ISLRR View

Low Vision Conference

Issue June 2025

The 15th International Conference on

Low Vision Research and Rehabilitation

Florence (Italy), 8-12 September 2025

PRESIDENT'S MESSAGE

BEN THOMPSON

I am very much looking forward to the upcoming Vision 2025 conference being held in Florence from the 8th – 12th September https://vision2025florence.com/.

The organizers have put together an outstanding program that highlights the breadth and depth of knowledge generation and innovation in low vision. The conference provides an excellent opportunity to connect with fellow low vision experts from around the world and build networks. International collaboration is critical if we are to advance low vision research and practice within a rapidly evolving global research funding environment. I will see many of you there!

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"Vision 2025: Equal Opportunities, Unique Experiences"

Vision 2025 is a multidisciplinary conference welcoming everyone involved in low vision research and rehabilitation. Building on the comprehensive approaches developed in recent years, the goal of Vision 2025 is to take the next step: not only supporting patients as they adapt to their visual limitations, but also exploring opportunities for clinical and functional improvements.

A well-known message from the field is that patients do not just want to be left alone with their impairment, they want to stop their vision from getting worse, they want to improve their functions and enhance their quality of life. They often ask:

- Can I avoid becoming visually impaired?
- If I'm already visually impaired, is there a way to keep my condition from getting worse?
- Can I maintain the vision that I still have?

If we fail to address these common questions or to offer our patients a path to preserve or improve their visual function, patients may lose their motivation and disengage from rehabilitation. **That's why Vision 2025 focuses on research areas that are both scientifically promising and practically deliverable, alongside effective social services.**

If this sounds ambitious, it is because it truly is. However, dreaming big is never a waste of time when it paves the way to make things better for all who need it. Of course, such progress cannot be achieved alone or taken lightly. As Hellen Keller wisely said, "**Alone we can do so little, but together we can do so much!**".

That's why Vision2025 welcomes everyone who cares – **there is a place for all**.

The Vision 2025 Organizing Committee looks forward to welcoming you in **Florence** to share Equal Opportunities and Unique Experiences!

This is the link to our conference website: https://vision2025florence.com/

II INTERNATIONAL LOW VISION PROJECT IN BRAZIL (2016 – 2019)

Luciene C Fernandes, MD; Liana Ventura, MD; Célia R Nakanami, MD;
Galton C Vasconcelos MD, PhD and Daena Leal, MD

Figure 1 - Advisory board team of specialists in low vision from the Altino Ventura Foundation (AVF), the Federal University of São Paulo (UNIFESP), the Federal University of Minas Gerais (UFMG), and regional partners from eight low vision services in the north and northeast of Brazil.

Although there are several low vision services all over Brazil's largest cities, services amongst the north and northeast regions of the country are still scarce.

The II International Low Vision Project was an initiative led by the Christoffel Blindness Mission (CBM) and the German Government through the Ministry of Development (BMZ). Building on the I International Low Vision Project supported by CBM (2011-2013), this project was supported by Sight First (2015-2017). The Altino Ventura Foundation (AVF), as the project's strategic partner, worked with a technical advisory board of low vision specialists from the Federal University of São Paulo (UNIFESP), the Federal University of Minas Gerais (UFMG), and Rehabilitation Center of the AVF. Regional partners in eight low vision services across the northern and northeastern Brazil also participated. This collaboration benefited rehabilitation centers, patients with low vision, and professionals in this field. The project aimed to support the health policies of the Brazilian Ministry of Health for people with visual impairment, as part of the "Living Without Limits" Programme. Its main objectives were to help establish and improve low vision services in the north and northeast regions of Brazil, donate optical and non-optical low vision aids, and promote multidisciplinary care for people with visual impairment. The programme also offered theoretical and practical training for health and education professionals, early intervention workshops, provision of assistive technology and training for low vision assistants. Participating services were located in Itabuna (Bahia), Aracaju (Sergipe), Fortaleza (Ceará), João Pessoa (Paraíba), Macapá (Amapá), Boa Vista (Roraima) and Maceió (Alagoas).

An expressive number of professionals were qualified in vision re/habilitation (992), 5,461 patients were submitted to ophthalmologic evaluation in 2016 (august to December), 14,400 in 2017 and 5,709 until July 2018, a total of 25,570, reaching 65% of the goal proposed by the project. Of the total amount of patients 36% were 18 years old and below and 64% over 18 years old and most of them were female (51%). Therapeutic evaluations were conducted in 723 patients (august to December 2016), 3,961 (January to December 2017) and 2,629 (January to June 2018), a total of 7,200 patients, reaching 101% of target proposed by the project. From all services participant only one was replaced, by impossibility of sustainability.

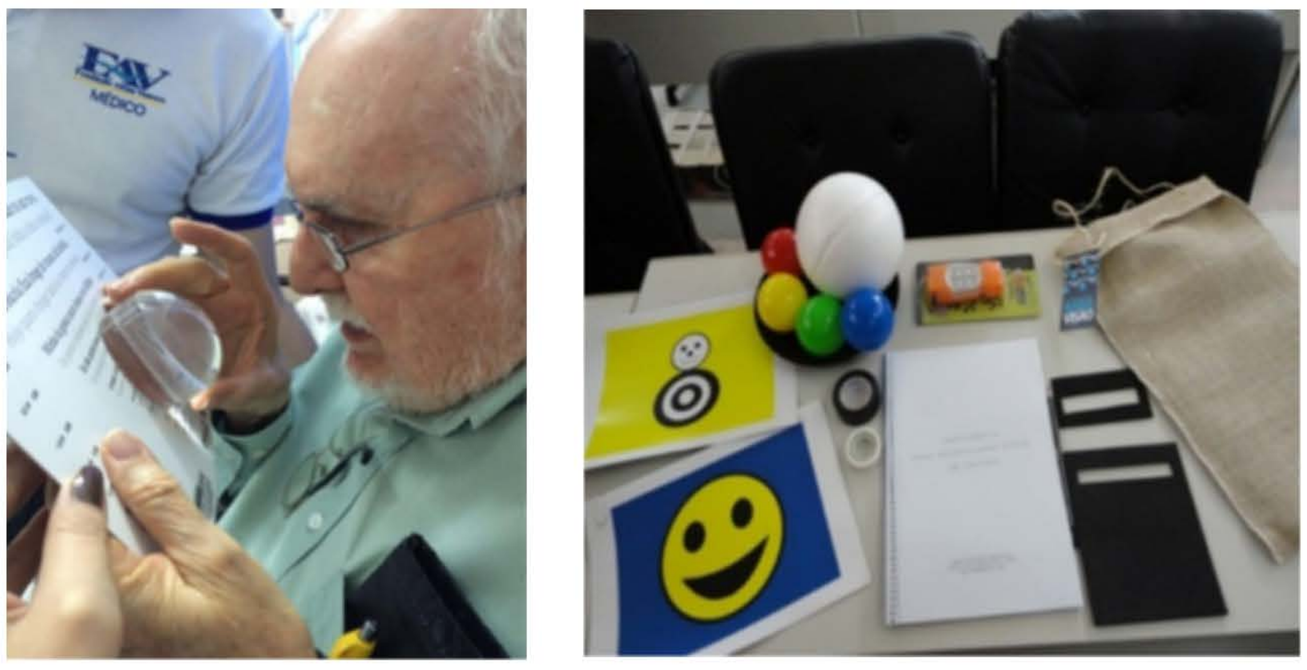


Figure 2 - Material for vision stimulation, optical and non-optical aids dispensed to low vision services

This project, a pioneer in Brazil, represents a milestone in the care of visually impaired people, including professional training, breaking down barriers to accessing specialised services and promoting the educational and social inclusion of low-income patients with low vision.

HIGHLIGHTS FROM ARVO 2025 ON LOW VISION RESEARCH

Allen Cheong
PhD, JD, BSc (Hons), FAAO

At ARVO 2025, low vision research covered a wide range of innovative topics. Presentations include advances in functional vision assessment, new assistive technologies like wearable devices and digital applications, and strategies to enhance rehabilitation and independence for patients with visual impairment. Researchers also discussed neural and cognitive adaptations to vision loss, the psychosocial impact of low vision, and the importance of patient-centred care.

Further highlights featured progress in gene therapy and retinal prosthetics, as well as the use of artificial intelligence for early detection and monitoring of vision changes. The meeting emphasized multidisciplinary collaboration and the growing use of patient-reported outcomes, reflecting the field's commitment to meaningful, real-world improvements for people living with low vision.

For this newsletter, several researchers have contributed short articles to share their insights and experiences from ARVO 2025. Their perspectives offered a closer look at the latest advances and ongoing challenges in low vision research. We encourage you to explore these contributions for a deeper understanding of the field's current direction.

ARVO SHARING

Low Vision Cross-sectional Group 2025

Integrated care in older adults with vision impairment: Needs and challenges

Vijaya K Gothwal, PhD, Dip AAO (LV)
Senior Faculty, Meera and LB Deshpande Centre for Sight Enhancement, Institute for Vision Rehabilitation, Hyderabad, Telangana, India

Organizers and speakers of the symposium (from left to right): Yingzi Xiong, Bradley Dougherty, Vijaya Gothwal, Joshua Ehrlich, Bamini Gopinath, Jennifer Deal, Pradeep Ramulu and Lisa Keay

Over the last century, there has been great progress in life expectancy worldwide and older people make up a larger part of the world's population than before. This proportion will rise rapidly in the coming decades. Although actions at all levels of society are vital to foster healthy ageing, realigning health systems towards building and maintaining the intrinsic capacity of older adults has been identified as an immediate priority. Losses of intrinsic capacity in older age are characterized by the manifestation of common problems, such as difficulties with hearing, seeing, memory, walking at usual pace, continence and positive affect. Yet, most healthcare professionals currently lack guidance or training to recognize and manage declines in physical and mental capacities in older adults.

It may be possible to prevent or delay the onset of losses in intrinsic capacity through an integrated approach to modifying a set of predisposing factors. Delivering research evidence that is relevant to the needs of older adults and the health and social care systems that care for them requires a full-spectrum approach from discovery science to implementation. Advancing research at the intersection of ophthalmology and geriatrics can improve the health and quality of life of older adults with vision impairment. These efforts will allow for a better coordination of care for older adults with vision impairment as well as help identify a subset of older adults at risk of negative aging trajectories and develop tailored and cost-effective interventions for them. Also, a better understanding of the needs and challenges in the integrated care of older adults with vision impairment is important for eye care professionals and policy makers to help older adults maintain a good quality of life, allocate health resources, and conduct targeted interventions to promote healthy aging.

Given the importance of the topic, **Vijaya Gothwal** (Chair, Association for Research in Vision and Ophthalmology [ARVO] 2025 - Low Vision cross-sectional group) along with other members of the group, Yingzi Xiong (JHU, Baltimore, USA), and Bradley Dougherty (OSU, Ohio, USA) organized a symposium titled “Integrated care in older adults with vision impairment: Needs and challenges) held at ARVO 2025, Salt Lake City, Utah, USA on 5th May 2025. The symposium included some of the best speakers from diverse backgrounds (Glaucoma specialist, Audiologist, Neuropsychologist, Public Health Ophthalmologist, Public Health Optometrist) from across the globe. They shared their latest research on the topic highlighting the importance and the challenges in the integrated care of older adults with vision impairment.

The speakers were:

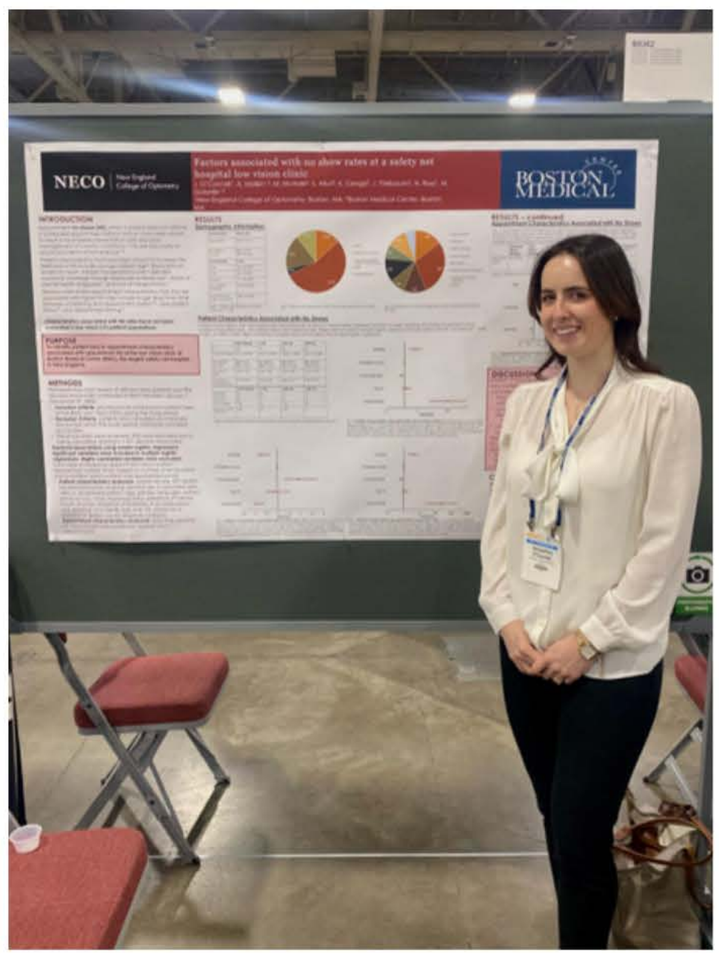
1. Joshua R Ehrlich (USA) – Aging and vision impairment: Implications and Opportunities
2. Jennifer Anne Deal (USA) – Multisensory loss and the aging brain
3. Bamini Gopinath (Australia) – Dual sensory loss: Unveiling prevalence, impacts and pathways to interventions
4. Pradeep Y Ramulu (USA) – Falls, mobility, and the environment in older adults with vision impairment
5. Lisa Keay (Australia) – Competing health priorities for older people with low vision and multi-morbidity

There were about 150 attendees, and the session was very well received. There was a lot of appreciation for this session as it was timely (given shift in population demographics globally and increase in population of older adults), unique, and was multi-disciplinary in nature.

ARVO SHARING(ALEXIS G. MALKIN)

Alexis G. Malkin, O. D., F.A.A.O.
Associate Professor of Optometry, New England College of Optometry
Director Low Vision Service, Boston Medical Center/BU Eye Associates

This year's ARVO meeting highlighted some key work on an understudied population. Our research team was made up of researchers from Boston University School of Medicine as well as New England College of Optometry. Through our 2 projects, we sought to understand characteristics of the low vision patient population at an urban public hospital. We investigated factors that may influence a patient's show rate of attendance for appointments (vs those who miss visits without cancelling/rescheduling). We also analyzed the characteristics that were associated with an improvement in refraction in this population. This population is medically underserved and of lower socioeconomic status than many previous low vision studies. Of those included in our study, 64% of patients were receiving non-Medicare public health insurance (based on income status) and nearly half were best served in a language other than English. Visually, this population is also unique because the patients are younger than what is reported in the literature. Our patients also have a higher prevalence of glaucoma and visual field loss compared to other US Low Vision clinics. In addition, one third of our patient sample had 2 or more diagnoses contributing to their low vision status. In the work that we presented at ARVO, we found that our population had similar rates of improvement in refraction as compared to the existing literature. We also found that there were fewer drivers in our sample and fewer people living alone compared to previous work on low vision patient populations in the United States. In our study those who had better entering vision and those with better BCVA were more likely to receive an updated Rx. In terms of device prescription, our patients were prescribed magnifiers (~42%), video magnifiers (22%), and distance devices (19%). Thirty-three percent were prescribed multiple devices, In terms of show-rate, we found that there were a few modifiable risk factors associated with patients who had a high no show rate. In our sample, this included patients who had the longest time between the booking of the appointment and the actual appointment date, as well as those who did not confirm their visit. We plan to implement strategies to address these specific factors in a future study.

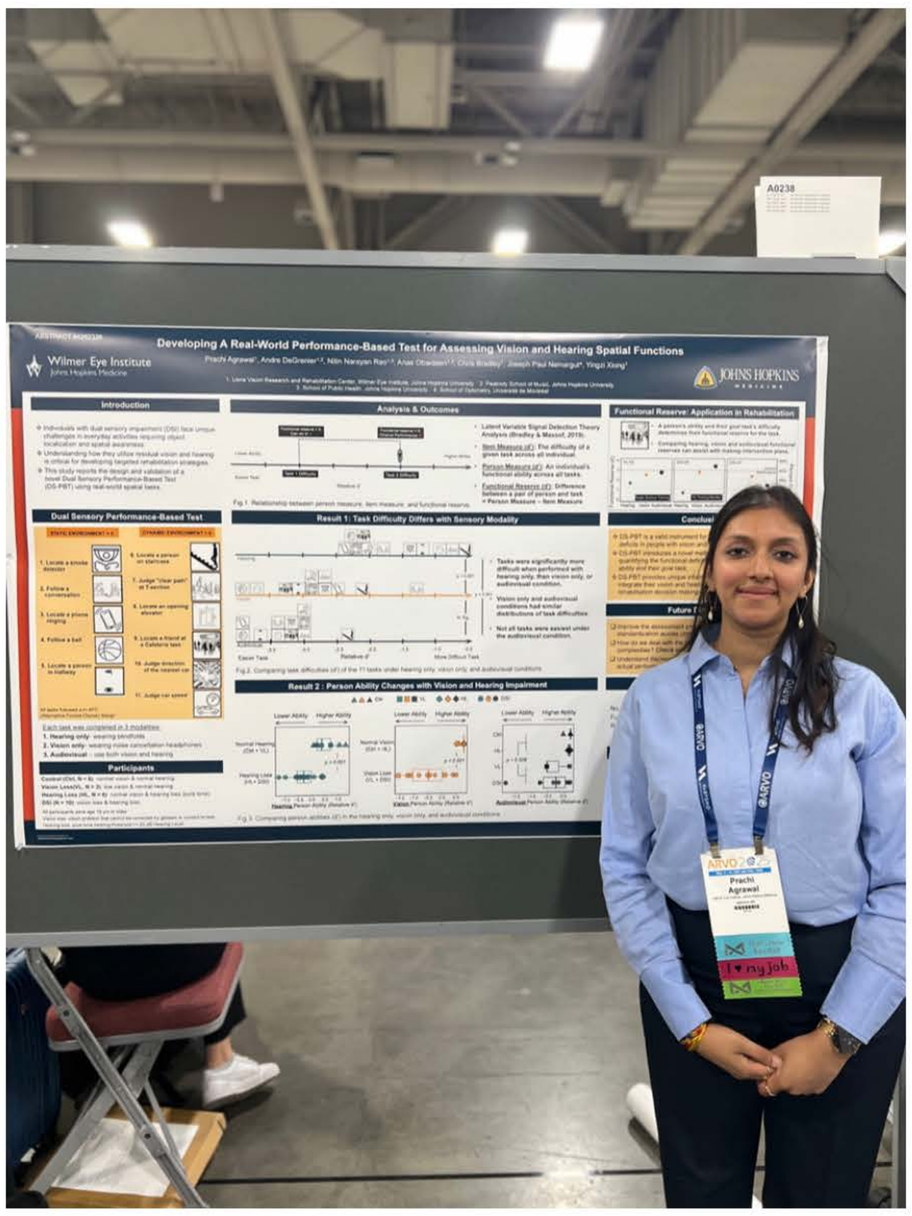


Jackie O'Connell presented her poster titled "Factors associated with no show rate at a safety net hospital low vision clinic" in ARVO 2025.

The ARVO meeting allowed our team to present our findings on this unique population. We look forward to sharing the complete results in a paper publication soon.

ARVO SHARING(PRACHI AGRAWAL)

Bridging the Gap Between Assessment and Real-World Needs: Insights from ARVO 2025



Yingzi Xiong

Prachi Agrawal, MD, MPH

Postdoctoral Research Fellow

Lions Vision Research & Rehab Center

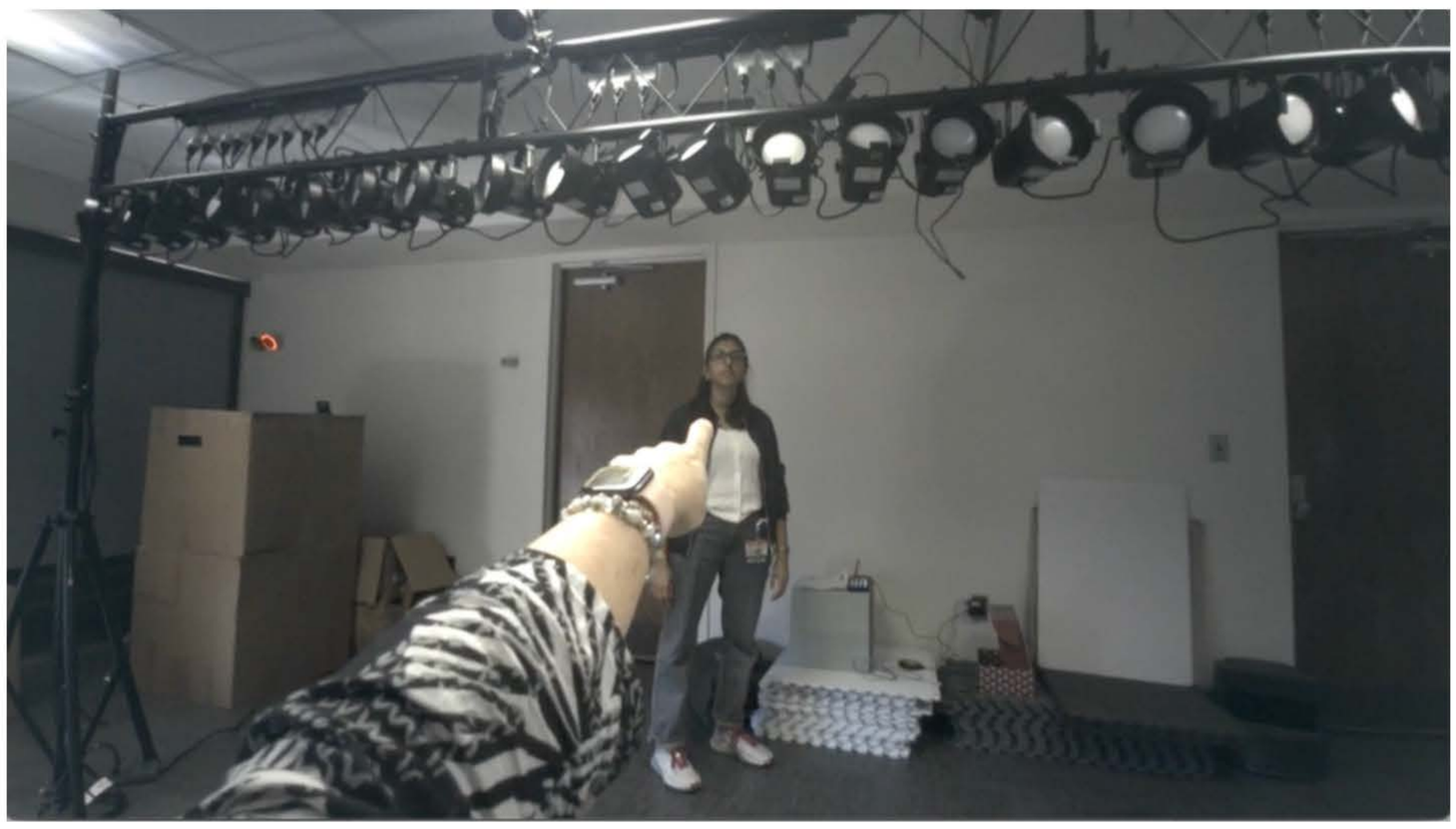
Wilmer Eye Institute

Johns Hopkins University

Wilmer Eye Institute
Johns Hopkins Medicine

At the 2025 ARVO conference, we presented a novel tool developed to assess spatial functional abilities in individuals with Dual Sensory Impairment (DSI)—those with combined vision and hearing loss. While clinical assessments typically focus on isolated sensory functions, real-world navigation depends on integrated use of both vision and hearing. This motivated the creation of the Dual Sensory Performance-Based Test (DS-PBT), an objective, ecologically valid tool designed to simulate everyday spatial challenges.

The DS-PBT includes 11 tasks: five in controlled indoor environments (e.g., identifying a smoke detector's location) and six in uncontrolled settings (e.g., locating an open elevator door). Each task is repeated under three sensory conditions: vision-only, hearing-only, and combined audiovisual, with no feedback provided to avoid learning effects. Performance is analyzed using latent variable signal detection theory, yielding “functional reserve” scores—an estimate of how much residual ability an individual has beyond what is needed to complete the task.



Participant performing Task- Locating a smoke detector in the room, in my lab.

Participant performing Task- Locating which elevator door opens, in elevator corridor at the hospital.

Preliminary results from 25 participants showed that individuals with hearing or vision loss had significantly lower sensory-specific ability scores compared to those with normal senses. Interestingly, the benefit of using both senses together (i.e., sensory integration) was more evident in controlled environments than in uncontrolled ones, highlighting the complexity of real-world spatial function.

In the U.S., there is growing recognition of the need for more inclusive, multisensory approaches in vision rehabilitation, especially for individuals with DSI. Tools like DS-PBT reflect this shift, aiming to bridge the gap between traditional clinical assessments and the real-world functional needs of people with both vision and hearing loss. DSI affects 5.5% of the world population, with its prevalence projected to increase by 27.2% by 2050. It greatly limits mobility, independence, and communication, leading to increased functional, psychological, and cognitive decline. Despite a large and increasing population, the unique needs of DSI have received little attention.

This test represents a crucial step toward more holistic assessment and rehabilitation strategies for individuals with DSI. My research uses patient-centered assessments to evaluate the functioning of DSI individuals, to advance individualized vision and hearing rehabilitation. By improving the independence and quality of life in DSI individuals, we support healthy aging, reduce caregiver burden, and ultimately reduce healthcare demands and public health costs.

I hope that DS-PBT will inspire further research and collaboration across the vision and hearing rehabilitation communities.

ATWELL AWARD RECIPIENT

Atwell Award 2025

The Atwell Award, named in honor of Constance Atwell - a dedicated supporter of low vision research and influential staff member at the National Eye Institute, recognizes outstanding presentations at ARVO by junior investigators. Eligible recipients are students, post-doctoral researchers, or junior faculty members within five years of earning their last professional degree.

This year, Vision Research Group (LVRG) was pleased to present the Atwell Award to **Yi Ni Toh, PhD**. Dr. Toh exemplifies the spirit of this award through her innovative research and dedication to advancing our understanding of vision rehabilitation. She shares about her background and research interests below.

Yi Ni Toh, PhD

Atwell Award Recipient

I'm a postdoctoral researcher at the Schepens Eye Research Institute of Mass Eye and Ear and Harvard Medical School, where I work with Dr. Alex Bowers on vision rehabilitation research. I completed my Ph.D. in Cognitive and Brain Sciences with a minor in Computer Science at the University of Minnesota with Dr. Vanessa Lee.

My research explores how humans perceive, attend, and learn in dynamic environments. During my PhD, I investigated how attention and memory can be optimized for behaviorally relevant events. Now, I study how these cognitive processes adapt—or fail to—in individuals with visual impairments. I'm particularly interested in the limits of attention, how the brain compensates after sensory loss, and how these insights can improve safety, independence, and quality of life.

At ARVO 2025, I was honored to receive the Low Vision Atwell Award for presenting our NIH-funded clinical trial on reminder-cue head-scanning training for drivers with homonymous visual field loss. The training significantly improved blind-side hazard detection and scanning behavior, with benefits persisting at least one month later. This work reflects my broader goal: to develop scalable, mechanism-informed interventions that enhance adaptive functioning for individuals with sensory or cognitive challenges.

In the long term, I aim to develop an interdisciplinary research program that deepens our understanding of adaptive human cognition and contributes to intelligent systems that support people across a spectrum of sensory, physical, and cognitive abilities in reaching their fullest potential.

Vision Loss Rehabilitation Canada (VLRC) Distinguished Community Partner Award

From left to right: Dr. Judith Renaud, Dr. Natalina Martiniello, Dr. Tanya Packer, Dan Zbacnik.
Back row: Dr. Joe Nemargut and Dr. Walter Wiitich.

Congratulations to the Visual Impairment and Rehabilitation team at the School of Optometry of the Université de Montréal in Montreal, Canada! Their impactful contributions to vision rehabilitation have earned them the Vision Loss Rehabilitation Canada (VLRC) Distinguished Community Partner Award. Under the leadership of Dr. Walter Wittich, this program has become highly successful and has played a vital role in the success of VLRC's partnership with the Université de Montréal's Master of Vision Science. This collaboration is truly making a difference in shaping the professional workforce both in Canada and around the globe. Together, they are making significant strides in vision rehabilitation and empowering Canadians with partial vision or blindness to live their lives to the fullest!

VLRC was represented at the May 21st 2025 ceremony at the Université de Montréal by board chair, Tanya Packer, and finance committee chair, Dan Zbacnik. Check out the Université de Montréal's Master's in Vision Science program: opto.umontreal.ca/msc. In 2004/05, the Ecole d'optometrie, introduced two concentrations for Specialized higher education diplomas: one targeting the training Orientation and Mobility Specialists, and the other targeting specialists in the rehabilitation of visual impairment.

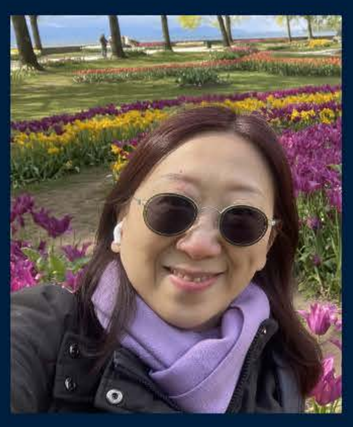
An award made from clear glass with black and blue shots of colour is next to a wooden plaque.

For those interested in both concentrations, two microprograms were added in 2012. Trainees had the option of upgrading their diploma to a Master's degree by completing the research course requirements until 2016, when the Masters in Vision Science - Vision Rehabilitation option was introduced, at the time under the leadership of Dr. Olga Overbury. The Masters became available in three concentrations: Low Vision Therapy (sight enhancement), Vision Rehabilitation Therapy (sight substitution) and Orientation & Mobility (independent travel). At this point, the diploma programs were restructured into microprograms that remain available today for individuals who want to work in more than one specialty.

These programs are all available in both English and French and are unique in Canada. The English and French Low Vision Therapy concentration and the Orientation & Mobility concentration each have already received approval by the international accreditation body, The Association for Education and Rehabilitation of the Blind and Visually Impaired (AER), while the remaining programs are currently under review. In their entirety, they help to increase the student population and train professionals who expand the service offer for persons living with visual impairments.

To learn more about the VLRC Distinguished Community Partner Award,
please visit: https://lnkd.in/gYu2Dg7X

Newsletter Editorial Board



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Alexis Malkin
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Stay Connected!

We are seeking submissions for our upcoming issue in Winter 2025. If you have insights or experiences in clinical service, research, education, innovation, or technology in low vision or vision rehabilitation, we want to hear from you. Some tips for next newsletter:

- Special vision rehabilitation service/ model in your continents
- Personal sharing from your patients
- Recent research highlights in vision rehabilitation
- Adaptive strategies for living with low vision

Submit your articles by **15 October 2025** to allen.my.cheong@polyu.edu.hk to be featured.
Share your expertise and help us inspire our community.

Get Involved by Joining us!

Join our community to enjoy member benefits and networking opportunities. Visit https://islrr.org/membership-application-form to sign up.