

DEEPTI AGGARWAL

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RESEARCH HIGHLIGHTS

- **4 journal articles and 21 peer-reviewed conference papers**, majority of which appear in tier-A ACM conferences in the field of Human Computer Interaction (HCI) (Citation count: 295, h-index: 8, i10-index: 7 as of Jan. 2023)
- **Recipient of 2023 Early Career Research Support Funding (PRESS)** at Deakin University.
- **Honorable Mention Awards** at ACM CHI PLAY 2020, ACM CHI 2015, and CIS Doctoral Colloquium 2017.
- Finalist for the **Victorian Premier's Design Award** 2022, 2018 and 2015.
- Winner of the 2017 **Victorian Fresh Science Award**. Fresh Science is a national competition that helps early-career researchers to find and share their stories of discovery to a large audience through several media outlets.
- Featured on over **200 media outlets** in Australia and overseas, with a combined coverage of over 86 million. Key highlights include video coverage on BBC news, Ten News, ABC News, and 7 News; selection in the London Science Museum (From the lab video series); live interviews on Channel 9 Today Show and Pulse Radio; and cover stories in The Indian Weekly and G'Day India magazines.
- **Public exhibitions** of the works at 5 international academic events attracting over 1000 attendees.
- Recipient of the **prestigious scholarships and travel grants** including MIFRS and MIRS PhD Scholarships 2014-2017, ACM Travel Scholarship 2016, and ACM-Women Travel Grant 2013.
- **Honorary appointments** at Royal Children's Hospital and Mudroch Children's Research Institute, Melbourne.

EDUCATION

Doctor of Philosophy University of Melbourne, Australia <i>Thesis: Supporting Bodily Communication in Video Consultations of Physiotherapy</i> Advisors: Prof. Frank Vetere, Dr. Bernd Ploderer and A/Prof. Thuong Hoang	2014 - 2018
Master of Science by Research in Computer Science & Engineering International Institute of Information Technology, Hyderabad, India <i>Thesis: Exploring Crowdsourcing to Personalize Web Experiences</i> Advisors: Prof. Venkatesh Choppella and Prof. Vasudeva Varma	2010 - 2013
Bachelor of Technology in Computer Engineering Gobind Ballabh Pant University of Agriculture & Technology, Pantnagar, India	2006 - 2010

WORK EXPERIENCE

Research Fellow (0.6 FTE) School of Information Technology, Deakin University (Burwood Campus), Australia Manager: A/Prof. Thuong Hoang	Apr 2022 – present
Research Fellow (Casual) HAFP Research Lab, School of Design, RMIT University, Australia Manager: Dr Rohit Ashok Khot	Apr 2019 – Sept. 2022
Research Fellow Dept. of Computing and Information Systems, University of Melbourne, Australia Manager: Prof. Frank Vetere	May 2018 – Oct. 2018
Honorary Fellow Dept. of Anaesthesia and Pain Management, Mudroch Children's Research Institute (MCRI), Melbourne Manager: Dr. Suzette Sheppard	June 2018 - present
Honorary Fellow Dept. of Anaesthesia and Pain Management, Royal Children's Hospital (RCH) Manager: Dr. Suzette Sheppard	Feb. 2017 - present
Research Intern Interaction Centre, University College London (UCL), UK Manager: Prof. Nadia Berthouze	Oct 2016 – Nov 2016
Student Intern Human Computer Interaction Institute (HCII), Carnegie Mellon University (CMU), USA Manager: Prof. Anind K. Dey	May 2013 – Oct 2013

JOURNAL ARTICLES

- [4] Prasad Sandbhor, Priti Bangal, **Deepti Aggarwal**, and Rohit Ashok Khot. 2021. Life on Wings: Relating to a Bird's Life in a City through a Board Game. Proc. ACM Hum.-Comput. Interact. 5, CHI PLAY, Article 232 (September 2021), 28 pages. (Acceptance rate: 25%)
- [3] Rohit Ashok Khot, **Deepti Aggarwal**, Jung-Ying (Lois) Yi, and Daniel Prohasky. 2021. Guardian of the Snacks: Toward Designing a Companion for Mindful Snacking. Proc. Multimodality & Society 1, no. 2 (June 2021): 153–73.
- [2] **Deepti Aggarwal**, Frank Vetere, Bernd Ploderer, Thuong Hoang, and Mark Bradford. A Framework to Evaluate the Efficacy of Video Consultation Systems. ACM Transactions on Computing for Healthcare, 1(4), 1-29.
- [1] Robyn Garnett, Patricia Eadie, Bronwyn Davidson, Ken Clarke, and **Deepti Aggarwal**. Telepractice Delivery of an Autism Communication Intervention to Parent Groups: A Feasibility Study. Submitted to Journal of Clinical Practice in Speech-Language Pathology.

FULL PAPERS (top-tier venues in the field of Human Computer Interaction are ACM CHI, TEI and DIS)

- [15] Yi Ling (Ellie) Ta, Jason Ng, **Deepti Aggarwal**, Nandini Pasumarthi and Rohit Ashok Khot. 2023. FoodChestra: Rethinking Domestic Food Consumption through Multi-modal Open Pantry. To appear in the Proceedings of the Tangible, Embedded, and Embodied Interaction (TEI'23), ACM. (Acceptance rate: 25%)
- [14] Rohit Ashok Khot, **Deepti Aggarwal**, and Nandini Pasumarthi. 2022. Understanding Screen-based Dining Practices through the Lens of Mindful Eating. In CHI Conference on Human Factors in Computing Systems (CHI '22). Association for Computing Machinery, New York, NY, USA, Article 456, 1–19. (Acceptance rate: 25%)
- [13] Rohit Ashok Khot, Jung-Ying (Lois) Yi, and **Deepti Aggarwal**. 2022. Designing for Microbreaks: Unpacking the Design Journey of Zenscape. In Proceedings of the Sixteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI'22), ACM. (Acceptance rate: 25%)
- [12] Rohit Ashok Khot, Jason Ng, and **Deepti Aggarwal**. 2022. Crafting Tangible Interfaces for Human Digestion: Unpacking the Research through Design Prototyping Journey. In Proceedings of the Sixteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI'22), ACM. (Acceptance rate: 25%)
- [11] **Deepti Aggarwal**, Thuong Hoang, Bernd Ploderer, Frank Vetere, Rohit Ashok Khot and Mark Bradford. 2020. Lessons Learnt from Designing a Smart Clothing Telehealth System for Hospital Use. In 32nd Australian Conference on Human-Computer Interaction (OzCHI '20). Association for Computing Machinery, New York, NY, USA, 355–367. (Acceptance rate: 46%)
- [10] Yi Ling (Ellie) Ta, **Deepti Aggarwal** and Rohit Ashok Khot. 2020. Reconnecting with Food Through Dining Play. In Proceedings of the ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY'20) [**Honorable Mention Award** – top 5% papers] (Acceptance rate: 29.5%)
- [9] Rohit Ashok Khot, Lois, Yi, **Deepti Aggarwal**. 2020. SWAN: Designing a Companion Spoon for Mindful Eating. In Proceedings of the Fourteenth International Conference on Tangible, Embedded and Embodied Interactions (TEI '20). ACM, 743-756. (Acceptance rate: 25%)
- [8] **Deepti Aggarwal**, Weiyi Zhang, Thuong Hoang, Bernd Ploderer, Frank Vetere, and Mark Bradford. 2017. SoPhy: A Wearable Technology for Lower Limb Assessment in Video Consultations of Physiotherapy. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17). ACM, New York, NY, USA, 3916-3928. (Acceptance rate: 25%)
- [7] Rohit Ashok Khot, **Deepti Aggarwal**, Ryan Pennings, Larissa Hjorth, and Florian 'Floyd' Mueller. 2017. EdiPulse: Investigating a Playful Approach to Self-monitoring through 3D Printed Chocolate Treats. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17). ACM, New York, NY, USA, 6593-6607. (Acceptance rate: 25%)
- [6] **Deepti Aggarwal**, Bernd Ploderer, Frank Vetere, Mark Bradford, and Thuong Hoang. 2016. Doctor, Can You See My Squats?: Understanding Bodily Communication in Video Consultations for Physiotherapy. In Proceedings of the 2016 ACM Conference on Designing Interactive Systems (DIS '16). ACM, New York, NY, USA, 1197-1208. (Acceptance rate: 26%)

- [5] **Deepti Aggarwal**, Robyn Garnett, Bernd Ploderer, Frank Vetere, Patricia Eadie, and Bronwyn Joy Davidson. 2015. Understanding Video based Parent Training Intervention for Children with Autism. In Proceedings of the Annual Meeting of the Australian Special Interest Group for Computer Human Interaction (OzCHI '15), Bernd Ploderer, Marcus Carter, Martin Gibbs, Wally Smith, and Frank Vetere (Eds.). ACM, New York, NY, USA, 10-19. (Acceptance rate: 49%)
- [4] Rohit Ashok Khot, Jeewon Lee, **Deepti Aggarwal**, Larissa Hjorth, and Florian 'Floyd' Mueller. 2015. TastyBeats: Designing Palatable Representations of Physical Activity. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15). ACM, New York, NY, USA, 2933-2942. [**Honorable Mention Award** – top 5% papers] (Acceptance rate: 25%)
- [3] **Deepti Aggarwal**, Rohit Ashok Khot, Vasudeva Varma and Venkatesh Choppella. 2012. uPICK: Crowdsourcing Based Approach to Extract Relations Among Named Entities. In Proceedings of the 4th Indian Conference on Human Computer Interaction (IndiaHCI '12), available as a technical report in IIIT-Hyderabad archival (Report No: IIIT/TrR/2012/-1). (Acceptance rate: 50%)
- [2] **Deepti Aggarwal**, Himanshu Zade, and Anind K. Dey. 2012. Demography based Automated Teller Machines. In Proceedings of the 4th Indian Conference on Human Computer Interaction (IndiaHCI '12). (Acceptance rate: 50%)
- [1] Vasudeva Varma, Bhaskar Ghosh, Mohan Soundararajan, **Deepti Aggarwal**, and Priya Radhakrishnan. 2012. IIIT Hyderabad at TAC 2012. In Proceedings of the Text Analysis Conference (TAC '12). (TAC comprises of different tasks known as "tracks," focusing on a particular sub-problem of Natural Language Processing, such as slot filling task in a given knowledge base.)

SHORT PAPERS (top-tier venues in the field of Human Computer Interaction are ACM CHI and ACM DIS)

- [6] **Deepti Aggarwal**, Thuong Hoang, Weiyi Zhang, Bernd Ploderer, Frank Vetere, and Mark Bradford. 2017. SoPhy: Smart Socks for Video Consultations of Physiotherapy. In: Bernhaupt R., Dalvi G., Joshi A., K. Balkrishan D., O'Neill J., Winckler M. (eds) Human-Computer Interaction – INTERACT 2017. INTERACT 2017. Lecture Notes in Computer Science, vol 10516. Springer, Cham.
- [5] **Deepti Aggarwal**. 2016. Supporting Bodily Communication in Video Based Clinical Consultations. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16). ACM, New York, NY, USA, 188-192. (I was one of the only 15 candidates selected, Acceptance rate: 22%)
- [4] Robyn Garnett, Patricia Eadie, Bronwyn Davidson, Ken Clarke, Zaher Joukhadar and **Deepti Aggarwal**. 2015. Utilising Technologies to Address the Social Communication of Young Children with Autism Spectrum Disorder. In Proceedings of Asia Pacific Autism Conference (APAC '15).
- [3] Rohit Ashok Khot, Jeewon Lee, Helmut Munz, **Deepti Aggarwal** and Florian Floyd Mueller. 2014. TastyBeats: making mocktails with heartbeats. In CHI '14 Extended Abstracts on Human Factors in Computing Systems (CHI EA '14). ACM, New York, NY, USA, 467-470. (Acceptance rate: 32%)
- [2] **Deepti Aggarwal**, Rohit Ashok Khot and Venkatesh Choppella. 2013. Power of friends: when friends guess about their friends' guess. In CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13). ACM, New York, NY, USA, 907-912. (Acceptance rate: 32%)

- [1] T. B. Dinesh, S. Uskudarli, Subramanya Sastry, **Deepti Aggarwal** and Venkatesh Choppella. 2012. Alipi: a framework for re-narrating web pages. In ACM Proceedings of the International Cross-Disciplinary Conference on Web Accessibility (W4A '12). ACM, New York, NY, USA, Article 22, 4 pages. (Acceptance rate: 30%)

WORKSHOP PAPERS (top-tier venues in the field of HCI are ACM CHI and ACM DIS)

- [3] **Deepti Aggarwal**, Philip Goebel, and Rohit Ashok Khot. 2017. Caring for the Caregivers of People with Dementia. In Proceedings of CHI'17 workshop on HCIXDementia: The Role of Technology and Design in Dementia.
- [2] **Deepti Aggarwal**, Bernd Ploderer, and Frank Vetere. 2015. Addressing Research Gaps in Teleconsultation Settings. In Proceedings of CHI '15 workshop on Everyday TelePresence: Emerging Practices and Future Research Directions.
- [1] Rohit Ashok Khot, Larissa Hjorth, **Deepti Aggarwal**, and Florian 'Floyd' Mueller. 2014. Supporting Autonomy in Physical Activity Through Material Artefacts. In Proceedings of CHI '14 workshop on Positive Computing.

SELECTED PRESS

My PhD work has received coverage in over 200 media outlets (TV news, radio, newspapers and magazines) in Australia and overseas, with a combined coverage of over 86 million. The story was covered overseas in the United Kingdom, America, Malaysia, Israel, Italy, New Zealand, Iran, Canada and China. Some highlights of the coverage are listed below.

London Science Museum (From the Lab video series), How smart socks revolutionise physiotherapy	June 2018
Tenplay Scope TV , Smart Socks	June 2018
Radio Mirchi Love , Smart Socks	June 2018
BBC News , Smart SoPhy socks send data to your physiotherapist	May 2018
Pulse Radio (Live Interview), 'Smart socks' offer hope for remote patients with chronic pain	May 2018
The Indian Weekly (Cover Story), Smart Solution	April 2018
Pursuit , Clever socks connecting remote patients and physios	April 2018
SBS , Indian-Australian invents 'smart socks' for chronic pain sufferers	April 2018
Channel 9 Today Show (Live Interview), Smart Socks	April 2018
New Atlas , Smart socks designed to aid physio-by-Skype	April 2018
Cosmos , Young inventor puts a sock in it	April 2018
Ten News , Big Step	April 2018
ABC News , 'Smart socks' offer hope for remote patients with chronic pain, researcher says	April 2018
7 News , Vic student creates physio 'smart socks'	April 2018
Ten Play , Wearable technology improves treatment opportunities for rural and remote patients	April 2018
Starts at 60 , 'Smart socks' to help physiotherapists treat pain	April 2018

TVNZ, Australian student using 'smart socks' to allow remote treatment by a physiotherapist

April 2018

TEACHING

Lecturing	Hosted the Panel Discussion in INF090006 Fieldwork for Design , University of Melbourne, 2018 (in the absence of the lecturer)
Tutoring	INF090006 Fieldwork for Design , University of Melbourne, 2018 (semester 2)
Marking	INF090006 Fieldwork for Design , University of Melbourne, 2018 (semester 2) ISYS90051 Impacts of Digitisation , University of Melbourne, 2018 (semester 1) ISYS90085 Interaction Design and Usability , University of Melbourne, 2017 (semester 1)
Guest Lectures	INF090006 Fieldwork for Design , University of Melbourne, 2018 (Host: Dr Jenny Waycott) MGMT90223 Design Thinking , University of Melbourne, 2018 (Host: Prof. Frank Vetere) INFO30004 Usability Engineering , University of Melbourne, 2018 (Host: Prof. Martin Gibbs)
Professional Development	Tutor and Demonstrator Professional Development Training, University of Melbourne, 2018 (a 6-week training program for staff taking tutoring responsibilities) HDR Supervision Practices, Deakin University, 2022 (a professional development program for staff to undertake supervision responsibilities)

SUPERVISION

- Weiyi Zhang (Masters Project, Dec. 2015 - May 2016), "Real-time data visualization system for smart socks", Co-supervised with Dr. Thuong Hoang
- Kartikey Vyas & Deep Dixit (B.Tech Project, Feb. 2012 - May 2013), "Developing Ontological Framework for Alipi", Co-supervised with Prof. Venkatesh Choppella
- Mentoring of the 10th grade experience students at The University of Melbourne, 2018

ORAL PRESENTATIONS

- Full paper presentation at **ACM OzCHI 2020, Australia**
- PhD work presentation at **Centre for Health Informatics, Macquarie University, Sydney, 2020**
- PhD work presentation at **Victoria Fresh Science, 2017**
- PhD work presentation at **Dept. of Anaesthesia and Pain Management, Royal Children's Hospital, 2017** (Host: Dr. George Chalkiadis)
- PhD work presentation at **Microsoft Research Cambridge, UK, 2017** (Host: Kenton O'Hara)
- PhD work presentation at **Pain Management Centre, University College London Hospital, UK, 2017** (Host: Dr. Diarmuid Denny)
- PhD work presentation at **UCL Interaction Center, UK, 2017** (Host: Prof. Nadia Berthouze)
- Full paper presentation at **ACM CHI 2017, Denver, USA**
- Workshop paper presentation at **ACM 2017, Denver, USA**
- Full paper presentation at **ACM DIS 2016, Brisbane, Australia**

- Presentation at **ACM CHI 2016 Doctoral Consortium**, San Jose, USA
- Full paper presentation at **ACM OzCHI 2015**, Melbourne, Australia
- Project presentation at **Health XL Hackathon on Aging 2015**, Melbourne, Australia
- Workshop paper presentation at **ACM CHI 2015**, Korea
- PhD work presentation at **Interaction Design Lab Seminar**, University of Melbourne, 2014 - 2017
- PhD work presentation at **CIS Doctoral Colloquium**, University of Melbourne 2014 - 2017

HONORS & AWARDS

- **Finalist** for the 2022 Victorian Premier's Design Award
- **Honorable Mention Award** at ACM CHI PLAY 2020
- **Finalist** for the 2019 IxDA Interaction Awards
- **Finalist** for the 2018 Victorian Premier's Design Award, Student Category
- **Winner** of the 2017 Victorian Fresh Science Award
- **Invited Panelist** on 'Games and Health' at SIGCHI Sponsored Summer School on Playful Interactions 2017
- **Best Paper Honorable Mention Award** at CIS Doctoral Colloquium 2017
- **Invited Research Demo** of SoPhy at CHI 2017
- **Best Paper Honorable Mention Award** at ACM CHI 2015
- **Finalist** for the Premier's Design Award 2015, Student Category
- **Finalist** for the Student Innovation Contest, UIST 2013
- **Innovative Design Award** at TechEase 2011

RESEARCH GRANTS

- **2023 ECR Support Scheme (PRESS)** at Deakin University (AUD \$5000)

SCHOLARSHIPS

- **Conference Travel Scholarship** to present at ACM CHI 2017 (AUD \$750)
- **Melbourne Abroad Travel Scholarship** to present at ACM DIS 2016 (AUD \$750)
- **ACM Travel Scholarship** to present at ACM CHI 2016 Doctoral Consortium (USD \$2,050)
- **SocialNUI Student Travel Scholarship** 2015 – 2017 (AUD \$7,000)
- **SocialNUI Postgraduate Research Top-up Scholarship** 2015 - 2017 (AUD \$15,000)
- **Melbourne International Fee Remission Scholarship (MIFRS)** 2014 – 2017 (AUD \$ 34,080 annually)
- **Melbourne International Research Scholarship (MIRS)** 2014 – 2017 (AUD \$25,810 annually)
- **Pursuit Travel Grant** 2013 to pursue internship at Carnegie Mellon University (USD \$1,000)
- **ACM-Women Travel Grant** to present at CHI 2013 (USD \$2,000)

PROFESSIONAL ACTIVITIES

- **Judging Panel Member:** Victorian Fresh Science 2019
- **Scientists LIVE Panel Member!:** Science Week 2019, Altona Primary School

- **Public Exhibitions:** LNCS INTERACT 2017, ACM CHI (2017, 2014), IIT Bombay Techfest 2014, UIST Student Innovation Contest 2013, OpenData Camp Showcase – Hyderabad Meet 2012, MIT Media Lab Design Innovation Workshop 2012, IIIT-Hyderabad R&D Showcase 2011-2013
- **Media Liaison:** Dept. of Computing & Information Systems, University of Melbourne, 2016
- **Coordinator:** Interaction Design Lab seminars, 2015 – 2016
- **Co-Chair:** ACM OzCHI 2015 Student Design Challenge
- **Co-organizer:** Hands on computing 2015 at University of Melbourne, TechEase-2011 at IIIT- Hyderabad, Spic Macay Virasat 2010 at IIIT- Hyderabad
- **Program committee member:** ACM OzCHI 2018
- **Associate Chair:** ACM CHI 2018 Late Breaking Work
- **Reviewer (full paper category):** ACM CHI 2017-2023, VRST 2022, ACM OzCHI 2014-2021, ACM TEI 2020, ACM DIS 2016, ACM CHI Play 2017, ACM NordiCHI 2018 & 2020, ECIS 2018
- **Reviewer (Late breaking work):** ACM OzCHI 2017, ACM CHI Play 2016-2017, ACM CHI 2021, 2013, 2014 & 2017
- **Student Volunteer:** ACM DIS 2016, ACM CHI 2015, ACM WWW 2011