4ᵗʰ Australian Assistive Technology Conference (AATC) 2024 Program

Sun Sea and AT, the rising tide of innovation and inclusive technology

6 – 8 November 2024

Gold Coast Convention and Exhibition Centre

Please note that the AATC 2024 Program subject to change at the discretion of the Program Committee, updated 25.09.2024

Pre-Conference Workshops, Wednesday 6 November 2024

Location	Room 1 – **Cabaret set up**	Room 2 – **Cabaret set up**	Room 3 – **Cabaret set up**	Central Room A – **Ushape**	Central Room C – **Ushape**
09.00 – 12.00 (3-hour workshops)	**65. Accessible Gaming Special Interest Group (SIG): An Introduction to Accessible Gaming** Andrew Congdon, Assistive Technology Lab, David Harraway, Yooralla and Jayden Dunn, National 360	**100. Using assistive technology for cognitive support within everyday activities: Demonstrating products and providing resources for use by assistive technology advisors** Libby Callaway, Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University	**133. Prevention, identification and measurement of postural asymmetry in lying** Denise Luscombe, Postural Care Australia and Bas Jansen, Postural Care Australia	**126. Let's 'High Five' Alternate Access - a hands on workshop** **An Introductory workshop for those new to Electronic AT** Rachelle Baldock, Cerebral Palsy Alliance	**93. Fundamentals of Intermediate Assistive Technology** Emily Nunn, Everyday Independence
12.00 – 12.30	Break for Lunch – own catering arrangements				
Location	Room 1 – **Cabaret set up**	Room 2 - **Cabaret**	Room 3 – **Cabaret**	Central Room A – **Ushape**	Central Room C – **Ushape**
12:30 – 14:30 (2-hour workshops)	**20. Mobile phone access and Infra-red controls from Powered wheelchairs** Karthik Pasumarthy, Rehabilitation Engineering Clinic, Department of Health	**96. Minor modifications, equipment, and technology: A complementary partnership to achieve transformative outcomes** Elizabeth Ainsworth, Home Design for Living	**112. Wheelie early: A global perspective on empowering early powered mobility** Rachael Mcdonald, Swinburne University of Technology	**24. U-BEACH Workshop for Beach Accessibility** Sasha Job, Central Queensland University	**82. Getting the Best out of Custom Seating** Jenni Dabelstein, Gizmo Rehabilitation
14:30 – 15:00	Break for afternoon – own catering arrangements				
Location	Room 1 - **Cabaret**	Room 2 - **Cabaret**	Room 3 - **Cabaret**	Central Room A - **Ushape**	Central Room C – **Ushape**

| 15:00 – 17:00
(2-hour workshops) | 131. Artificial Intelligence and Assistive Technology: What Do You Need to Know?

Kate Anderson, RMIT University | 144. Addressing complexity to create inclusive and innovative housing and technology solutions

Elizabeth Ainsworth, Home Design for Living | 27. Best Practice Guidelines for Assessment and Selection of Mobile Shower Commode Chairs

Emma Friesen, University of Queensland, Cathy Young, Odyssey Consulting and Lois Brown, Ils Australia | 72. Tool Time with Manual Wheelchairs

Amy Susanne Bjornson, Clinical Director - Sunrise Medical | 32. Application of interface pressure mapping for pressure management and clinical intervention

Sandra Malkin, Rehabilitation Engineering Clinic |

Thursday 7 November 2024

08:45	AATC 2024 Conference Opening and Welcome to Country	Arena 1B
09:15 – 10:15	Opening Keynote Session: **Professor Jacquie Ripat** **Shifting sands: Assistive technology amidst a changing context**	Arena 1B
10:15 – 10:55	Morning Tea and Exhibition	Hall 1 (Exhibition Hall)

Theme	Home Matters	Co-design	Brain Matters	Speech and Eye Gaze
Location	Arena 1B	Central Room A	Central Room B	Central Room C
11:00 – 11:20 (20 minutes)	22. Understanding the Specialist Disability Accommodation Design (SDA) Standard Joe Manton, Access Institute	76. The importance of user feedback for inclusive assistive technology product design Liza Maclean, Remarkable	105. Mainstream and innovative assistive technology for cognition: a case study Kieran Broome, Medical Aids Subsidy Scheme / Good To Better Therapy Services	78. Speech Recognition for Tablets and Phones Graeme Smith, Ability Technology

Time	The Digital Home	Co-design and Innovation	Wheeled Mobility	AT Learnings
11:20 – 11:40 (20 minutes)	35. Beyond Modification: Exploring Relocation for Accessibility Sarah Collison, VerveOT	63. A Client-Centred Approach to Product Design Innovation Edward Milner, Medifab	90. The importance of "everyday items" on functional participation following brain injuries: case studies in a community setting Janet McPherson, Bridge To Best	66. TD Access Suite – Intuitive and efficient eye gaze access to communication, computer, web browsing and phone functions. Jade Bilusich, Link Assistive
11:40 – 12:00 (20 minutes)	34. The only way is up - Vertical Lift Success in the NDIS Sarah Collison, VerveOT	85. Walker Boost – Co-Designing Customised Assistive Technology for Caregivers with Disability Thomas Beltrame, Flinders University	109. Empowering Independence: The Application and Evaluation of Assistive Technology to Support Cognitive Changes Following Acquired Brain Injury Brendan Worne, Assistive Technology Hub	42. SQUIDLY – Teleconferencing platform with embedded eye gaze technology: Perspectives from eye-gaze users with cerebral palsy Petra Karlsson, Cerebral Palsy Alliance, The University of Sydney
12:00 – 12:20 (20 minutes)	143. History in the making: A showcase of practitioner excellence in the development of AS 1428 Elizabeth Ainsworth, Home Design For Living	86. Co-designing a new approach to transfer Camila Shirota, The Hopkins Centre, Griffith University	139. A systematic review of cognitive training to improve paediatric cancer-related cognitive impairment Rebekah O'Loughlin, Flinders University	37. Clinical Guidelines: Eye-gaze control technology for children, adolescents and adults with cerebral palsy Petra Karlsson, Cerebral Palsy Alliance, The University of Sydney
12:20 – 13:20	**Lunch, Exhibition and Poster Presentations**			Hall 1 (Exhibition Hall)
Theme	**The Digital Home**	**Co-design and Innovation**	**Wheeled Mobility**	**AT Learnings**
Location	Arena 1B	Central Room A	Central Room B	Central Room C

Time				
13:20 – 13:40 (20 minutes)	84. Getting started with smart home control: A beginner's guide Trina Phuah, Charles Sturt University	134. Adopting a user-centred approach in the design of assistive technology research. Kate Anderson, RMIT University	104. Wheelchair seating standards and their application in a clinical setting for prevention and treatment of pressure injuries Karthik Pasumarthy, Rehabilitation Engineering Clinic, Department of Health	132. Implementing emerging assistive technologies - learnings from a leading disability service provider Liza Maclean, Remarkable
13:40 – 14:00 (20 minutes)	106. Can virtual visualisations of Activities of Daily Living (ADLs) support the home modifications design process? Matthew McShane, Griffith University	12. "Without culture it doesn't exist": Reimagining assistive technology information in partnership with First Nations people Vanessa Langenberg, Independent Living Assessment (iLA)	111. Minimising the risk of falls from manual wheelchairs by establishing the position of the centre of gravity in three planes Bill Contoyannis, Melbourne Health, Specialist Wheelchair And Seating Clinic, REHAB TECH	148. MND and AT - an overview of the scope of AT and issues associated with rural and regional service provision. Peta Hardy, Coast Rehab
14:00 – 14:20 (20 minutes)	94. Electronic home technology perspectives of people with physical disabilities Presenting Author/s: Janine Yaffe, Michele Verdonck, University of the Sunshine Coast	118. Assistive Technology in applied arts – how innovative applications can motivate rehabilitation, community engagement and sense of purpose Diana Poole, Austin Health	45. A purpose-built wheelchair centre of gravity platform and its application in a clinical setting Ryan Collier, Health Technology Management Unit	13. World Health Organization (WHO) Training in Assistive Products (TAP) Platform Data Capture Study: Integrating TAP into Occupational Therapy Undergraduate Curriculum Hassan Sarsak, Batterjee Medical College
14:20 – 14:40 (20 minutes)	77. Apple HomeKit - How Far Does it Take Us? Graeme Smith, Ability Technology	55. Capturing life beyond boundaries: The Big Picture to a tailored photography solution Evana Jacobson, Rehabilitation Technology Unit – Communication & Assistive Technology Service (CATS)	91. Harnessing lived experience creating hybrid wheelchair technology with integrated power assist Andrew Slorance, Phoenix Instinct	43. Switching and getting unstuck – The Switching Access Measure (SAM) Journey Louise Ganser, Novita
14:40 – 15:15	Afternoon Tea and Exhibition			Hall 1 (Exhibition Hall)

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15:20 – 16:00	Dr Barry Seeger ORATION - Peter Skattery		Arena 1B

Theme	Wheeled Mobility	Co-design	The Older Australian	Lived Experience
Location	Arena 1B	Central Room A	Central Room B	Central Room C
16:00 – 16:20 (20 minutes)	57. Manual wheelchair training programs: A scoping review of educational approaches and intended learning outcomes Kimberly Charlton, University of Adelaide	101. Co-designing a technological solution for people with acquired brain injury transitioning home from inpatient rehabilitation. Louise Gustafsson, Griffith University	73. What assistive products are older Australians receiving through the Commonwealth Home Support Programme, and what are the outcomes being achieved? Dr Natasha Layton, Monash University	138. Co-design of a Micro-credential on the Good Practice Steps of Assistive Technology: Reflections on the Process and Outcome Melanie Hoyle, Australian Rehabilitation and Assistive Technology Association
16:20 – 16:40 (20 minutes)	83. Tales from the field: Active young high level amputees and their chairs - tips, tricks and cautionary tales! Jenni Dabelstein, Gizmo Rehabilitation	119. Co-designing a skills-based program to support employment in lived experience disability roles in AT development Claudia Bridge, MedTechVic, Swinburne University of Technology	135. Research to develop assistive technology and home modifications lists to inform the Support at Home Program for Older Australians 136. Envisioning a workforce for assistive technology and home modifications	127. Decision making frameworks to support tool selection Rachelle Baldock, Cerebral Palsy Alliance

Time				
16:40 – 17:00 (20 minutes)	54. Alternative Controls for Wheelchairs – exploring new options Jacelyn Goh, Linds Rehab Equipment	117. Parenting with a disability: how technology can support the parenting journey Claudia Bridge, MedTechVic, Swinburne University Of Technology	within the Support at Home Program for Older Australians 137. Assistive technology and home modifications provision for older Australians who experience progressive or complex conditions: Informing Australian Government policy Dr Natasha Layton, Monash University (40 minutes)	92. Implementing an Assistive Technology prescriber training program to support emerging AT Assessors Emily Nunn, Everyday Independence
17:00 – 17:15 (15 minutes)	38. Large Data From Continuous Monitoring - How to Make (the most) Use of It. Tilly Brook, Permobil	36. Assistive Technology Innovations: An International Survey of Cerebral Palsy Stakeholders on Equity, Empowerment, Ease of Use, and Education Darryl Chiu, Cerebral Palsy Alliance	8. Innovative technical solutions for everyday activities Samuel Ren, Samrenproductions (30 minutes)	33. Utilising lived experience in the provision of assistive technology - AT peer mentoring Kristy Harper, Independent Living Assessment (iLA)
17:15 – 17:30 (15 minutes)	15. Wheeled and Seated Mobility Devices Provision: Quantitative Findings and SWOT Thematic Analysis of a Global Occupational Therapist Survey Hassan Sarsak, Batterjee Medical College	122. Impact and outcomes of customised bicycles on people's participation in sport and recreation Sally Logan, Deakin University		130. Opening doors to a better life. Jocelyn Stocker, Spinal Life Australia
17:30 – 19:30	Substantial Networking Event			Hall 1 (Exhibition Hall)

Friday 8 November 2024

07:45 – 08:30	ARATA AGM Breakfast Meeting			Central Room A
08:30 – 09:00	**Break**			
09:00 – 10:00	Friday Keynote Session: **Associate Professor Libby Callaway** **Title to be announced**			Plenary Hall – Arena 1B
10:00 – 10:40	**Morning Tea and Exhibition**			**Hall 1 (Exhibition Hall)**

Theme	Innovation in Movement	International Perspectives	Emerging Technologies	Posture and Support Matters
Location	Arena 1B	Central Room A	Central Room B	Central Room C
10:40 – 11:00 (20 minutes)	7. Positive Impact of a Hoist on the Sit-to-stand Biomechanics Elissa Coates, Novis Healthcare	75. Assistive technology and the World Health Organization Package of Rehabilitation Interventions: Implications for Australian Policy and Practice Natasha Layton, Monash University	107. AI IS AT! David Harraway, Yooralla	121. Whose choice is it anyway? Views and experiences of postural support in a disability service organisation setting. Paraskevi (Paris) Triantis, Swinburne University of Technology
11:00 – 11:20 (20 minutes)	48. Improving Crouch Gait Motor Performance in a Child with Cerebral Palsy Using Soft Knee Robotic Assistance Raymond Kai-yu Tong, The Chinese University Of Hong Kong	74. International Panel – Scaling up the rising tide of AT in our region Natasha Layton, Monash University (60 minutes)	79. Using ChatGPT in everyday AT Graeme Smith, Ability Technology	103. Family capacity building and therapeutic supported lying Denise Luscombe, Postural Care Australia

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Time				
11:20 – 11:40 (20 minutes)	59. Patient and clinician perspectives of intervention using overground wearable lower limb robotic exoskeletons: considerations for exoskeletal technology implementation within Australia Nicola Postol, Cerebral Palsy Alliance Research Institute		21. A Case Study of Innovative Geofencing Technology Improving Personal Freedoms Whilst Managing Hazards Richard Sutton, Rehabilitation Engineering Clinic	142. The high cost of perfect posture - A case study in custom seating Stephen Hales. Stephen Hales Occupational Therapy
11:40 – 12:00 (20 minutes)	11. An Innovative Adjustable Offloading Ankle-Foot Orthosis: Enhancing Walking Dynamics, Functionality, and Comfort Dana Solav, Technion Israel Institute of Technology		113. Technology to support improvements in cardiovascular health in young adults living with intellectual disabilities Rachael Mcdonald, Swinburne University of Technology	18. Carrying out interface pressure mapping remotely in rural Western Australia Karthik Pasumarthy, Rehabilitation Engineering Clinic, Department of Health
12:00 – 13:30	**Lunch, Exhibition and Poster Presentations**			Hall 1 (Exhibition Hall)
13:30 – 14:30	Closing Keynote Session: **Professor Simon Darcy** **Assistive Technologies' Role in Disability Citizenship: Imagining a future for bringing along people with high support needs on the journey to an ordinary life**			Arena 1B
Theme	**Leisure**	**Seating**	**Focus on Engineering**	**Communication Matters**
Location	Arena 1B	Central Room A	Central Room B	Central Room C
14:30 - 14:50 (20 minutes)	41. Tech Toys: Accessible toys for infants with significant motor and physical needs Petra Karlsson, Cerebral Palsy Alliance, The University of Sydney	58. Addressing Pelvic Obliquity in Wheelchair Seating: A Comprehensive Review and Mechanical Evaluation Stephanie Fountain, Rehabilitation Engineering Centre, STARS, Brisbane	110. Identification: Supporting users to use their Assistive Technology in hospitals Kristen Morris, Austin Health	115. Voiceitt – from a user's perspective Michele Verdonck, University Of The Sunshine Coast; Esther Klang; David Harraway, Yooralla

Time				
14:50 - 15:10 (20 minutes)	95. Cycling to freedom: The transformative outcome of assistive technology to achieve inclusion in life Elizabeth Ainsworth, Home Design For Living	23. A hybrid seating system using a custom manufactured base and a commercial overlay Richard Sutton, Rehabilitation Engineering Clinic	145. Preparing a Specified Design Envelope for your Patient Matched Medical Devices Iain Brown, National Committee on Rehabilitation Engineering	52. High-tech access technologies for people with significant motor impairment to facilitate speed and accuracy of communication: A scoping review Annemarie Murphy, Cerebral Palsy Alliance
15:10 - 15:30 (20 minutes)	19. Upper body torso supports for air travel – availability, processes and areas for improvement Charlotte Walker, Medifab	89. Exploring the use of a mobile test rig and indenters to replicate human pressure cushion interface pressure patterns on armchairs. Gavin Brealey, USC	146. Defining Rehabilitation Engineering Competencies for the Australian Context Iain Brown, National Committee on Rehabilitation Engineering	64. "They absolutely love it or they're terrified of it". The Competence of Speech Language Pathologists in Augmentative and Alternative Communication Clancy Conlon, Central Queensland University
15:30 - 15:45 (15 minutes)	116. What it means to be included in sport and recreation and what is needed to make it happen Valerie Watchorn, Deakin University (20 minutes)	53. Integrating physiological sensor data to predict painful events and intensity in people with chronic pain Sabrina Schaly, University Of Sydney	16. Professional Supervision for the Rehabilitation Engineering profession: A call to action Emma Friesen, University of Queensland	40. My Voice Library: A repository of audio and visual datasets to enable personalised real-time communication Petra Karlsson, Cerebral Palsy Alliance, The University of Sydney
15:45 – 16:00		17. Insights into pressure cushion prescription from 12-years of data at the Medical Aids Subsidy Scheme Kieran Broome, Medical Aids Subsidy Scheme / Good To Better Therapy Services	46. A Design Algorithm to Standardise Custom Cushion Design Workflows in Rehabilitation Engineering Annie Simpson, Rehabilitation Engineering Centre, STARS	
16:00 – 16:30	Conference Close			Arena 1B

All posters that will be displayed during the Conference:

Presenter	Organisation	Poster Title
Bas Jansen	Postural Care Australia	141 - Exploring Biomechanics During Sleep in Children with Cerebral Palsy
Beth Sheehan	International Society Of Wheelchair Professionals	150 - Wheelchair provision education in Ukraine, a country at war.
Camila Shirota	The Hopkins Centre, Griffith University	87 - Improving outcomes by personalising AT through co-design between user, health provider, and designers and developers
Edward Milner	Medifab	69 - Prescriber Confidence in Complex Wheelchair Seating - A new digital solution to support clinicians.
Elissa Coates	Novis Healthcare	6 - Is the Hybrid Mattress an Effective Pressure Injury Prevention Solution
Graeme Smith	Ability Technology	80 - Intellikeys Revived
Hassan Sarsak	Batterjee Medical College	14 - A Perspective on Occupational Therapy and Assistive Technology: Research, Contributions, Challenges, and Global Initiatives
Jayke Bennett	The Hopkins Centre, Griffith University	44 - Effects of virtual reality-based nature exposure on mood following brain injury: A feasibility study in a hospital neurorehabilitation ward
Luke Ameduri	Ability WA	81 - 'AssisTing Kids' with Ability WA's specialised Assistive Technology (AT) library.
Melissa Noonan	Limbs 4 Life Incorporated	5 - The Impact of Limbs 4 Life's Amputee Peer Support Program
Mutsuhiro Nakashige	Shonan Institute of Technology	147 - Embedded voice switch to support acquisition of vocal behavior
Rachel Brough	The Hopkins Centre, Griffith University	108 - Assistive technology at work from the perspective of people with spinal cord injury: A metasynthesis
Samuel Ren	Samrenproductions	8 - Innovative technical solutions for everyday activities
Sasha Job	Central Queensland University	25 - Tides of change – beach accessibility barriers and facilitators for older people and people with disability: An Australian community survey
Sasha Job	Central Queensland University	26 - Seas the day – beach use, preferences, and benefits for older people and people with disability: An Australian community survey
Tilly Brook	Permobil	39 - ISO Testing – What it Means to Individualised Cushion Selection Based on Performance.