentamicin

Authors: Dawn Fitzgerald, PT, DPT; Kevin Helgeson, PT, DHSc; Tina Stoeckmann, PT, DSc, MA

Poster #46

Physical Therapy for Patients with Persistent Postural-Perceptual Dizziness (3PD): A Systematic Review

Authors: Cassandra Anderson, PT, DPT

Poster #50

Opsoclonus observed during Vestibular Physical Therapy re-assessment led to diagnosis of Paraneoplastic Syndrome

Authors: Melissa Grzesiak, PT, DPT; Nicholas Asher, MD

POSTER SCHEDULE

Poster #52

Differential Diagnosis and Dizziness in the Hospitalized Inpatient

Authors: Daniel Ludwig, PT, DPT; Kerry Lammers, PT, DPT, CCS

Poster #54

A Case of Mistaken Identity: Bell's Palsy versus Ramsay-Hunt Syndrome

Authors: Cathey Norton, PT, DPT; Holly Cauthen, PT, DPT

Poster #56

How Can We Help Patients With Vestibular Migraine When Medication Is Not An Option? A Case Study

Authors: Mary Behrens, PT, BSPT

Poster #58

People Living with Advanced Multiple Sclerosis Demonstrate Unique Strategies to Compensate for Vestibular-ocular Reflex Deficits

Authors: Colin Grove, PT, DPT, MS, PhD; Andrew Wagner, DPT; Brian Loyd, DPT, PhD; Lee Dibble, PT, PhD; Michael Schubert, PT, PhD

Poster #60

Atypical Dizziness Following Recovery From COVID-19: A Case Study

Authors: Celeste Delap, PT, DPT

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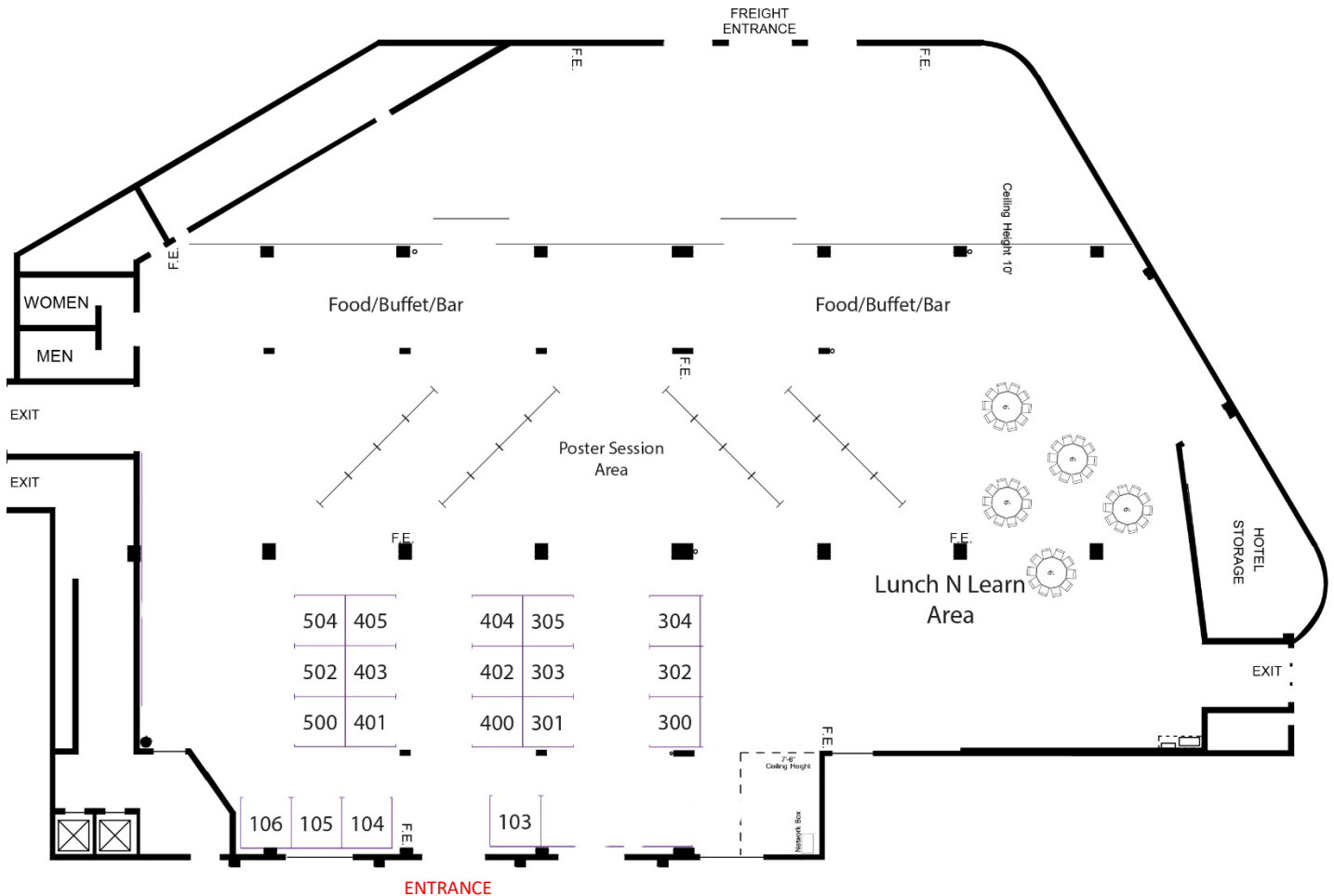
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EXHIBIT HALL



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|--------------------------|----------------------|
| 103 - Vestibular First | 400 - UprightVR |
| 104/105 - ANPT | 401 - Vizziq |
| 106 - Vizstim | 402/404 - Bertec |
| 300 - TheraTrainer | 403 - TheraSpecs |
| 301/303 - Virtualis | 405 - Urban Poling |
| 302 - Photo Station Wall | 500 - Interacoustics |
| 304 - Meditouch | 502 - RX Function |
| 305 - 360 Neuro Health | 504 - Perry Dynamics |

Updated October 7, 2022

Presenters



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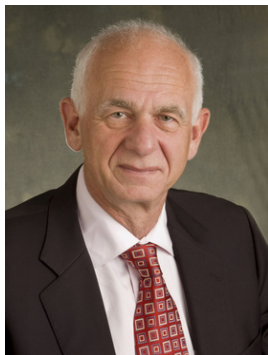
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KEYNOTE SPEAKER

G. Michael Halmagyi, MD



Staff Neurologist and Clinical Professor, Royal Prince Alfred Hospital and the University of Sydney, Australia

Graduated in Science and then in Medicine from the University of Sydney and then was a resident at Royal Prince Alfred Hospital, Sydney in general medicine and then in neurology. From 1977 to 1979 he worked in the MRC Hearing and Balance Unit at the National Hospital for Nervous Diseases in London, UK. Since 1979 he has been a staff neurologist at Royal Prince Alfred Hospital, founder and then head of the neuro-otology service. He has authored or co-authored over 290 articles and several book chapters on vestibular disorders.

Eric Anson, PT, PhD

Eric Anson, PT PhD is an Assistant Professor in the Department of Otolaryngology at the University of Rochester. He has 19 years of clinic experience emphasizing vestibular rehabilitation. He received a Masters degree in Physical Therapy from Texas Tech University Health Science Center in 2003, his PhD degree in Kinesiology from the University of Maryland in 2015, and he completed a postdoctoral research fellowship in vestibular physiology of healthy aging at the Johns Hopkins School of Medicine. His current NIDCD funded research interests include perception of self-motion and the effects of vestibular disorders and concussion on spatial orientation, gaze, and balance-related anxiety.



Alexandre Bisdorff, MD, PhD



Alexandre René BISOORFF, MD, PhD trained in Berlin (Charité) and the MRC Movement and Balance at the National Hospital for Neurology and Neurosurgery in London, acquired his PhD at the Université de Lorraine, France. He is a consultant neurologist and head of a multidisciplinary Vertigo Clinic since 2017, Centre Hospitalier Emile Mayrisch, Esch-sur-Alzette, Luxembourg. He is chair of the Classification Committee of Vestibular Disorders of the Barany Society and is president of the Société Luxembourgeoise de Neurologie.

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Kathleen Cullen, PhD



Dr. Cullen received her bachelor's degree in Biomedical Engineering and Neuroscience from Brown University and PhD in Neuroscience from the University of Chicago. She was a Fellow at the Montreal Neurological Institute, Department of Neurology and Neurosurgery, and in 1994 became an assistant professor in the Department of Physiology at McGill University. In 2016, Dr. Cullen moved to Johns Hopkins, where she is currently a Professor in Biomedical Engineering and co-Director for the Center for Hearing and Balance. She holds joint appointments in the Departments of Neuroscience and Otolaryngology. Dr. Cullen currently serves as Program Chair and Vice President of the Society for the Neural Control of Movement. She has also been an active member of the Scientific Advisory Board of NASA's National Space Biomedical Research Institute, which identifies health risks in extended space flight. Dr. Cullen received the Halpike-Nylen medal of the International Barany Society for "outstanding contributions to basic vestibular science" and the Sarrazin Award from the Canadian Physiological Society.

Sharon L. Cushing, MD, MSc, FRCSC

Dr. Sharon Cushing is a full time paediatric otolaryngologist at The Hospital for Sick Children in Toronto, Canada, and an Associate Professor and Clinician Investigator in the Department of Otolaryngology Head and Neck Surgery at the University of Toronto. She is the Director of the Cochlear Implant Program at the Hospital for Sick Children. Dr. Cushing has a clinical and surgical interest in disorders of the external, middle and inner ear, including hearing loss and vestibular dysfunction. Her research interest include vestibular and balance function and dysfunction in children, and its association with hearing loss and cochlear implantation.



Dr. Cushing completed her undergraduate degree at Queen's University in Kingston, followed by Medical School and Residency training in Otolaryngology Head and Neck Surgery at the University of Toronto. In addition, Dr. Cushing completed a Master's in Science degree examining vestibular function and balance in children with hearing loss through the Surgeon Scientist Program at the University of Toronto. She completed her fellowship training in Paediatric Otolaryngology at Seattle Children's Hospital prior to returning to Sick Kids in Toronto.

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Charles C. Della Santina, PhD MD



Charley C. Della Santina, PhD MD is a Professor of Otolaryngology – Head & Neck Surgery and Biomedical Engineering at the Johns Hopkins University School of Medicine, where he directs the Johns Hopkins Cochlear Implant Center and the Johns Hopkins Vestibular NeuroEngineering Laboratory. As a practicing neurotologic surgeon, Dr. Della Santina specializes in treatment of middle ear, inner ear and auditory/vestibular nerve disorders. His clinical interests include restoration of hearing via cochlear implantation and management of patients who suffer from vestibular disorders, with a particular focus on helping individuals disabled by chronic postural instability and unsteady vision after bilateral loss of vestibular sensation. His laboratory's research centers on basic and applied research supporting development of vestibular implants. In addition to that work, his >100 publications include studies characterizing inner ear physiology and anatomy; describing novel clinical tests of vestibular function; and clarifying the effects of cochlear implantation, vestibular implantation, superior canal dehiscence syndrome and intratympanic gentamicin therapy on the inner ear and central nervous system. Dr. Della Santina is also the founder of Labyrinth Devices LLC, a company dedicated to bringing novel vestibular implant and testing technology into routine clinical care.

Lee Dibble, PhD, PT, ATC, FAPTA

Lee Dibble, PT, PhD, ATC, FAPTA is a Professor and Department Chair at the University of Utah in the Department of Physical Therapy and Athletic Training. For the past 20 years, he has been the Co-director of the University of Utah Balance and Mobility Clinic, which provides insurance reimbursed care for individuals with vestibular disorders and other conditions that impair mobility. In addition, the clinic supports community-based risk reduction programs for people with chronic neurologic diseases, including but not limited to Parkinson disease, multiple sclerosis, and stroke. He completed a bachelor's degree in Animal Physiology from UC Davis, a master's degree in Physical Therapy from Duke University and his PhD in Exercise and Sports Science from the University of Utah with a focus on Motor Control and Motor Learning. Dr. Dibble's research agenda focuses on the effects of rehabilitation interventions on mobility, fall risk and quality of life in people with Parkinson disease and other disorders that affect balance and walking abilities.



Courtney D. Hall, PT, PhD



Courtney D. Hall, PT, PhD is a Research Health Scientist at the Hearing and Balance Research Program at the James H Quillen VAMC and Professor at East Tennessee State University. Dr. Hall received her PhD in Kinesiology from the University of Texas at Austin and her professional physical therapy degree from the University of North Carolina at Chapel Hill. Dr. Hall's research focus is towards understanding age-related changes in balance control and how best to intervene therapeutically to prevent loss of mobility and falls and reduce dizziness. Dr. Hall's current research seeks to develop novel rehabilitation interventions to alleviate symptoms of dizziness and imbalance using mobile medical app technology. Dr. Hall was the team lead for the Academy of Neurologic Physical Therapy's original and updated clinical practice guidelines on vestibular rehabilitation for peripheral vestibular hypofunction.

Presenters



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Janet O. Helminski, PT, PhD



Janet O. Helminski, PT, PhD is a Professor in the Department of Physical Therapy, College of Health Professions, Rosalind Franklin University. She received her PhD from Northwestern University's Institute for Neuroscience. Her clinical focus is treating atypical BPPV and uncompensated peripheral vestibular hypofunction. Her current research includes differential diagnosis of atypical BPPV, acquired vertical diplopia, and PT management of uncompensated peripheral vestibular hypofunction.

Joanna C. Jen, MD, PhD

Joanna C. Jen, M.D., Ph.D., is Dr. Morris B. Bender Professor of Neurology at Icahn School of Medicine at Mount Sinai. Dr. Jen is a neurologist with formal training in neuro-otology, the neurology of hearing, balance, and eye movement control. She evaluates and treats patients with dizziness due to a variety of causes, spanning very common disorders that are genetically complex to very rare disorders caused by specific mutations in single genes. Dr. Jen's clinical focus in neuro-otology is complemented by research performed in her laboratory on the genetic and physiological bases of disorders affecting balance and eye movement control in neurodevelopment and neurodegeneration. Her research spans many levels, from clinical observation to genetic characterization, cellular and animal studies, and clinical trials, to bring everything full circle back to patients. The ultimate goal of her research is to improve diagnosis and develop treatments that will improve patient function and quality of life.



Ji-Soo Kim, MD, PhD



Ji-Soo Kim, MD, PhD, is a Professor in the Department of Neurology, College of Medicine, Seoul National University, South Korea. He was the founding director of the Dizziness Center of Seoul National University Bundang Hospital. He was also the president of the Korean Balance Society (2015~2017) and Korean Society of Neuro-Ophthalmology (2019~2021). He is on the editorial board of Journal of Neuro-ophthalmology, Journal of Clinical Neurology, Frontiers in Neuro-otology, Frontiers in Neuro-ophthalmology, Journal of Vestibular Research, Medicine, and Clinical and Translational Neuroscience. He has published more than 410 SCI papers, especially on vertigo and eye movement disorders. He is the recipient of Young Scientist Award (2006) and Hallpike-Nylen Prize (2014) from the Barany Society and Order of Science and Technology from Republic of Korea (2015).

Presenters



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TRANSLATING RESEARCH TO ADVANCE PRACTICE

Laurie King, PhD, PT, MCR



Laurie King PhD, PT, MCR is currently a Professor in the Department of Neurology at Oregon Health & Sciences University (OHSU) and co-director of the Balance Disorders Laboratory. She received her Doctor of Philosophy degree from Medical College of Virginia in Richmond, Virginia, in Anatomy and Neurobiology. Prior to that, she graduated from Mayo School of Health Sciences in Rochester Minnesota with a Masters in Physical Therapy. She has over 15 years clinical experience treating neurologically impaired patients. She has a Masters in Clinical Research from OHSU and has over 70 peer-reviewed publications. She is currently funded by the NIH and the Department of Defense to study balance and gait and rehabilitation in people with neurologic disorders. Current research interests include the study of gait and balance deficits in people with neurologic deficits including traumatic brain injury and Parkinson's disease. Specifically, she studies emerging new technologies such as wearable sensors to detect deficits. She is also interested in rehabilitation techniques and improving best practices for rehabilitation in people with neurologic deficits.

Hermanus Kingma

Herman Kingma, is professor at the ENT department of Aalborg University, Denmark and emeritus professor at the ENT department of the Maastricht University Medical Center in the Netherlands. He started his academic education with master degrees in biology and physics at Amsterdam University and a PhD in Biophysics at Leiden University, all in the Netherlands. After that he was appointed as head of the Vestibular Department and graduated as a Clinical Physicists specialized in Vestibular disorders. He saw many patients with vestibular disorders in consultations for more than 30 years. Teaching to students and clinical specialists is one of his passions in life. His current research in Maastricht and Aalborg focuses on the development of vestibular prostheses: the vestibular implant and the balance belt, on bilateral vestibular loss, on treatment of BPPV and development of advanced diagnostic technology. In August 2012 his team together with the team of Prof Guyot in Geneva, successfully implanted the first artificial balance organ in humans in the world: the vestibular implant. He also developed the BalanceBelt, a vestibular prosthesis based on haptic stimulation around the waist signaling body posture and movement.



Brooke Klatt, PT, DPT, PhD, NCS



Brooke N. Klatt, PT, DPT, PhD, NCS is an Assistant Professor in the Department of Physical Therapy at the University of Pittsburgh. Dr. Klatt obtained her Bachelors of Science in Kinesiology at Penn State University, her Doctorate of Physical Therapy at New York University, and her PhD in Rehabilitation Sciences at the University of Pittsburgh. She completed a postdoctoral fellowship at Johns Hopkins University where she studied the impact of cognition in vestibular rehabilitation. She is currently funded by an NIH NIDCD career development award to investigate activity and participation in vestibular disorders.

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Dan Merfeld, PhD



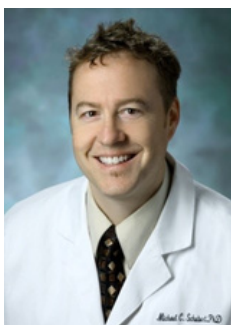
Dan Merfeld received his BSME (1982) in Mechanical Engineering from the University of Wisconsin-Madison, his MSE (1985) in Aerospace & Mechanical Engineering from Princeton University, and his PhD (1990) in Biomedical Engineering from MIT. He grew up southwest Wisconsin – not far from the Mississippi River. Dan is a Professor at the Ohio State University in the department of Otolaryngology – Head and Neck Cancer. Dan also serves as the Senior Vestibular Scientist at the Naval Medical Research Unit – Dayton (NAMRUD). Dan is a neuroengineer/neuroscientist and an inventor of the vestibular implant – the vestibular equivalent of a cochlear implant. His primary research studies the processing of motion cues and sensorimotor integration through the use of physiological and psychophysical measures as well as computational neuroscience techniques such as dynamic systems modeling. Dan conducts such neuro-vestibular investigations in an attempt to (a) prevent falls and other spatial disorientation accidents, (b) better understand how the nervous system processes noisy ambiguous sensory cues and (c) develop new tools to help diagnose clinical disorders.

Kathryn J. Schneider, BHScPT, BKIN(Hons), DScPT, PhD, DipManipPT

EDr. Schneider researches the prevention, detection and treatment of sport-related concussion. She identified a large treatment effect using multimodal physiotherapy and vestibular rehabilitation in athletes who have persistent symptoms following concussion. She is a clinical specialist in musculoskeletal physiotherapy, a fellow of the Canadian Academy of Manipulative Physiotherapists and has expertise in vestibular rehabilitation. Her clinical practice focuses on treating recreational to elite/professional athletes with ongoing symptoms following sport-related concussion. Avenue Magazine named her “Top 40 Under 40” in 2012 and she received the Vestibular Disorders Association (VEDA) Champion of Vestibular Medicine Award in 2015. Research which she led identified changes in measures of neck function following concussion and was awarded the 2018 Journal of Orthopaedic & Sports Physical Therapy (JOSPT) Excellence in Research Award.



Michael C. Schubert, PhD PT FAPTA



Michael C. Schubert PT, PhD, FAPTA is Professor in the Department of Otolaryngology Head and Neck Surgery with a joint appointment in Physical Medicine and Rehabilitation at Johns Hopkins University. He completed his PhD at the University of Miami and a post-doctoral fellowship at Johns Hopkins. The research conducted by Dr Schubert is supported by the Department of Defense, the NIH and NASA. His clinical focus is treating gaze and gait instability in people with loss of vestibular sensation. His current research investigates differences in motor learning in the vestibulo-ocular reflex considering dosing and using different types of error signals. Dr Schubert has authored or coauthored over 140 articles.

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Barry M. Seemungal, PhD, FRCP



Barry Seemungal heads the Centre for Vestibular Neurology at Imperial College. His research group (@VestibularNeuro) interrogate the vestibular system from reflex to perception and combine this with brain imaging and pharmacological and electrical brain modulation, to gain a mechanistic insight into how brain disease affects balance and spatial orientation and hence to develop targeted therapy. He obtained his PhD in Vestibular Neurosciences from the Institute of Neurology at the MRC Human Movement and Balance Unit (Profs Bronstein & Gresty). His postdoctoral training at Imperial was funded by an Academy of Medical Sciences and Health Foundation Clinician Scientist Fellowship.

David J. Szmulewicz, MD, PhD

David Szmulewicz is a Neurologist, Neuro-otologist and medical researcher. He holds a PhD from the University of Melbourne and his clinical and research interests include diseases of the cerebellum, vestibular system and the combination of the two. David is the founding head of Balance Disorders & Ataxia Service at The Royal Victorian Eye and Ear Hospital, and the Cerebellar Ataxia Clinic at the Alfred Hospital. He is a Neurologist with the Neurodegeneration Division of the Florey Institute of Neuroscience and Mental Health. David has been the lead investigator on research involving deep phenotyping and gene discovery in a novel ataxia - Cerebellar Ataxia with Neuropathy and Vestibular Areflexia Syndrome (CANVAS) and idiopathic cerebellar ataxia with bilateral vestibulopathy (iCABV), as well as the development of an objective oculomotor test of combined cerebellar and vestibular impairment - the videoVOR. Currently, He is the recipient of research grants from the National Health and medical research council (NHMRC), Medical Research Future Fund (MRFF) and several international funding bodies. Currently, David's research includes an ongoing program of work to develop instrumented objective ataxia metrics David is the Australian delegate and member of steering committee of The Ataxia Global Initiative (AGI).



Julia Treleaven, PhD, BPhty



Julia Treleaven is a Lecturer and Senior Researcher at the University of Queensland. In 2004 she completed her PhD focusing on the necks influence on dizziness, head and eye movement control and postural stability in whiplash injuries. Her research continues in this area and has looked at cervical sensorimotor control in idiopathic neck pain, the elderly and post concussion. She is particularly interested in identifying clinical measures to assist with differential diagnosis of cervicogenic dizziness. She has published over 100 peer reviewed papers and has contributed to several book chapters and is author of the book Management of neck disorders- An evidenced based approach. Julia also works part-time in private practice assessing and treating patients such as those with whiplash, cervicogenic dizziness and headache and post concussion syndrome.

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Raymond van de Berg, MD, PhD



Raymond van de Berg is an Associate Professor and ENT-surgeon at Maastricht University Medical Center, with a special interest in vestibular disorders. His research initiatives mainly focus on the vestibular implant, bilateral vestibulopathy and vestibular diagnostics. He obtained his first PhD (in medicine) cum laude, which won several scientific prizes. A second PhD was obtained in biophysics (maximum score). He is also head of the Department of Audiology, Head of the Vestibular Department and Chair of the Bárány Society Educational Committee.

KEYNOTE SPEAKER

Susan L. Whitney, DPT, NCS, ATC, FAPTA

Susan L. Whitney, DPT, PhD, NCS, ATC, FAPTA received her PhD in motor development/motor learning from the University of Pittsburgh and her professional physical therapy education from Temple University in Philadelphia, PA. Currently, she is a professor in physical therapy in the School of Health and Rehabilitation Sciences, in the Department of Otolaryngology and the Center for Clinical and Translational Sciences at the University of Pittsburgh. Dr. Whitney is a past President of the Academy of Neurologic Physical Therapy and is the current Vice President of the International Neurologic Physical Therapy Association, which is a subgroup of World Physiotherapy. She is a past Board member of the American Physical Therapy Association. Dr. Whitney has been funded by NIH and Department of Defense grants to support her work related to balance and vestibular disorders. She is currently funded by three Department of Defense grants. In her career she has published 180 papers on Medline, has co-authored a book about vestibular disorders, and has published over 30 book chapters. She most recently was recognized by the Barany Society, which is an international multidisciplinary group, with the Hallpike-Nylen award which recognizes outstanding clinical research achievement in vestibular medicine. She is the first non-physician and the second woman to receive the award. Dr. Whitney actively treats patients with balance and vestibular disorders while teaching and conducting clinical research studies.



Francisco Zuma e Maia, MD, PhD



Francisco Zuma e Maia, MD; PhD , Neurotology at Clínica Maia Rio Grande do Sul , Brazil; Member of the Barany Society; Former Preceptor of ENT Service from PUC-RS Brazil; Former Lieutenant Colonel at Brazilian Air Force as a doctor; Organizer of The International Course of the Dizziness Experts; Three books of Neurotology published.