Chi Thanh **Vi**

PhD in Computer Science · HCI Researcher

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Summary

I am a Research Fellow in Multisensory Experiences at the Sussex Human Computer Interaction (SCHI) Lab, University of Sussex. Previously, I was a Research Assistant at the Bristol Interaction & Graphics (BIG) Lab, University of Bristol.

I received my PhD in Computer Science in 2014 and my MSc in Advance Computing: Internet Technologies with Security in 2008, both from University of Bristol, while I was working with Prof. Sriram Subramanian. I received my BSc in Electronics and Telecommunications at Hanoi University of Science and Technology in 2006.

My research interest falls into the Human-Computer Interaction (HCI) multidisciplinary domain, where there is a cross feeding between Computer Science, Neuroscience, and Psychology. More specifically, I am interested in using different brain sensing methods (for example EEG and fMRI) to understand the neural basis of different user states and investigate how it can benefit to HCI users.

Education

University of Bristol
Bristol, UK

PhD in Human Computer Interaction
May 2010 - May 2014

- **Supervisor**: Professor Sriram Subramanian.
- **Research focus**: My thesis focused on using physiological signals to support interactive applications and computer users. I investigated how to evaluate interactive applications using different brain sensing techniques, such as EEG (Electroencephalography). I also investigated the detection of human error awareness using EEG while interacting with computing systems.
- **Thesis**: Designing Interactive Applications using Active and Passive EEG-based BCI Systems.

University of Bristol
Bristol, UK

MSc in Internet Technology and Security
Sep 2007 - Nov 2008

- **Selected Subjects**: Web Technologies, Cryptography, Information Security, Mobile and Ubiquitous Computing.
- **Grade**: Second class honours, upper division (2:1).
- **Thesis**: Investigating human movement models in improving user interaction using pen input devices.

Hanoi University of Science and Technology
Hanoi, Vietnam

BSc in Electronic and Telecommunications
Sep 2001 - May 2006

- **Selected Subjects**: Digital Signal Processing, Automatic Control Theory, Microwave Engineering, Microprocessors, Data Transmission, Optical Fiber Communications.
- **Grade**: Distinction.
- **Thesis**: Research & Development of Voice Over IP Systems.

Work Experience

SCHI Lab, University of Sussex
Brighton, UK

Research Fellow in Multisensory Experience
Jul 2015 - PRESENT

- Work at the Sussex Computer Human Interaction (SCHI /sky/) Lab, lead by Dr. Marianna Obrist.
- My research objectives are to explore and develop novel interaction techniques using different senses, especially taste and smell, and evaluate the developed interactive applications using novel methods (such as EEG and fMRI).

BIG Lab, University of Bristol
Bristol, UK

Research Assistant in Shape Changing Interfaces
Jul 2014 - Jul 2015

- I worked in close collaboration with Professor Sriram Subramanian in the Bristol Interaction and Graphics group within the Department of Computer Science on a project exploring the evaluation of shape-changing interfaces.
- My tasks were to develop novel interactive display devices, investigate UX of interactive display devices using novel methods (e.g. by measuring physiological signals such as EEG and fMRI), explored direct and indirect interaction techniques with such display devices in novel scenarios, and to examine how these devices can become part of an ecology of displays (both 2D and 3D).

SPHERE Group, University of Bristol
Bristol, UK

Research Assistant
May 2014 - Jul 2014

- I worked in the SPHERE project under supervision of Professor Ian Craddock.
- The overall objective of this project is to develop a novel sensing technique to diagnose and help manage health and wellbeing conditions.
- My task specifically was to investigate the capabilities of various EEG sensors and systems to provide a simple, convenient but reliable EEG measurements for old people.

ICD Lab, Tohoku University
Sendai, Japan

RESEARCH FELLOW · *Dec 2012 - May 2013*

- I spent 6 months here as a PhD research intern, under the supervision of Prof. Yoshifumi Kitamura.
- My main objective was to evaluate existing interactive applications using physiological signals (particularly using portable and commodity EEG neuro-headsets).

Toshiba Software Development Vietnam
Hanoi, Vietnam

SOFTWARE ENGINEER · *Jan 2009 - Mar 2009*

- Worked in FlareCE project.
- My job was to downgrade an application from Action Script Flash 3 to Action Script Flash 2 in order to run properly on mobile devices.

BankNetVN
Hanoi, Vietnam

SYSTEM ADMINISTRATION · *Aug 2006 - Dec 2006*

- Worked in the Network and Communication Department.
- I was a system administration of HP-UniX servers responsible for national financial switching system interconnecting all payment card systems in general and all ATM/POS systems in particular of banks in Vietnam.

R&D Lab, Hanoi University of Science and Technology
Hanoi, Vietnam

RESEARCH ASSISTANT · *Jun 2005 - Jun 2006*

- Researched and deployed the project Voice over IP as part of BKUMN project (Bach Khoa Unified Messaging Network).
- I successfully implemented two systems using VoIP: Web2Phone and Asterisk.

Honors & Awards

2013	**Honorable mention paper award**, International Conference on Advances in Computer Entertainment Technology (ACE)	*Enschede, Netherlands*
2012	**Best paper award**, ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)	*Austin, Texas, U.S.A*
2006	**Second prize award**, "Student research contest" at the Hanoi University of Science and Technology	*Hanoi, Vietnam*
2005	**Commendation awards**, for having excellent achievement in academic year 2004, 2005 at the Hanoi University of Science and Technology	*Hanoi, Vietnam*

Academic Activities

- **Organizer/ Program Committee**
    - PC member: 2nd Workshop on Multisensory Approaches to Human-Food Interaction 2017.
    - PC Member: ACM Multimedia Conference (MM) 2017. CA, USA
    - Co-organizer: Workshop at CHI 2016 on "Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI".
    - PC member: aBCI 2015 - 4th Workshop on Affective Brain Computer Interaction (aBCI 2015).
    - PC Member: 12th International Conference on Entertainment Computing (ICEC 2013), São Paulo, Brazil.
    - PC Member: 11th International Conference on Entertainment Computing (ICEC 2012), Tsukuba, Japan.
- **Reviewer**: continuously from 2010 to present
    - Conferences: CHI, UIST, ICMI, DIS, INTERACT, TEI, MM, OzCHI, MobileHCI, EICS, ICEC, UbiComp, and so on.
    - Journals: ToCHI, IJHCS, Quality and User Experience

Publications

Journals

Chi Thanh Vi, Damien Ablart, Elia Gatti, Calos Velosco, Marianna Obrist. *"Not just seeing, but also feeling Art: Mid-air Haptic Experiences integrated in a Multisensory Art Exhibition"*. International Journal of Human-Computer Studies (IJHCS). vol. 108, p. 1-14. December 2017.

Chi Thanh Vi, Kazuki Takashima, Hitomi Yokoyama, Gengdai Liu, Yuichi Itoh, Sriram Subramanian, Yoshifumi Kitamura. *"A Dynamic Flexible and Interactive Display Method of Digital Photographs"*. Entertainment Computing, November 2014. ISSN 1875-9521.

Peer-Reviewed Conferences

Chi Thanh Vi, Asier Marzo, Damien Ablart, Gianluca Memoli, Sriram Subramanian, Bruce Drinkwater, Marianna Obrist. *"TastyFloats: A Contactless Food Delivery System"*. ACM International Conference on Interactive Surfaces and Spaces (ISS). Brighton, UK. 2017. ★ Best Demo Award ★

Dmitrijs Dmitrenko, Emanuela Maggioni, Chi Thanh Vi, Marianna Obrist. *"Did I Sniff? Mapping Scents Onto Driving-Related Messages"*. ACM International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI). Oldenburg, Germany. 2017.

Chi Thanh Vi, Kasper Hornbæk, Sriram Subramanian. *"Neuroanatomical Correlates of Perceived Usability"*. ACM Symposium on User Interface Software and Technology (UIST). Quebec, Canada. 2017.

Patricia Cornelio Martinez, Silvana De Pirro, Chi Thanh Vi, Sriram Subramanian. *"Agency in mid-air Interfaces"*. In proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI). Denver. USA. 2017.

Bo Wan, <u>Chi Thanh Vi</u>, Sriram Subramanian, Diego Martinez Plasencia. "*Enhancing Interactivity with Transcranial Direct Current Stimulation*". In Proceedings of the 21st International Conference on Intelligent User Interfaces Companion (IUI). Sonoma, California. 2016.

Dmitrijs Dmitrenko, <u>Chi Thanh Vi</u>, and Marianna Obrist. "*A Comparison of Scent-Delivery Devices and Their Meaningful Use for In-Car Olfactory Interaction*". In Proceedings of the AutomotiveUI'16: 8th International Conference on Automotive User Interfaces and Interactive Vehicular Applications (AutomotiveUI). Ann Arbor, MI, USA

Marianna Obrist, Carlos Velasco, <u>Chi Thanh Vi</u>, Nimesha Ranasinghe, Ali Israr, Adrian Cheok, Charles Spence, Ponnampalam Gopalakrishnakone. "*Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI*". Proceedings of the ACM CHI Conference Extended Abstracts on Human Factors in Computing Systems. San Jose, CA, USA. 2016

Camille Jeunet, <u>Chi Thanh Vi</u>, Daniel Spelmezan, Bernard Nkaoua, Fabien Lotte, Sriram Subramanian. "*Continuous Tactile Feedback for Motor-Imagery based Brain-Computer Interaction in a Multitasking Context*". 15th IFIP International Conference on Human-Computer Interaction (INTERACT). Bamberg, Germany. 2015.

<u>Chi Thanh Vi</u>, Izdihar Jamil, David Coyle, Sriram Subramanian. "*Error Related Negativity in Observing Interactive Tasks*". In proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI), ACM. Toronto, Canada. 2014.

<u>Chi Thanh Vi</u>, Kazuki Takashima, Hitomi Yokoyama, Gengdai Liu, Yuichi Itoh, Sriram Subramanian, Yoshifumi Kitamura. "*D-FLIP: Dynamic & Flexible Interactive PhotoShow*". In proceedings of Advances in Computer Entertainment (ACE 2013). Enschede, Netherlands. 2013. ★ Honorable Mention Award ★

Yoshifumi Kitamura, <u>Chi Thanh Vi</u>, Gengdai Liu, Kazuki Takashima, Yuichi Itoh, Sriram Subramanian. "*-FLIP: Dynamic & Flexible Interactive PhotoShow*". ACM SIGGRAPH Asia Emerging Technologies. Hong Kong, China. 2013.

<u>Chi Thanh Vi</u>, Sriram Subramanian. "*Detecting Error-Related Negativity For Interaction Design*". In proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI), ACM. Austin, Texas, USA. 2012. ★ Best Paper Award ★

Magazines

Marianna Obrist, Elia Gatti, Emanuela Maggioni, <u>Chi Thanh Vi</u>, Carlos Velasco. "*Multisensory Experiences in HCI*". In IEEE MultiMedia, vol. 24, no. 2, pp. 9-13, Apr.-June 2017.

Marianna Obrist, Carlos Velasco, <u>Chi Thanh Vi</u>, Nimesha Ranasinghe, Ali Israr, Adrian Cheok, Charles Spence, Ponnampalam Gopalakrishnakone. "*Sensing the future of HCI: touch, taste, and smell user interfaces*". ACM Magazine Interaction. Volume 23 Issue 5, September + October 2016. Pages 40-49.

Workshops - Technical Reports

<u>Chi Thanh Vi</u>, Damien Ablart, Daniel Arthur, Marianna Obrist. "*Gustatory Interface: The Challenges of 'How' to Stimulate the Sense of Taste.*". In Proceedings of 2nd ACM SIGCHI International Workshop on Multisensory Approaches to Human-Food Interaction (MHFI'17). ACM, New York, NY, USA.

Dmitrijs Dmitrenko, <u>Chi Thanh Vi</u>, Marianna Obrist. "*A Comparison of Scent-Delivery Devices and their Meaningful Use*". Position Paper at ACM CHI Workshop on Touch, Taste, & Smell User Interfaces: The Future of Multisensory HCI. San Jose, CA, USA. 2016.

<u>Chi Thanh Vi</u>, Jason Alexander, Pourang Irani, Behrad Babaee, Sriram Subramanian. "*Quantifying EEG Measured Task Engagement for use in Gaming Applications*". Technical Report. University of Bristol. November 2014.

<u>Chi Thanh Vi</u>, Sriram Subramanian. "*Online Single Trial ERN Detection As An Interaction Aid In HCI Applications*". In ACM CHI Workshop on Brain and Body Interfaces: Designing for Meaningful Interaction. Vancouver, Canada. 2011.

Thesis

<u>Chi Thanh Vi</u>. "*Designing Interactive Applications using Active and Passive EEG-based BCI Systems*". PhD Thesis. University of Bristol. September 2014.

<u>Chi Thanh Vi</u>. "*Investigating human movement models in improving user interaction using pen input devices*". MSc Thesis. University of Bristol. November 2008.

<u>Chi Thanh Vi</u>. "*Research & Development of Voice Over IP Systems*" (in Vietnamese). BSc Thesis. Hanoi University of Science and Technology. May 2006.

References

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