YUMENG HOU

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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.

"Visualizing Embodied Knowledge System", Guest lecture in *Cultural Data Sculpting*, EPFL, 20 May 2021.

"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

Teaching Assistant, *DH-404 Cultural Data Sculpting 2021/2022/2023*, EPFL	2021 – 2023
Supervision, Master's semester project on knowledge interface design, EPFL	Fall 2023
Supervision, Master's semester project on knowledge graph-based cultural analytics, EPFL	Fall 2021
Supervision, Master's semester project on deep learning for multimodal archives, EPFL	Spring 2021
Supervision, Six master course projects on machine learning for movement analysis, EPFL	Fall 2020

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

ACADEMIC SERVICES

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

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).