ANUSHA WITHANA

School of Computer Science
Faculty of Engineering,
University of Sydney.
J12/1 Cleveland St, Darlington NSW 2008, Australia.

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wdanusha@acm.org
http://withana.info
DoB: 1983-02-20, in Sri Lanka

I am a lecturer in School of Information Technologies, Faculty of Engineering, University of Sydney, Australia. My research is focused on fabricating *blended interfaces* that are interactionally, ergonomically and technologically fit to sustain in real world applications. Such interfaces are vital to expand the traditional human computer interaction (HCI) from desktops to a broader social interaction paradigm and will play an important role in future smart societies accommodating education, play and wellbeing.

EDUCATION

Ph.D. in Media Design (HCI) - Keio University, Tokyo, Japan   **2010 to 2014**
Thesis: Integration of Multimodal Interactions for Inter-Spatial Continuum
Advisors: Prof. Masahiko Inami, Prof. Naohisa Ohta, Prof. Akira Kato

M.Sc. in Media Design (HCI) - Keio University, Tokyo, Japan   **2008 to 2010**
Thesis: *ImpAct*: Immersive Haptic Interface - Exploring Direct Touch and Manipulation Techniques for Surface Computing
Advisors: Prof. Masahiko Inami, Asst. Prof. Maki Sugimoto

B.Sc. (Hons.) in Electronics and Telecommunication - University of Moratuwa, Sri Lanka   **2003 to 2007**
Grade Point Average (GPA) = 3.91 (First Class)

GCE A/L Examination, Sri Lanka   **2000 to 2002**
District Rank: 1st (Out of appr. 20,000), **National Rank:** 41st (Out of appr. 180,000).
Maths: A, Physics: A, Chemistry: A, Z-score: 2.4838

PROFESSIONAL EXPERIENCES

School of IT, Faculty of Engineering, University of Sydney, Australia
Lecturer   **July 2017 - Now**

Max Planck Institute for Informatics and Saarland University, Germany
Postdoctoral Fellow   **Dec 2016 - Apr 2017**

Singapore University of Technology and Design, Singapore
Postdoctoral Fellow   **Jan 2014 - Oct 2016**

University of Melbourne, Melbourne, Australia
Visiting Researcher   **Jun - Aug 2015**

Keio University, Tokyo, Japan.
Researcher   **Oct - Dec 2013**
SCOPE (Strategic Information and Communications R&D Promotion Program)

Research Assistant   **Oct 2012 - Mar 2013**
SCOPE (Strategic Information and Communications R&D Promotion Program)

JST ERATO Igarashi Design Interface Project, Tokyo, Japan.
Research Assistant   **Jul 2009 - Mar 2011**

Dialog Telekom Ltd., Colombo, Sri Lanka.
Core Network Engineer   **Nov 2007 - Sep 2008**

REFEREED PUBLICATIONS

JOURNAL PUBLICATIONS

J1   Juan Pablo, Piyum Fernando, Priyashri Sridhar, <u>Anusha Withana</u>, Suranga Nanayakkara, Jurgen Steimle, and Pattie Maes. **PostBits: using contextual locations for embedding cloud information in the home**. *Personal and Ubiquitous Computing*, 20(6):1001–1014, nov 2016

J2   Yuta Sugiura, Kakei Gota, <u>Anusha Withana</u>, Daisuke Sakamoto, Masahiko Inami, and Takeo Igarashi. **Direct Operation Method with Self-projectable Finger Gestures for Bipedal Robots**. *Journal of Information Processing (JIP)*, 52(2):737–742, 2011

J3   Miyuru Dayarathna, <u>Anusha Withana</u>, and Kazunori Sugiura. **Infoshare : Design and Implementation of Scalable Multimedia Signage Architecture for Wireless Ubiquitous Environments**. *Wireless Personal Communications*, 60(1):3–27, mar 2011

J4   <u>Anusha Withana</u>, Yasutoshi Makino, Makoto Kondo, Maki Sugimoto, Gota Kakehi, and Masahiko Inami. **ImpAct : Immersive Haptic Stylus to Enable Direct Touch and Manipulation for Surface Computing**. *Computers in Entertainment*, 8(2):1, dec 2010

SELECTED CONFERENCE PAPERS

C1   Narjes Pourjafarian, <u>Anusha Withana</u>, , Joe Paradiso, and Jürgen Steimle. **Multi-Touch Kit: A Do-It-Yourself Technique for Capacitive Multi-Touch Sensing using a Commodity Microcontroller**. In *The 32nd Annual ACM Symposium on User Interface Software and Technology - UIST '19 (to appear)*, New York, New York, USA, 2019. ACM Press

C2   Daniel Groeger, Martin Feick, <u>Anusha Withana</u>, and Jürgen Steimle. **Tactlets: Adding Tactile Feedback to 3D Objects Using Custom Printed Controls**. In *The 32nd Annual ACM Symposium on User Interface Software and Technology - UIST '19 (to appear)*, New York, New York, USA, 2019. ACM Press

C3   <u>Anusha Withana</u>, Daniel Groeger, and Jürgen Steimle. **Tacttoo: A Thin and Feel-Through Tattoo for On-Skin Tactile Output**. In *The 31st Annual ACM Symposium on User Interface Software and Technology - UIST '18*, pages 365–378, New York, New York, USA, 2018. ACM Press

C4   Aditya Shekhar Nittala, <u>Anusha Withana</u>, Narjes Pourjafarian, and Jürgen Steimle. **Multi-Touch Skin: A Thin and Flexible Multi-Touch Sensor for On-Skin Input**. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems - CHI '18*, pages 1–12, New York, New York, USA, 2018. ACM Press

C5   Bernd Ploderer, Justin Fong, <u>Anusha Withana</u>, Marlena Klaic, Siddharth Nair, Vincent Crocher, Frank Vetere, and Suranga Nanayakkara. **ArmSleeve: a Patient Monitoring System to Support Occupational Therapists in Stroke Rehabilitation**. In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems - DIS '16*, pages 700–711, New York, New York, USA, 2016. ACM Press

C6   <u>Anusha Withana</u>, Roshan Peiris, Nipuna Samarasekara, and Suranga Nanayakkara. **zSense: Enabling Shallow Depth Gesture Recognition for Greater Input Expressivity on Smart Wearables**. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, pages 3661–3670, 2015

C7   <u>Anusha Withana</u>, Shunsuke Koyama, Daniel Saakes, Kouta Minamizawa, Masahiko Inami, and Suranga Nanayakkara. **RippleTouch: initial exploration of a wave resonant based full body haptic interface**. In *Proceedings of the 6th Augmented Human International Conference on - AH '15*, pages 61–68, 2015

C8   Santiago Ortega-Avila, Jochen Huber, Nuwan Janaka, <u>Anusha Withana</u>, Piyum Fernando, and Suranga Nanayakkara. **SparKubes: exploring the interplay between digital and physical spaces with minimalistic interfaces**. In *Proceedings of the 26th Australian Computer-Human Interaction Conference on Designing Futures the Future of Design - OzCHI '14*, pages 204–207, 2014

C9   Shunsuke Koyama, Masahiko Inami, Yuta Sugiura, Masa Ogata, <u>Anusha Withana</u>, Yuji Uema, Makoto Honda, Sayaka Yoshizu, Chihiro Sannomiya, and Kazunari Nawa. **Multi-touch steering wheel for in-car tertiary applications using infrared sensors**. In *Proceedings of the 5th Augmented Human International Conference on - AH '14*, pages 1–4, New York, New York, USA, 2014. ACM Press

C10   Anusha Withana, Shunsuke Koyama, Yuta Sugiura, Yuji Uema, Kazunari Nawa, Sayaka Yoshizu, Chihiro Sannomiya, and Masahiko Inami. **Effects of Relative Rotation on Gesture Interaction in a Multitouch Steering Wheel Based Gaming Interface**. In *18 Virtual Reality Conference*, Osaka, Japan, 2013. Virtual Reality Society of Japan

C11   Yuta Sugiura, Calista Lee, Masayasu Ogata, Anusha Withana, Yasutoshi Makino, Daisuke Sakamoto, Masahiko Inami, and Takeo Igarashi. **PINOKY: A Ring That Animates Your Plush Toys**. In *Proceedings of the 2012 ACM annual conference on Human Factors in Computing Systems - CHI '12*, pages 725–734, New York, New York, USA, may 2012. ACM Press

C12   Anusha Withana, Yuta Sugiura, and Masahiko Inami. **Haptic Telescope: Visual to Haptic Cross Modal Display**. In *17 Virtual Reality Conference*. Virtual Reality Society of Japan, 2012

C13   Anusha Withana, Miyuru Dayarathna, Masa Inakage, and Kazunori Sugiura. **Infoshare: Content, design and system independent multimedia signage architecture**. In *2011 2nd International Conference on Wireless Communication, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE)*, pages 1–6. IEEE, feb 2011

C14   Yuta Sugiura, Gota Kakehi, Anusha Withana, Calista Lee, Daisuke Sakamoto, Maki Sugimoto, Masahiko Inami, and Takeo Igarashi. **Detecting shape deformation of soft objects using directional photoreflectivity measurement**. In *Proceedings of the 24th annual ACM symposium on User interface software and technology - UIST '11*, pages 509–516, New York, New York, USA, oct 2011. ACM Press

C15   Yuta Sugiura, Diasuke Sakamoto, Anusha Withana, Masahiko Inami, and Takeo Igarashi. **Cooking with robots: designing a household system working in open environments.** In *Proceedings of the 28th international conference on Human factors in computing systems - CHI '10*, page 2427, 2010

C16   Kazunori Sugiura, Miyuru Dayarathna, and Anusha Withana. **Design and implementation of distributed and scalable multimedia signage system**. In *2010 Second International Conference on Ubiquitous and Future Networks (ICUFN)*, pages 273–278. IEEE, jun 2010

DEMONSTRATIONS, INSTALLATIONS AND WORKSHOPS

D1   Anusha Withana and Jürgen Steimle. **Personalized Interactive Surfaces with Printed Electronics**. In *Adj. Proceedings of the Interactive Surfaces and Spaces - ISS '17*, pages 473–476, New York, New York, USA, 2017. ACM Press

D2   Anusha Withana, Shanaka Ransiri, Tharindu Kaluarachchi, Chanaka Singhabahu, Yilei Shi, Samitha Elvitigala, and Suranga Nanayakkara. **waveSense : Ultra Low Power Gesture Sensing Based on Selective Volumetric Illumination**. In *Adj. Proceedings of the 29th Annual Symposium on User Interface Software and Technology*, pages 139–140, New York, NY, USA, 2016. ACM Press

D3   Thomas Schroepfer, Suranga Nanayakkara, Anusha Withana, Aloysius Lian, and Lonce Wyse. **The RIBbon @ Read Bridge: Interactive light installation**, 2015

D4   Thomas Schroepfer, Suranga Nanayakkara, Anusha Withana, Aloysius Lian, Roger Boldu, John Naylor, and Sachith Muthukumarana. **SonicSG: Interactive light and sound installation for celebration of SG50**, 2015

D5   Thomas Schroepfer, Suranga Nanayakkara, Anusha Withana, Thomas Wortmann, Alex Cornelius, Yu Nong Khew, and Aloysius. Lian. **Keepers & Bees: an interactive light-art installation of interactive critters that visitors can interact with in real time via their smartphones.**, 2014

D6   Thomas Schroepfer, Suranga Nanayakkara, Anusha Withana, Juan âĂŃPablo, Thomas Wortmann, Alex Cornelius, Yu Nong Khew, and Aloysius Lian. **nZwarm: a swarm of luminous sea creatures that interact with passers-by**, 2014

D7   Thomas Schroepfer, Suranga Nanayakkara, Thomas Wortmann, Alex Cornelius, Yu Nong Khew, Aloysius Lian, Yeo Kian Peen, Roshan Peiris, Anusha Withana, Werry. Iain, Benjamin Petry, Santiago Otega, Nuwan Janaka, Samitha Elvitigala, Piyum Fernando, and Nipuna Samarasekara. **iSwarm: a swarm of luminous sea creatures that interact with passers-by**, 2014

D8   Yuta Sugiura, Calista Lee, Masayasu Ogata, Anusha Withana, Yasutoshi Makino, Daisuke Sakamoto, Masahiko Inami, and Takeo Igarashi. **PINOKY: A Ring-like Device That Gives Movement to Any Plush Toy**. In *CHI '12 Extended Abstracts on Human Factors in Computing Systems*, CHI EA '12, pages 1443–1444, New York, NY, USA, 2012. ACM

D9   Gota Kakehi, Yuta Sugiura, <u>Anusha Withana</u>, Calista Lee, Naohisa Nagaya, Daisuke Sakamoto, Maki Sugimoto, Masahiko Inami, and Takeo Igarashi. **FuwaFuwa: Detecting Shape Deformation of Soft Objects Using Directional Photoreflectivity Measurement**. In *ACM SIGGRAPH 2011 Emerging Technologies on - SIGGRAPH '11*, pages 1–1, New York, New York, USA, aug 2011. ACM Press

D10   <u>Anusha Withana</u>, Yuta Sugiura, Charith Fernando, Yuji Uema, Yasutoshi Makino, Maki Sugimoto, and Masahiko Inami. **ImpAct: Haptic Stylus for Shallow Depth Surface Interaction**. In *SIGGRAPH Asia 2011 Emerging Technologies on - SA '11*, pages 1–1, New York, New York, USA, dec 2011. ACM Press

D11   Yuta Sugiura, <u>Anusha Withana</u>, Teruki Shinohara, Masayasu Ogata, Daisuke Sakamoto, Masahiko Inami, and Takeo Igarashi. **Cooky: A Cooperative Cooking Robot System**. In *SIGGRAPH Asia 2011 Emerging Technologies on - SA '11*, pages 1–1, New York, New York, USA, dec 2011. ACM Press

D12   <u>Anusha Withana</u>, Makoto Kondo, Gota Kakehi, Yasutoshi Makino, Maki Sugimoto, and Masahiko Inami. **ImpAct: Enabling Direct Touch and Manipulation for Surface Computing**. In *Adjunct proceedings of the 23nd annual ACM symposium on User interface software and technology - UIST '10*, page 411, New York, New York, USA, oct 2010. ACM Press

D13   Yu Ebihara, Masa Inakage, Chihiro Kondo, Maki Sugimoto, Satoru Tokuhisa, Takuji Tokiwa, Kentaro Harada, Hiroaki Miyasho, Toshitugu Yasaka, and <u>Anusha Withana</u>. **Composing sounds and images for public display using correlated KANSEI information**. In *ACM SIGGRAPH ASIA 2010 Posters on - SA '10*, page 1, New York, New York, USA, dec 2010. ACM Press

D14   <u>Anusha Withana</u>, Rika Matsui, Maki Sugimoto, Kentaro Harada, and Masa Inakage. **Narrative image composition using objective and subjective tagging**. In *ACM SIGGRAPH 2010 Posters on - SIGGRAPH '10*, page 1, New York, New York, USA, jul 2010. ACM Press

D15   Adrian David Cheok, Roshan Lalintha Peiris, Nimesha Ranasinghe, James Keng Soon Teh, Wei Wang Thang, Kening Zhu, Makoto Danjo, Miyuru Dayarathna, Charith Lasantha Fernando, Nancy Lan-Lan Ma, Yukihiro Morisawa, Dilrukshi Abeyrathne, <u>Anusha Indrajith Withana</u>, Chamari Priyange Edirisinghe, Owen Noel Newton Fernando, Isuru Sawubhagya Godage, Kris Hoogendoorn, Junsong Hou, Kasun Karunanayaka, and Michelle Narangoda. **Petimo: children's companion for safe social networking**. In *ACM SIGGRAPH ASIA 2009 Art Gallery & Emerging Technologies: Adaptation on - SIGGRAPH ASIA '09*, page 80, 2009

D16   Adrian David Cheok, Owen Noel Newton Fernando, and Charith Lasantha Fernando. **Petimo: Enhanced tangible social networking companion for children**. In *Proceedings of the International Conference on Advances in Computer Enterntainment Technology - ACE '09*, pages 411–412, 2009

D17   Adrian David Cheok, Owen Noel Newton Fernando, and Charith Lasantha Fernando. **Petimo: Safe Social Networking Robot for Children**. In *Proceedings of the 8th International Conference on Interaction Design and Children - IDC '09*, page 274, New York, New York, USA, jun 2009. ACM Press

D18   Charith Lasantha Fernando, Takeo Igarashi, Masahiko Inami, Maki Sugimoto, Yuta Sugiura, <u>Anusha Indrajith Withana</u>, and Kakehi Gota. **An operating method for a bipedal walking robot for entertainment**. In *ACM SIGGRAPH ASIA 2009 Art Gallery & Emerging Technologies: Adaptation on - SIGGRAPH ASIA '09*, page 79, New York, New York, USA, dec 2009. ACM Press

PATENTS

P1   Anusha Indrajith Withanage Don, Suranga Chandima Nanayakkara, and Shanaka Ransiri Pulukkutti Arachchige Don. **Method and device for determining position of a target**, 2018

P2   Anusha Indrajith Withanage Don and Suranga Chandima Nanayakkara. **Gesture recognition devices, gesture recognition methods, and computer readable media**, 2017

P3   Suranga Chandima Nanayakkara, Nuwan Janaka Nanayakkarawasam Peru Kandage, Roshan Lalintha Peiris, and Anusha Indrajith Withanage Don. **Rehabilitation exercise system**, 2017

P4   Sayaka Yoshizu, Hihiro Sannomiya, Shunsuke Koyama, Yuta Sugiura, Anusha Indrajith Withanage, Don, Masayasu Ogata, and Masahiko Inami. **Input device and input acquisition method**, 2015

HONOURS AND AWARDS

Rutherford Fellowship for Visiting Researcher   **2019**
The University of Sussex, UK.

Most Promising Technology Award: zSense: Gestures on Smart Wearables   **2016**
Innovfest unBound 2016 event. Organized by NUS, unBound IDA Singapore.

Best Pitch Award: zSense: Gestures on Smart Wearables   **2015**
Singapore-MIT Alliance for Research and Technology (SMART) Bootcamp, 2015.

Monbukagakusho *MEXT*   **2009 to 2013**
Japanese Government Monbukagakusho *MEXT* scholarship for higher education

Best Paper Silver Award ACM ACE2010   **2010**
ImpAct: Immersive haptic stylus to enable direct touch and manipulation for surface computing at 7th International Conference in ACE2010 at Taipei.

InventiON*: First prize in the ICT track for *Petimo   **2010**
Petimo: social networking robot for children, won the first prize in an international innovation competition in Milan, Italy sponsored by the MMCC. April 22, 2010

***Petimo*: Winner of the C4C (Como for Children) Competition at IDC**   **2009**
The 8th International Conference on Interaction Design and Children (IDC): Learning and Playing in the pre-school of the future, Como, Italy, June 2009

Dean's List (*University of Moratuwa*)   **2003 to 2004**
Dean's List of Faculty of Engineering University of Moratuwa, Level 1 and 2.

***DialogGSM Change* Scholarship**   **2003 to 2007**
Awarded for outstanding performance in GCE A/L examination in physical science stream.

District Rank 1 GCE A/L examination (*Kalutara District*)   **2002**
Score the highest mark in GCE A/L examination in Kalutara District, Sri Lanka.

RESEARCH GRANTS

AWARDED

CI of User Centered Fabrication of Interactive Things, *Source: FEIT ECR MES*   **2019**
Centrally formed and wrote the research program. **104K AUD**

Co-PI of zSense: Gestures on Smart Wearables, *Source: SMART Innovation Grant*   **2016 to 2017**
Centrally formed and wrote the research program. (PI: Nanayakkara). **216K SGD**

Co-PI of zSense: Gestures on Smart Wearables, *Source: SMART Innovation Grant*   **2015 to 2016**
Centrally formed and wrote the research program. (PI: Nanayakkara). **60K SGD**

Gestures on Steering Wheel, *Role: Lead research, Source:Toyota IT*   **2012 to 2013**
Collaboratively formed and wrote the research program (PI: Inami). **4 million JPY**.

Impact V2 - For Design and Creation, *Role: Lead research, Source:Keio University*   **2012 to 2013**
Centrally formed and wrote the research program. (PI: Inami). **400K JPY**

Ambient Haptic Display for Car Steering Wheel, *Role: Lead research, Source:Toyota IT*   **2011 to 2012**
Collaboratively formed and wrote the research program (PI: Inami). **4 million JPY**.

TEACHING EXPERIENCES

Core Lecture Human Computer Interaction, Saarland University, Germany, (*Co Teach*)   **2017**
Prepared and conducted lectures (3), labs and tutorials on HCI, Interaction Design, UCD and Evaluation. (9CP). *Professor: Juergen Steimle*

Systems and Control, SUTD, Singapore, (*Co Teach*)   **2016**
Conducted lectures, labs and tutorials on Signals, LTI, Convolution, Laplace, FT, FS. *Professor: Suranga Nanayakkara, Class: Systems and Control*

Functional Prototyping: Basics of Actuators, Keio University, Japan, (*TA*)   **2013**
Design and conducted a lecture on basics of electronic actuators and their usage in a workshop style class. *Professor: Masahiko Inami, Class: Introduction to Media Design*

Experiment Design, Keio University, Japan, (*TA*)   **2012**
Assisted in designing and conducting a lecture on experiment design in HCI context.
Professor: Masahiko Inami, Class: Design of Experiments

Rapid Prototyping: Fabrication with Laser Cutter, Keio University, Japan, (*TA*)   **2011**
Design and conducted a lecture on fabrication with Laser cutter in a workshop style class.
Professor: Masahiko Inami, Class: Introduction to Media Design

Functional Prototyping: Sensors, Keio University, Japan, (*TA*)   **2010**
Instructed on basics of electronic sensors and their usage in a workshop style class.
Professor: Maki Sugimoto and Masahiko Inami, Class: Introduction to Media Design

INVITED TALKS

Highly Personalized Multimodal Interfaces on Skin, The University of Sussex. UK   **Feb, 2019**

Highly Personalized Multimodal Interfaces on Skin, Monash University, Australia.   **Dec, 2018**

Unburdening the User: Disappearing Wearable Interfaces, Honda Research Institute, Europe, Germany. HRI-EU   **Nov, 2018**

Keynote: ***Embedded Sensing and Actuation for Expressive Tangible Interactions***, European tangible interaction studio (ETIS) 2017   **June, 2017**

Invited talk: ***zSense and RippleTouch: Appropriating Technologies for Social and Ubiquitous Interfaces***, IDL seminar   **June, 2015**
Social NUI Group, University of Melbourne, Australia. [`www.socialnui.unimelb.edu.au`]

Invited talk: ***Auralities and Luminosities: When the object is not concrete***, Lux14   **2014**
Lux Wellington light festival. Lux Critical Forum, New Zealand. [`lux.org.nz`]

Invited talk: ***ImpAct: Challenges in Through Surface Interaction Design***,   **2011**
UniSA-Keio GCOE Workshop on Application on Human Sensing and Interaction, Keio University, Japan

Invited talk: ***Infoshare: Content, design and system independent multimedia signage***,   **2011**
IEEE Wireless VITAE 2011 International Conference, Chennai, India.

ACADEMIC SERVICES AND ACTIVITIES

Program Committee, ACM CHI Conference on Human Factors in Computing Systems   **2018**

Program Committee, ACM International Conference on Interactive Surfaces and Spaces (ISS)   **2018**

Co-Chair - Demonstration, ACM ISS2018 (To be held in Tokyo)   **2018**
ACM International Conference on Interactive Surfaces and Spaces

Workshop - Personalized Interactive Surfaces with Printed Electronics, ACM ISS2017   **2017**
ACM International Conference on Interactive Surfaces and Spaces, Brighton UK

Program Committee, ACM - Augmented Haman 2016   **2016**

Co-Chair - Demonstration and Poster, AH15   **2015**
ACM - Augmented Haman 2015 International Conference. [`dl.acm.org/citation.cfm?id=2735711`]

Program Committee Member, ACM - Augmented Haman 2015   **2015**

Secretary, Sri Lanka Students' Association in Japan, SLSAJ   **2008-2009**
Published SLSAJ journal, Anual multidisciplinary scientific research journal. [`slsaj.com`]

Reviewer, Different scientific Conferences   **2009-now**
ACM CHI, ACM UIST, ACM AH, IEEE VR, ACM ACE

Editor of the E-Club, University of Moratuwa, Sri Lanka   **2004-2005**
E-Club, Department of Electronics and Telecommunication Engineering, University of Moratuwa; for academic year 2004/2005. Published the E-Clubs yearly magazine *E-Carrier*. [`ent.mrt.ac.lk`]

STUDENT SUPERVISION

PHD STUDENTS

Nisal Menuka, PhD Thesis   **2019- now**
Fabricating Wearable Interfaces.
The University of Sydney, Australia.

MASTERS STUDENTS

Alister Palmer, Masters research project   **2019- now**
Machine Generated Humurous Captions for Cartoons.
The University of Sydney, Australia.

Fereshteh Shahrabi, Masters thesis   **2016 - 2018**
Wearable hand gestures with differential sensing.
Saarland University, Germany.

Manoz Banda, Masters thesis   **2016 - 2018**
Printed electronics for multi-modal interfaces.
Saarland University, Germany.

Shunshuke Koyama, Masters thesis   **2011 - 2012**
Multi-touch steering wheel for in-car tertiary applications using infrared sensors.
Keio University Japan.

UNDERGRADUATE STUDENTS

Zixuan Wang, Honors research thesis   **2019- now**
Mechanomyographic Sensing of Hand Activities.
The University of Sydney, Australia.

Ziyu Amy Liu, Honors research thesis   **2019- now**
Predicting Bodily Movement with Wearable Sensors.
The University of Sydney, Australia.

Zhuolin Xu, Honors research thesis   **2019- now**
Passive Wearables for Gesture Sensing.
The University of Sydney, Australia.

Samuel Cheong Li Yang, Undergraduate Research Opportunities Program (UROP) **2014 - 2015**
Asthma, Air and Me: Ubiquitous device to measure air quality.
Singapore University of Technology and Design.

Chanaka Singhabahu, Undergraduate Internship Program **2015 - 2016**
zSense: Enabling Shallow Depth Gesture Recognition on Smart Wearables.
Singapore University of Technology and Design.

Tharindu Kaluarachchi, Undergraduate Internship Program **2015 - 2016**
SHRUG: Stroke Haptic Rehabilitation Utilising Gaming.
Singapore University of Technology and Design.

Jessica A. Fang, MIT MISTI Internship Program **2015**
SonicSG: Interactive light and sound installation for celebration of SG50.
Singapore University of Technology and Design.

Akshika Wijesundara, Undergraduate Internship Program **2014 - 2015**
zSense: Enabling Shallow Depth Gesture Recognition on Smart Wearables.
Singapore University of Technology and Design.

Nipuna Samarasekara, Undergraduate Internship Program **2014**
zSense: Enabling Shallow Depth Gesture Recognition on Smart Wearables.
Singapore University of Technology and Design.

LANGUAGE SKILLS AND COMPETENCES

English **Fluent**
IELTS, December 2014.
Results: *Listening: 8.0, Reading: 7.0, Writing: 8.0, Speaking: 7.0, Overall: 7.5*

Sinhalese **Native**

Japanese **Intermediate**

SELECTED PRESS

Singapore designers create lights for the deaf and rings for the blind, 2015 **CNN**
Showcased the project *zSense* in November 19, 2015. [`https://t.co/lJespV3wwD`]

National Television Sri Lanka (Rupvahini): Featured in program Nugasewana, 2015 **Rupavahini, SL**
Showcased *zSense* and *ImpAct*, December 31, 2015. [`https://youtu.be/kDMqWdr9AbA`]

Sonic sculpture livens up river, 2015 **NUS' News Portal**
Showcased the project *SonicSG* in December 28, 2015. [`https://goo.gl/51HQaW`]

An interactive tribute to Singapore (printed and web), 2015 **Straits Times**
Showcased the project *SonicSG* in December 23, 2015. [`http://goo.gl/tqL7mt`]

The More Well Wishes for the Nation, the Brighter the Interactive Light Up, 2015 **Lianhe Zaobao**
Showcased the project *SonicSG* in December 23, 2015. [`http://tinyurl.com/ho8sd9z`]

Blinking curtain of lights to bring SG50 to a close, 2015 **Berita Harian**
Showcased the project *SonicSG* in December 23, 2015. [`http://tinyurl.com/jq3d7wh`]

Keio university develops a device to probe content inside iPhone through a stylus, 2010 **Gizmodo**
Showcased the project *ImpAct* in November 18, 2010. (in Japanese). [`http://goo.gl/yJgtt2`]

Mixed Reality Lab on Discovery Science Channel "Future of Communication", 2009 **Discovery**
Showcased the project *Petimo*. [`http://goo.gl/mizn6j`]

Social Networking Robot for Children: Article in newspaper Straits Times, 2009   **Straits Times**
Showcased the project *Petimo* in June 16, 2009.

Social Networking Robot for Children: appeared in NUS' News Portal, 2009   **NUS' News Portal**
Showcased the project *Petimo* in June 03, 2009. [`http://goo.gl/8UbC8Z`]

Social Networking Robot for Children: Article in newspaper Lianhe Zaobao, 2009   **Lianhe Zaobao**
Showcased the project *Petimo* in May 31, 2009.

Walky robot understands iPhone gestures, football fanaticism, 2009   **Engadget**
Showcased the project *Walky* in November 17, 2009.

FABRICATION, PROTOTYPING AND SOFTWARE TOOLS

Programing and Application Implementation

Network Application programing with *"HTML5", "NodeJS", "NW.js"* and *"JavaScript"*	Expert
Object Oriented Programming with *"JAVA"*	Expert
Android mobile Application Programming with *"JAVA"*	Expert
Procedural Programming with *"C"*	Expert
Web CMS with *"Drupal 7"*	Expert
Web service programing with *"PHP"*	Expert
Object Oriented Programming with *"C++"*	Expert
MVC programing with *"Ruby on Rails"*	Intermediate

Fabrication

Pritned Electronics with functional inks	Expert
3D Modeling with *"Solidworks"*	Expert
Rapid Prototyping / Additive Manufacturing *"Laser Cutter", "3D Printer"*	Expert
Electronics circuit design and PCB layout with *"Altium DXP"*	Expert
Firmware and embedded programing in *"GNU-ARM", "Arduino", "AVR", "CCS C PIC"*	Expert

Research Tools

Statistics and data manipulation with *"R"*	Expert
Machine learning and data manipulation *"Weka"*	Expert

REFERENCES

Prof. Juergen Steimle (Previous Supervisor)
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