YUAN FENG
INTERACTION DESIGNER & RESEARCHER

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Systemic Change
Industrial Design
Eindhoven University of Technology
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PROFILE

- **Interaction Designer** in Senior Health and Well-being Context
- **Human-Computer Interaction (HCI) Researcher** in Designing Towards Enhanced User Engagement Context

Research Interests: design for social and rehabilitation of seniors including people with dementia, design for multisensory experiences, develop HCI technologies that employ multimodal interaction, tangible interaction, and human-robot interaction.

RESEARCH MOTIVATION

Starting from master period, my designs and research are motivated by promoting senior health and well-being regards both physical and psychosocial aspects. With eight years' training and research, I am now fairly aware of how to gain sensitivity of senior-related experiences, able to convert gained sensitivity into usable systems/artifacts, and conduct valid and rigorous research that leads to communicable knowledge for peers within multidisciplinary fields.

EDUCATION

DOCTORAL RESEARCH

Doctoral Thesis:
Rich Interaction for People with Dementia
(Graduated with Cum Laude)

2016 - 2022 | Eindhoven University of Technology, TU/e, Netherlands
Doctoral of Philosophy, Systemic Change, Industrial Design
Sponsored by the China Scholarship Council (CSC)
University Website: http://research.tue.nl/en/persons/yuan-feng

MASTER'S DEGREE

Master's Thesis:
Wearable Smart Systems for Health Monitoring of Aging Population

2012 - 2015 | Northwestern Polytechnical University, Xi'an, China
Master of Science, Industrial Design
Degree Certificate No., Z10699320150018

2014 | The Oslo School of Architecture and Design, Oslo, Norway
Exchange study, Industrial Design
Sponsored by the Northwestern Polytechnical University

BACHELOR'S DEGREE

Bachelor's Thesis:
Manned Submersible Inner Cabin Layout Optimation Design and Ergonomics Evaluation

2008 - 2012 | Northwestern Polytechnical University, Xi'an, China
Bachelor of Engineering, Industrial Design
Degree Certificate No., 1069942012003352

2011 | National Taipei University of Technology, Taiwan, China
Exchange study, Product Design
Sponsored by the Northwestern Polytechnical University

SKILLS

- PROGRAMING
Arduino
Processing
Kinect SDK
PLEOrb SDK

- DATA ANALYSING
IBM SPSS
AMOS Graphics
NVivo
Dedoose
Noldus Observer XT
Noldus FaceReader

- DESIGNING
Adobe Photoshop
Adobe Premiere
Adobe After Effects
Adobe Illustrator
Adobe InDesign
CorelDraw
Rhino

PUBLICATIONS

ORCiD

Peer-reviewed Jounal Articles

1. Sensors, MDPI (IF 3.576, Q1, JCR 2021) [TOP10sen] (h5-index 172) (Citation: 6)
Feng, Y., Emilia, B., Yu, S., Hu, J., Rauterberg, M., **2020.** Effects of the Level of Interactivity of a Social Robot and the Response of the Augmented Reality Display in Contextual Interactions of People with Dementia. Sensors, 20(13), 3771. https://www.mdpi.com/1424-8220/20/13/3771

2. International Journal of Social Robotics, Springer (IF 5.126, Q1, JCR 2021) [TOP20rob] (h5-index 53)
Feng, Y., Perugia, G., Yu, S., Emilia, B., Hu, J., Rauterberg, M., **2021.** Context-Enhanced Human-Robot Interaction: Exploring the Role of System Interactivity and Multimodal Stimuli on the Engagement of People of Dementia. International Journal of Social Robotics. https://doi.org/10.1007/s12369-021-00823-4

3. Journal of Universal Computer Science (IF 1.139, Q3, JCR 2021) [TOP10un] (h5-index 20)
Honegger, F., **Feng, Y.,** Rauterberg, M., **2021.** Multimodality for Enhancing Presence of Passive Experience: Effects of Visual, Auditory, Vibration and Draught Stimuli on Perceived Realism. Journal of Universal Computer Science, 27(6), 582-608. https://lib.jucs.org/article/68384/

Peer-reviewed Conference Full Papers

1. Feng, Y., Yu, S., etc., **2019.** LiveNature: Ambient Display and Social Robot-Facilitated Multi-Sensory Engagement for People with Dementia. In Proceedings of the 2019 on Designing Interactive Systems Conference, **DIS 2019** (pp. 1321-1333). ACM.[TOP10int] (h5-index 41) (Citation: 13) https://dl.acm.org/doi/pdf/10.1145/3322276.3322331

2. Hendrix, J., **Feng, Y.,** etc., **2019.** Adding a Context: Will It Influence Human-Robot Interaction of People Living with Dementia? In Proceedings of the Eleventh International Conference on Social Robotics, **ICSR 2019**, Madrid, Spain. Springer, Lecture Notes in Computer Science; vol. 11876, P. 494-504. **(Citation: 5)** https://link.springer.com/chapter/10.1007/978-3-030-35888-4_46

3. Feng, Y., Yu, S., etc., **2018.** Closer to nature: Multi-sensory engagement in interactive nature experience for seniors with dementia. In Proceedings of **Chinese CHI 2018**. New York: Association for Computing Machinery, Inc, Vol. Part F137135, p. 49-56. **(Citation: 10)** https://dl.acm.org/doi/abs/10.1145/3202667.3202674

4. Feng, Y., van Reijmersdal, R., etc., **2017.** Using observational engagement assessment method VC-IOE for evaluating an interactive table designed for seniors with dementia. In Proceedings of International conference on Smart Health, **ICSH 2017**, Hong Kong, China. Springer, Lecture Notes in Computer Science; vol. 10347, p. 26-37. https://link.springer.com/chapter/10.1007/978-3-319-67964-8_3

5. Feng, Y., van Reijmersdal, R., etc., **2018.** Dynamorph: Montessori inspired design for seniors with dementia living in long-term care facilities. In Proceedings of Intelligent Technologies for Interactive Entertainment, **INTE-TAIN 2017**, Funchal, Portugal, 2017. Springer, Social-Informatics and Telecommunications Engineering; vol. 215, p. 49-58 (Citation: 6) https://link.springer.com/chapter/10.1007/978-3-319-73062-2_4

Other Publications

Robotics Technology Symposium 2019, RTS 2019. Invited talk and poster presentation. Closer to Nature: Interactive Installation Design with a Therapeutic Robot for Enhancing Positive Engagement in Seniors with Dementia.

Mechatronica & Machinebouw Magzine 2019, the Netherlands, 2019. Robots Meet Social Skills. p. 18-19.

COMMUNITY SERVICES

As Peer Reviewer of Journals
1. International Journal of Social Robotics, Springer (IF 5.126)
2. IEEE Transactions on Human-Machine Systems, IEEE Xplore (IF 3.347)
3. BMJ open Journal (IF 2.692)
4. IET Cyber-Physical Systems: Theory & Applications

As Peer Reviewer of Conferences
1. IEEE International Conference on Robot & Human Interactive Communication (RO-MAN)
2. International Conference on Social Robotics (ICSR)
3. International Conference on Human-Agent Interaction (HAI)
4. International Conference of Intelligent Technologies for Interactive Entertainment (INTETAIN)

As Conference Orgnazing Group Members
1. Student volunteer of Designig Interactive Systems 2019, DIS 2019, San Diego, USA
2. Orgnazing Committee Member of Design for Experience and Wellbing 2019, DEW 2019, Xi'an, China
3. Orgnazing Committee Member of International Symposium on Smart Product Through Life Design 2018, Xi'an, China
4. Student volunteer of Design and Semantics of Form and Movement-Sense and Sensitivity, DeSForM 2017, Delft, Netherlands
5. Orgnazing Committee Member of International Conference on Interaction Design 2013, ICID 2013, Xi'an, China

DESIGN & RESEARCH PROJECTS

SELECTED FOR DESIRED POSITION

Context-Enhanced Human-Robot Interaction for Engaging People with Dementia | 2019 - 2021

In collaboration with Giulia Perugia, Uppsala Social Robotics Lab, Uppsala University, Sweden; and TU/e Social Robotics Lab, the Netherlands

In this project we investigated a novel approch of combined interaction with an augmented reality display with HRI for positively engaging people with dementia living in residential care facilities.

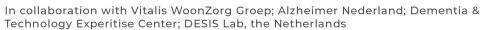**Multimodality for Enhanced Presence of Passive User Experience | 2019 - 2020**

In collaboration with Fabian Honegger, Remomation AG, ETH Zurich, Switzerland

In this project we investigated the role of different sensory stimuli and their combinations on user presence during passive user experience. Findings of this study could contribute to designing multimodal interaction for people with dementia.

Rich Interaction for People with Dementia | 2016 - 2019

- LiveNature: A Social Robot Assisted Multisensory Experience for Enhancing Affective Engagement of People with Dementia **(2018 - 2019)**

- Closer to Nature: An Interactive Public Installation for Enabling Multisensory Engagement with Tangible Interaction for People with Dementia **(2016 - 2017)**

- Dynamorph: An Interactive Table for Collective Play with Sensational Touch of People with Dementia **(2016 – 2017)**

In collaboration with Vitalis WoonZorg Groep; Alzheimer Nederland; Dementia & Technology Experitise Center; DESIS Lab, the Netherlands

In this project, we explored how to design and deploy HCI systems as meaningful activity provision for promoting sensory, emotional, and social engagement of

Madelief: Online-Platform for Customized Recommondations of Assisted Living Products for People with Dementia and Caregivers | 2016

In collaboration with Jolenthe Janssen, TU/e, and Vitalis WoonZorg Groep, the Netherlands

Wearable Alarm Design for Preventing Accident Falls of Solitary Elderly | 2014

In collaboration with Olsomedtech, Hospital Organizer, Synaptic technologies, Norway

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OTHER PROJECTS

Scan to Check for more

The Design and Assessment for Civil Aircraft Cabin Comfort | 2015
In collaboration with the AVIC Xi'an Aircraft Design Institute, China

Design of a Wireless Charging Station for Personal Devices | 2014
In collaboration with Synaptic technologies AS, Norway

Inner Cabin Layout Optimization Design of the Chinese Space Station | 2013
In collaboration with the Shanghai Aerospace Systems Engineering Institute, China

Logging Truck Center Cabin Layout Optimization Design | 2012 - 2013
In collaboration with the China National Petroleum Corporation

Manned Submersible Inner Cabin Layout Optimization Design and Ergonomic Evaluation | 2012 - 2013
In collaboration with China Shipbuilding Industry Corporation, China

The Wireless Internet Terminal Device Design | 2012 - 2013
In collaboration with ZTE Corporation, China

TALKS GIVEN

2021	**Invited Talk (Online).** Workshop of Design for Active Aging: Living Better Together, Tsinghua Future Lab, China
2019	**Full Paper Presentation.** Internation Conferences on Social Robotics (**ICSR 2019**), Madrid, Spain
2019	**Full Paper Presentation.** ACM Designing Interactive Systems Conference (**DIS 2019**), San Diego, USA
2019	**Invited Talk.** Robtics Technology Symposium of Eindhoven University of Technology (**RTS 2019**), Eindhoven, the Netherlands
2018	**Full Paper Presentation. Chinese CHI 2018**, Montreal, Canada
2017	**Full Paper Presentation.** Intelligent Technologies for Interactive Entertainment (**INTETAIN 2017**), Funchal, Portugal
2017	**Full Paper Presentation.** International Conference on Smart Health (**ICSH 2017**), Hong Kong, China

TEACHING TASKS

2019	**Master Resesarch Project, M1.2 by E. Barakova, ID department, TU/e, the Netherlands** Involved as Advisor/Coach With Jorien Hendirx on "Adding a Context: Will it influence human-robot interaction of people with dementia?"
2017-2018	**Master Course DBM140 - Embodying Intelligent Behavior in Social Contexts** **by E. Barakova, ID department, TU/e, the Netherlands** Involved as Advisor/Coach With M.E. Boersma, W.F. Goevaerts, et al., on "Simulating a bonding experience with digital animals for people with dementia". With F. Ye, H. Wang, et al., on "Zootopia: an embodied interactive screen for elderly people."
2017	**Final Bachelor Project, B3.2 by M. Rauterberg, ID department, TU/e, the Netherlands** Involved as Advisor/Coach With Jolenthe Janssen on "Madeliefhulp: Care with Love"
2016-2017	**Squad: Social and Physical Rehabilitation by E. Barakova, ID department, TU/e, the Netherlands** Involved as Advisor With R. Reijmersdal and T Zuo on "Dynamorph: Design for Social Inclusion"
2013	**Bachelor Course - Product Design by John Tan (Northumbria University),** **International Curriculum of Northwestern Polytechnical University, Xi'an, China** Involved as Teaching Assistant/Assessor

MEMBERS

1. ID Social Robotics lab, TU/e
https://www.tue.nl/en/research/research-areas/humans-and-technology/social-robotics-lab/

2. Design for Social Innovation through Social Computing (DESIS) Lab, the Netherlands
http://desis.id.tue.nl/2018/03/closer-to-nature-interactive-systems-for-seniors-with-dementia-in-long-term-care/

3. Dementia and Technology Expertise Centre, the Netherlands
https://ecdt.nl/en/design-work/closer-to-nature/