YUMENG HOU

[Address] EPFL-CDH-DHI-eM+, Rue des Jordils 41, 1025 St-Sulpice, Switzerland
[Email] yumeng.hou@epfl.ch • [Homepage] • [Google Scholar] • [LinkedIn] • [Twitter/X]

EDUCATION

Doctor of Philosophy in Digital Humanities Aug/Sept 2024
École polytechnique fédérale de Lausanne (EPFL) (Expected)
Thesis keywords: computational museology, embodied knowledge, motion semantics,
intangible heritage, traditional martial arts, digital humanities, interactive archives
Supervisor: Prof. Sarah Kenderdine

Master of Science in Computer Science 2015 – 2017
École polytechnique fédérale de Lausanne (EPFL)
Dissertation: "Visualizing Personal Nutrition Intake and Emotions", *Supervisor*: Dr. Pearl Pu

Bachelor of Engineering in Digital Media Technology 2010 – 2014
Zhejiang University
Dissertation: "Visualizing Topic Evolutions in Wikipedia", *Supervisor*: Prof. Wei Chen

Exchange Student in Computer and Systems Sciences 2013 – 2014
Stockholm University

RESEARCH EXPERIENCE

Doctoral Researcher in Digital Humanities 2020 – present
Laboratory for Experimental Museology (eM+), DHI, EPFL

Visiting Scholar July – Dec 2022
Academy of Visual Arts, Hong Kong Baptist University

Research Assistant in Data Visualization 2013 – 2015
Visual Analytics and Intelligence Group, State Key Lab of CAD&CG, Zhejiang University

PUBLICATIONS

Publication in Scientific Journals

Hou, Y.*, Seydou, F., & Kenderdine S. (2023). "Unlocking a multimodal archive of Southern Chinese martial arts through embodied cues". *Journal of Documentation*. https://doi.org/10.1108/JD-01-2022-0027

Hou, Y.*, Kenderdine S., et al. (2022). "Digitizing Intangible Cultural Heritage Embodied: state of the art", in *Journal on Computing and Cultural Heritage*. https://doi.org/10.1145/3494837

Hou, Y.* (2021). "Accessing, Representing, and Transmitting Cultural Heritage through Digital Archives: Challenges and Opportunities". *Digital Humanities Research*, 4(1), 77-91. http://dhr.ruc.edu.cn/CN/Y2021/V1/I4/77

Adamou, A., Picca, D., **Hou, Y.** & Granados-García, P. L. (2023). "The Facets of Intangible Heritage in Southern Chinese Martial Arts: Applying a Knowledge-Driven Cultural Contact Detection Approach". *Journal on Computing and Cultural Heritage*. Just accepted. https://doi.org/10.1145/3606702

Xia, J., **Hou, Y.**, Chen, Y. V., Qian, Z. C., Ebert, D. S., & Chen, W.* (2017). "Visualizing rank time series of Wikipedia top-viewed pages". *IEEE computer graphics and applications*, 37(2), 42-53. https://doi.org/10.1109/MCG.2017.21

Hou, Y.* & Yuan, L. (in press) "Building a knowledge graph of Chinese kung fu masters from heterogeneous bilingual data". *Journal of Open Humanities Data*. Accepted pending copyediting.

Hou, Y.* & Kenderdine, S. (in press) "Ontology-based Knowledge Representation for Traditional Martial Arts". *Digital Scholarship in the Humanities*. Revisions under review.

Peer-reviewed Conference Proceedings

Hou, Y. (2023). "Datafication: Towards digital transmission of the living heritage of Southern Chinese martial arts". *Proceedings of* the *Ninth Young Scholars' Forum in Chinese Studies,* Chinese University of Hong Kong, Sept 7-8 2023, Hong Kong.

Hou, Y. (2023). "Co-encoding embodied knowledge in Southern Chinese martial arts: a collaboration between computists, experts, and digital models". *Digital Humanities 2023: Book of Abstracts.* July 10-14 2023, Graz, Austria. https://zenodo.org/record/8107443

Hou, Y.*, Kenderdine S. (2022). "Encoding the Whole-of-Environment Knowledge for Intangible Cultural Heritage". *AMPS Proceedings Series, 29.1 - (IN)TANGIBLE HERITAGE(S): Design, culture and technology – past, present, and future*, June 15-17, Canterbury, UK, pp.121-132.

Picca, D.*, Adamou, A.*, Hou, Y., et al. (2022). "Knowledge organization of the Hong Kong Martial Arts Living Archive to capture and preserve intangible cultural heritage". *Digital Humanities 2022: Book of Abstracts*. July 25-29 2022, Tokyo.

Adamou, A.*, Hou, Y.*, Picca, D.*, et al. (2021). "Ontology-mediated cultural contact in Southern Chinese martial arts". *Proceedings of the International Joint Workshop on Semantic Web and Ontology Design for Cultural Heritage.* https://ceur-ws.org/Vol-2949/short2.pdf

Xia, J., Chen, W.*, Hou, Y., et al. (2016). "*Dimscanner*: A relation-based visual exploration approach towards data dimension inspection". In *Proceedings of 2016 IEEE Conference on Visual Analytics Science and Technology (VAST)* (pp. 81-90). IEEE. https://doi.org/10.1109/VAST.2016.7883514

Contributions to Books

Kenderdine, S.*, Hibberd, L., Shaw, J., Chang, T.-Z., & Hou, Y. (2023). "Archery Rites: Re-making Confucian Rites." In *Chinese Archery Studies: Theoretical and Historical Approaches to a Martial Discipline*. Springer. https://doi.org/10.1007/978-981-16-8321-3_13

OTHER TALKS & LECTURES & CONFERENCE PRESENTATIONS

"Your proposal: The (in)accessible embodiment: Unfolding the multifaceted knowledge in traditional martial arts". Paper presentation at *EuropeanaTech 2023*, Oct 11-1-2 2023, Den Haag, Netherlands.

"Towards Digital Preservation of Traditional Chinese Martial Arts". Keynote speech at *The 4th International Martial Studies Conference*, Nov 30 2022, Guangzhou, China.

"Augmenting knowledge exploration using agent-based models: A computational experiment with the HKMALA". Presentation at the *7th International Martial Arts Studies Conference*. June 29 - July 2 2022, Lausanne, Switzerland.

"Artificial Intelligence for Cultural Heritage and Computational Archives". Guest lecture in *Digital Art History: Current Trends and Experimental Applications*, University of Basel, April 8 2022.

"Computational Motion Archives", Guest lecture in *Cultural Data Sculpting*, EPFL, 31 March 2022.

"Motion as meaning: Representing embodied knowledge in multimodal cultural archives". Speech at *DHCH@ISR 2021*, June 7-9 2021, Rome, Italy.

"Articulate Similarity: A Visual Search Framework for Embodied Knowledge in A Confucian Rites Video Archive". Poster at *16th International Digital Curation Conference (IDCC21)*, April 19 2021, Online.

TEACHING

Lecturer, Teaching Assistant, *DH-404 Cultural Data Sculpting 2021/2022/2023*, EPFL	2021 – 2023
Guest Lecturer, *Digital Art History 2022, University of Basel*	2022
Supervision, Master's project on knowledge interface design, EPFL	Fall 2023
Supervision, Master's project on knowledge graph-based cultural analytics, EPFL	Fall 2021
Supervision, Master's project on deep learning for multimodal archives, EPFL	Spring 2021

ACADEMIC SERVICES

Peer reviewer for *Heritage Science*, *International Journal of Heritage Studies*, *Multimedia Tools and Applications*, *Journal of Open Humanities Data*, and *Digital Humanities 2023*	2022 – present
Student Representative, Doctoral School of Digital Humanities, EPFL	2021.01 – 2023.02
Seminar Organizer, *Swissuniversities* DH seminar, Dec 2-3, 2021, EPFL, Lausanne	2021.09 – 2021.12
President of the Students' Union, *College of Computer Science, Zhejiang University*	2012 – 2013

GRANTS & AWARDS

Shortlisted as Paul Fortier Prize best paper candidate at Digital Humanities Conference 2023

Europeana Network Association (ENA) member grant for attending EuropeanaTech 2023

SNFS/EPFL Doc.Mobility grant, jointly funded by Swissuniversities and EPFL

Collaborative Research on Science and Society (CROSS) program, EPFL-UNIL

INSTALLATIONS & CREATIONS

ImmerscienceVR. An immersive learning environment (permanent). *Daning International School, Shanghai.*

Natural Origins of The Internet. Data Art Installation (permanent). *Museum of Inspiration, Hangzhou, China.*

AquA. A Virtual Aquarium Motivating Knowledge Sharing. *Médecins Sans Frontières (MSF), Geneva, Switzerland.*

MOOC Learning Flow. Interactive visualization of MOOC learners' learning path with success/failure prediction.

PROFESSIONAL EXPERIENCE

Creative Tech Lead, *_box Interaction, Hangzhou, China*	2019 – 2020
Digital Strategist (part-time), *NewStyle Media Group, Hangzhou, China*	2019 – 2020
Product Manager RTC/Livestreaming PaaS, *Alibaba Cloud, Hangzhou, China*	2017 – 2019
Digital Consumer Analyst EMEA (internship), *Procter & Gamble, Geneva, Switzerland*	2016 – 2017

INSTITUTIONAL MEMBERSHIPS

Europeana Network Association (ENA)	2023.03 – present
Association for Computing Machinery (ACM)	2021.10 – present
UNIL-EPFL dhCenter	2020.10 – present

SKILLS

Programming: Python, JavaScript (D3.js, three.js, p5.js), SQL/Cypher, R, Java, processing, HTML/CSS, C++, etc.

Tools: UE4, Unity, Axure, Media Processing (DaVinci, Photoshop, Audition, AI, etc), Knime, Spotfire, MS Office, etc.

Languages: Mandarin (native), English (proficient), French (intermediate, B1/B2), Cantonese (elementary).