NENG-HAO YU

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Research Interests

Human-Computer Interaction | Tangible UI & Multi-touch Interactions

User Experience Design | Virtual Reality

Education

Ph.D. in Computer Science — *Sep. 2007 - Jun. 2011*
Graduate Institute of Networking and Multimedia
National Taiwan University, Taiwan (Advisor: Dr. Yi-Ping Hung)

M.A. in Digital Media Design — *Sep. 1998 - Jun. 2001*
Department of Information Communication
Yuan Ze University, Taiwan (Advisor: Dr. Chao-Yun Liang)

B.S. in Computer Science — *Sep. 1994 - Jun. 1998*
Department of Computer Science and Information Engineering
Tatung Institute of Technology, Taiwan

Professional Experiences

Assistant Professor — *Aug. 2018 - Present*
Department of Design,
National Taiwan University of Science and Technology, Taiwan

Section Chief of E-Learning Division — *Dec. 2014 - Jul. 2016*
Center for Teaching and Learning Development
National Chengchi University, Taiwan

Assistant Professor — *Aug. 2011 - Aug. 2018*
Department of Computer Science,
National Chengchi University, Taiwan

Lecturer — *Feb. 2010 - Feb. 2011*
Information System Training Program,
National Taiwan University, Taiwan

Lecturer — *Feb. 2007 - Feb. 2010*
Telecom Training Institute,
Chunghwa Telecom Co., Ltd, Taiwan

Lecturer — *Feb. 2007 - Jul. 2007*
Department of Information Communication,
Yuan Ze University, Taiwan

Information Architect and Interaction Designer — *May. 2006 - Nov. 2007*
Receiver Design Studio, San Francisco, CA

Product Manager — *Oct. 2001 - May. 2006*
Department of Value-Added Service,
Chunghwa Telecom Co., Ltd, Taiwan

Professional Services

President — *2020 - Present*
Taiwan Association of Computer Human Interaction (TAICHI)

Local co-chair — *2022*
ACM CSCW2022

Demo & Video co-chair — *2021*
IEEE AIVR2021

Director — *2016 - 2020*
Taiwan Association of Computer Human Interaction (TAICHI)

Local co-chair — *2019*
ACM MobileHCI2019

Demo chair — *2018*
APMAR2018

Program co-chair — *2017*
ChineseCHI 2017

Local co-chair — *2014*
Smart Graphics 2014

Director — *2013 - 2015*
Taiwan User Experience Professional Association (UXTW)

Patents

US 11,262,848 B1
Method and head-mounted device for reducing motion sickness in virtual reality

US 9,410,789 B2
System and method for using electromagnet arrays to determine 3d relative position of electronic device corresponding to object

TW I669000
Selfie mode control method of multi-axis aerial camera

TW I537797
Touch panel operation apparatus and method thereof

TW I536249
Handheld touch device and its method of using single hand to manipulate full touch range

TW I466031
Adjustable marker for tangible object detection

TW I240521
Structure used to transmit message through network interface and method thereof

Awards & Honers

Best of Best, Red Dot Design Award 2021
“EyeBus”

Creative teaching award, 2019
“Creative Programming” & “Fundamentals of Interaction Design”

Awards & Honers	
	Excellent MOOCS course, 2016 “Programming101”
	Best of Best, Red Dot Design Award 2021 “BlindNavi”
	Best of Best, Red Dot Design Award 2021 “HearMe”
	Honorable Mention Award, ACM MobileHCI 2013 “Rapid Selection of Hard-to-Access Targets by Thumb on Mobile Touch-Screens”
	Brown prize, 6th Acer Long-Term Entrepreneur Competition, 2011 “Playful Toys for multi-touch devices”
	Best Paper Award, CVGIP 2010 “Projector Calibration of Multi-Resolution Display”
	First prize, Chunghwa Telecom Value-added Service Competition, 2010 “Flora App - cloud image recognition service for flowers”

Selected Publications

1. Chun-Miao Tseng, Po-Yu Chen, Shih Chin Lin, Yu-Wei Wang, Yu-Hsin Lin, Mu-An Kuo, Neng-Hao Yu, Mike Y. Chen, “HeadWind: Enhancing Teleportation Experience in VR by Simulating Air Drag during Rapid Motion”, *ACM CHI2022*, *New Orleans, LA*. April, 2022
2. Yu-Hao Lee, Wei-Zhe Tzeng, Neng-Hao Yu. “SHE”. *ACM SIGGRAPH 2021 VR Theater, Virtual Event, USA,* Aug, 2021
3. Fatma S. Abousaleh, Wen-Huang Cheng, Neng-Hao Yu, and Yu Tsao, “Multimodal Deep Learning Framework for Image Popularity Prediction on Social Media”, *IEEE Transactions on Cognitive and Developmental Systems,* Volume: 13, Issue: 3, Sep, 2021
4. Yi-Hao Peng, Carolyn Yu, Shi-Hong Liu, Chung-Wei Wang, Paul Taele, Neng-Hao Yu, Mike Y. Chen. “WalkingVibe: Reducing Virtual Reality Sickness and Improving Realism while Walking in VR using Unobtrusive Head-mounted Vibrotactile Feedback”. *ACM CHI2020*, *Hawaii, USA*. May, 2020
5. Shi-Hong Liu, Neng-Hao Yu, Li-Wei Chan, Yi-Hao Peng, Wei-Zen Sun, Mike Y. Chen. “PhantomLegs: Reducing Virtual Reality Sickness Using Head-Worn Haptic Devices”. *IEEE VR2019, Osaka, Japan.* Mar, 2019
6. Chiu-Hsuan Wang, Chen-Yuan Hsieh, Neng-Hao Yu, Andrea Bianchi, Liwei Chan. “HapticSphere: Physical support to enable precision touch interaction in mobile mixed-reality”. *IEEE VR2019, Osaka, Japan*. Mar, 2019

7. Yu-An Chen, Te-Yen Wu, Tim Chang, Jun-You Liu, Yuan-Chang Hsieh, Leon Yulun Hsu, Ming-Wei Hsu, Paul Taele, Neng-Hao Yu, Mike Y. Chen. "ARPilot: designing and investigating AR shooting interfaces on mobile devices for drone videography". *ACM MobileHCI2018*. Sep, 2018
8. Fatma S. Abousaleh, Tekoing Lim, Wen-Huang Cheng, Neng-Hao Yu, M. Anwar Hossain, Mohammed F. Alhamid. "A novel comparative deep learning framework for facial age estimation". *EURASIP Journal on Image and Video Processing*, Vol.2016 No.1 pp.47. Dec, 2016
9. Chia-Yu Chen, Yi-Ju Chung, Neng-Hao Yu. "Motion Guidance Sleeve: Guiding Forearm Rotation through External Artificial Muscles". *ACM CHI2016*. May, 2016
10. Ying-Chao Tung, Ta Yang Cheng, Neng-Hao Yu, Chiuan Wang, Mike Y. Chen. "FlickBoard: Enabling Trackpad Interaction with Automatic Mode Switching on a Capacitive-sensing Keyboard". *ACM CHI2015*, Soeul, Korea. May, 2015
11. Neng-Hao Yu, Da-Yuan Huang, Toby Hsu, Yi-Ping Hung. "Rapid Selection of Hard-to-Access Targets by Thumb on Mobile Touch-Screens". *ACM MobileHCI 2013*, Munich, Germany. Aug, 2013. (Honorable Mention Award)
12. Neng-Hao Yu, Sung-Sheng Tsai, I-Chun Hsiao, Dian-Je Tsai, Meng-Han Lee, Mike Y. Chen, Yi-Ping Hung. "Clip-on Gadgets: Expanding Multi-touch Interaction Area with Unpowered Tactile Controls". *ACM UIST2011*, Santa Barbara, CA. Oct, 2011.
13. Neng-Hao Yu, Li-Wei Chan, Seng-Yong Lau, Sung-Sheng Tsai, I-Chun Hsiao, Dian-Je Tsai, Lung-Pan Cheng, Fang-I Hsiao, Mike Y. C, "TUIC: Enabling Tangible Interaction on Capacitive Multi-touch Displays". *ACM CHI 2011*, Vancouver, BC
14. Marco Piovesana, Ying-Jui Chen, Neng-Hao Yu, Hsiang-Tao Wu, Li-Wei Chan, Yi-ping Hung, "Multi-Display Map Touring with Tangible Widget". *ACM Multimedia 2010*, Firenze, Italy.
15. Po-Hsun Chiu, Shih-Yao Lin, Li-Wei Chan, Neng-Hao Yu, Yi-Ping Hung, "Projector Calibration of Multi-Resolution Display". *CVGIP 2010*, Kaohsiung, Taiwan.
(Best Paper Award)

Full Publication list: http://dblp.uni-trier.de/pers/hd/y/Yu:Neng=Hao