

HYEOK HWEON “H. H.” KANG

Curriculum vitae

Department of East Asian Languages and Cultures, Washington University in St. Louis
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EMPLOYMENT

2021–pres. Assistant Professor of East Asian Languages and Cultures; Affiliated Assistant Professor of Comparative Literature and Thought (2024–), Washington University in St. Louis

2020–21 D. Kim Foundation Postdoctoral Fellow, Department of the History of Science & Technology, Johns Hopkins University

EDUCATION

2020 Ph.D., History and East Asian Languages, Harvard University

2013 B.A., History and Music, *summa cum laude*, Phi Beta Kappa, Emory University

PUBLICATIONS

Monograph-length Studies

Artisanal Heart: State, Craft, and Science in Early Modern Korea (under contract with The University of Chicago Press)

“Crafting Knowledge: Artisan, Officer, and the Culture of Making in Chosŏn Korea” (Ph.D. Dissertation, Harvard University, 2020)

Winner of *Turriano Book Prize*, International Committee for the History of Technology, 2021

Winner of *ICAS Book Prize* (Best Dissertation in the Humanities), ICAS, 2021

Finalist for *WHA Dissertation Prize*, World History Association, 2021

Peer-Reviewed Articles

“Global History and the Measures of Early Modern Technology: Europe, East Asia, and the Case of Smoothbore Ballistics,” *Journal of World History* 36, no. 2 (2025): 169–204

“Kingpins at Court: Contraband Diplomacy between Korea, Japan, and Tsushima, 1607–1671,” *Journal of Asian Studies* 83, no. 1 (2024): 116–139

“Reverse Engineering as History and Method: The Portuguese *Espingarda* in Chosŏn Korea,” *History and Technology* 38, no. 2–3 (2023): 144–66

“Korean Chronicles under a Macroscope: Towards a Digital Infrastructure in Premodern Korean Studies,” with Michelle Suh, *Korean Studies* 47, no. 1 (2023): 8–33

“How Network Analysis Uncovers International Networks of Smuggling History: Criminals in Nagasaki, Japan circa 1667,” *Journal of Cultural Analytics* 8, no. 1 (February 2023): 1–20

“Cooking Niter, Prototyping Nature: Saltpeter and Artisanal Experiment in Korea, 1592–1635,” *Isis: A Journal of the History of Science Society* 113, no. 1 (March 2022): 1–21

“A Korean Military Revolution? Parallel Military Innovations in East Asia and Europe,” with Tonio Andrade and Kirsten Cooper, *Journal of World History* 25, no. 1 (March 2014): 51–84

“Big Heads and Buddhist Demons: The Korean Musketry Revolution and the Northern Expeditions of 1654 and 1658,” *Journal of Chinese Military History* 2, no. 2 (2013): 127–89

Peer-Reviewed Book Chapters

“Firearms, Fluidity, and the Global Technology Circuit: Conflict, 1450–1650,” for *A Cultural History of Technology in the Age of Encounters (1450–1650)*, ed. Mackenzie Cooley (London: Bloomsbury, forthcoming)

“Difference in an Age of Parity: Technology and Global Military History,” in *The Military Revolution and Revolutions in Military Affairs*, ed. Mark C. Fissel (Berlin: De Gruyter, 2022), 29–64

“Nature of *Narye*: Sound, Spectacle, and the Politics of Performance in Fifteenth-Century Korea, 1392–1592,” in *Routledge Handbook of Asian Music: Cultural Intersections*, ed. Tong Soon Lee (London: Routledge, 2021), 150–73

Review Essays and Book Reviews

Review of Lim Jongtae, *Travel, Reform, and Science and Technology in Eighteenth-Century Korea*, *Journal of the Korean History of Science Society* 46, no. 2 (2024): 427–429

Review of *Technical Knowledge in Early Modern Japan*, eds. Erich Pauer and Ruselle Meade, *Japan Review* 37 (2022): 190–2

“In Pursuit of Truth and Justice: Legal History of Chosŏn Korea and the State of the Field,” *Seoul Journal of Korean Studies* 29, no. 1 (June 2016): 219–27

Other Scholarly Publications

“Silloker,” database and search engine for Korean historical chronicles, June 1, 2022–present, silloker.com. Co-designed with Michelle Suh

“Climate Change’s Fatal Synergy,” *Sense & Sustainability*, May 11, 2015

“The Little Ice Age: Heterogeneity of Impact and Japan’s Success Story?”, *Sense & Sustainability*, December 5, 2014

“The Little Ice Age: History of Climate-Induced Crisis in Europe and East Asia,” *Sense & Sustainability*, October 15, 2014

WORKS IN PROGRESS

“Beyond Technological ‘Traditions’: The Case of Steam Engines in East Asia” (journal article in progress)

“Imaging Historical Material Culture: Examining Korean Scaphe Dials under the Lens of X-Ray Computed Tomography,” with Paul Wilson, and Sarah Chard-Cooper (journal article in progress)

“Tactics Before Technics: Korean Perception of Japanese Wartime Technology, 1592–1598” (journal article in progress)

“Global Cooling, Bed Stoves, and the Rhetoric of Efficient Design in Eighteenth-Century Korea” (journal article in progress)

“Questioning Gendered Science: Poisons, Taboo, and Women’s Knowledge in the Late Chosŏn” (conference paper undergoing revision into an article manuscript)

AWARDS, GRANTS AND FELLOWSHIPS

External

- 2024, 21 Northeast Asia Council Korean Studies Grant, Association for Asian Studies
- 2023–24 ACLS Fellowship, American Council of Learned Societies
- 2020–22 Mellon Fellowship of Scholars in the Humanities, Stanford University (2-3 years; declined to accept the D. Kim Foundation Postdoctoral Fellowship)
- 2020–21 Postdoctoral Fellowship, D. Kim Foundation for the History of Science and Technology in East Asia
- 2021 Turriano ICOHTEC Book Prize, Juanelo Turriano Foundation and the International Committee for the History of Technology
- 2021 ICAS Book Prize (2019–2020), Best Dissertation in the Humanities in English, International Convention of Asia Scholars
- 2019–20 Mellon/ACLS Dissertation Completion Fellowship, ACLS
- 2019–20 Dissertation Fellowship, D. Kim Foundation for the History of Science and Technology in East Asia (declined to accept the Mellon/ACLS DCF)
- 2017–19 Korea Foundation Fellowship for Graduate Studies, Korea Foundation
- 2018 Joan Cahalin Robinson Prize, Society for the History of Technology
- 2018 Russell F. Weigley Graduate Travel Grant, Society for Military History
- 2017 Bernadotte E. Schmitt Research Grant, American Historical Association
- 2012 World History Association / Phi Alpha Theta Student Paper Prize (undergraduate division)
- 2012 Gold Medal, Chinese Speech Competition, Confucius Institute (full ride to Nanjing University for a master’s degree, declined)

Internal

Washington University in St. Louis

Humanities Symposium Grant (2025), with Marjan Wardaki and Diana Montaño; Roland Grimm Travel Award (2022, 2024); Seeding Projects for Enabling Excellence and Distinction (SPEED) in Research (2022–23); Summer Faculty Research Grant (2023); Internal Nominee for the National Endowment for the Humanities (NEH) Summer Stipend Competition (2023); Global Qing and Its Legacies Grant (2022)

Harvard University

Asia Center Winter Research Travel Grant (2017); Derek Bok Certificate of Distinction in Teaching (4 times) (2016–17); Nominee for Star Family Prize for Excellence in Advising (2016); Korea Institute Summer Research Grant (3 times) (2014–16); Sheldon Traveling Fellowship (declined to accept Korea Foundation Fellowship) (2016–17); Y.B. Min University Fellowship (2014–16); Fairbank Center for Chinese Studies Summer Travel Grant (2015); Reischauer Institute for Japanese Studies Summer Language Grant (2014); Institute for Quantitative Social Sciences Research Grant (2014); Nominee for Presidential Scholar (2013)

Emory University

Charles E. Shepard Scholar for Graduate Studies (2013); Burt and Betty Shear Award (one of two seniors selected from a graduating class of 1,400) (2013); Matthew A. Carter Citizen-Scholar Award (2013); George Cuttino Scholarship for Research Overseas (2012); Clio Prize for Best Junior/Senior Colloquium Paper (2012); Woodruff Library Undergraduate Research Award (2012); Fox Center for Humanistic Inquiry Fellowship (2011–13); Third Place in Original Music Composition, Arts Showcase (2011); William-Lemonds Grant (2011); Dewey-Hinton Scholarship (2011); Emory Scholars Summer Study Abroad Award (2011); Scholarly Inquiry and Research Summer Research Grant (3 times) (2010–12); Scholarly Inquiry and Research Conference Grant (2 times) (2010–11); Center for Creativity and Arts Grant (3 times) (2010–12); Best Presentation Award, Scholarly Inquiry and Research Symposium (Humanities and Arts Category) (2 times) (2010–12); Kemp Malone Scholar (full scholarship) (2009–13)

PRESENTATIONS

Invited Talks

- 2025 “Reworking Chosŏn: 3D Modeling and Virtual Exhibitions,” Digital Age Symposium, Center for East Asian Studies, University of Kansas
- 2025 “Precious Metals, Saltpeter, and the Little Ice Age,” Maya Stiller’s graduate seminar on eco-criticism, University of Kansas
- 2025 “The Wicked Factory? Artisans, Ethics, and Reform in Sixteenth-Century Chosŏn,” Korean Treasures at Harvard Series, Harvard University
- 2024 “Engineering and the Confucian State in Early Modern Korea,” American Association of Teachers of Korean Colloquium
- 2023 “Artisanal Heart: Engineering and Statecraft in Early Modern Korea,” East Asian Studies, Brown University
- 2023 “Artisanal Heart: The Vernacular Engineers of Early Modern Korea,” Korean Humanities Speaker Series, the Center for East Asian Studies, Stanford University
- 2022 “Reading Artisanal Knowledge from 16th century Korea,” Cornell Classical Chinese Colloquium, the Mario Einaudi Center for International Studies, Cornell University
- 2022 “Early Modern Science as Seen Through Late Chosŏn Military Workshops: Focusing on Niter Knowledge” (조선후기 군영공방으로 보는 근세 과학사: 염초 지식을 중심으로) (in Korean), Sungkyunkwan Seminars in Historical Studies, Sungkyunkwan University

2022 "The Artisanal Heart: Craft and Experimentalism in Early Modern Korea," Minnesota Colloquium for the History and Philosophy of Science, Technology, and Medicine, University of Minnesota

2022 "Artisan Squad: The Experimental Workshop in Early Modern Korea," Aftermath of the East Asian War of 1592–1598 Webinar Series, Autonomous University of Barcelona

2021 "Prototyping Niter: Experimentalism and Technological Practice in the Late Chosŏn Military Workshops" (조선후기 군영공방에서의 실험과 기술적 실천) (in Korean), Science in Historical Perspective, Seoul National University

2021 "The East Asian War: A Technological History," for undergraduate class on Korea History through Film, Harvard University

2021 "Reverse-Engineering the Gun: The Portuguese *Espingarda* in Chosŏn Korea," American Society of Arms Collecting, Prescott

2021 "Boiling Saltpeter: Espionage, Experiment, and Vernacular Science" (염초 달이기): 염탐, 시험 그리고 조선후기의 베나큘러 과학) (in Korean), Chosŏn History of Science Seminar Series, Seoul National University

2015 "Technologies in Korean History: A Broad Sweep," training session for interns at the MIT International Science and Technology Initiatives (MISTI), Massachusetts Institute of Technology

At Conferences and Workshops

2025 "Veneers of Circulation: Knowledge of Saltpeter in Eighteenth-Century Korea and the Politics of the Go-Betweens," Korean Society of History of Science International Workshop, Seoul National University

2025 "'My Humble Explanation of Things': A Korean Physician's Collecting of Chinese Recipes, Foods, and Useful Things," History of Science Society annual meeting, New Orleans

2023 "Military Technology as Literacy: Technical Knowledge in Korean Military Workshops," conference on Mastering of Materialities: Resources and Technology in Post-Imjin East Asia," Autonomous University of Barcelona

2023 "The Codification of Technical Knowledge in Korean Military Workshops, 1592–1635," the 16th International Conference on the History of Science in East Asia, Frankfurt

2023 "Silloker: Towards a Digital Infrastructure for Korean Historical Chronicles," conference on Tools of the Trade: The Way Forward, Harvard University

2022 "Vernaculars of Making: Artisanal Literacy through Image and Script," History of Science Society annual meeting, Chicago

2022 "From Envoys to Army Shops: Saltpeter and the Infrastructure of Craft Knowledge in Late Chosŏn Korea," Association for Asian Studies annual meeting, Honolulu

2022 "Silloker: Towards a Digital Turn in Premodern Korean Studies," workshop on

Digital Humanities and Korean Studies, University of Copenhagen

2022 "Making for the Home: Poisons, Taboo, and Women's Knowledge in 18th-Century Korea," Modern Language Association annual meeting, Washington

2022 "Cooking Niter, Prototyping Nature: Saltpeter and Artisanal Experiment in Korea, 1592–1635," working group on Craft, Technology, and Material Culture in Early Modern Asia, held online by the Consortium for History of Science, Technology, and Medicine (CHSTM)

2021 "My Humble Explanation of Things (*Somun sasōl*): A Source Reading," 4th New Frontiers in Premodern Korea Studies, held online by the Korea Institute, Harvard University

2021 "The Politics of Technology Choice: The Gun Debate in Chosōn Korea," workshop on The Multifarious Reception of the Harquebus, held online by the Autonomous University of Barcelona

2021 "With an 'Artisanal Heart'? How Korean Scholars Tinkered with Pneumatics and Natural Philosophy in the Early Nineteenth Century," History of Science Society annual meeting, New Orleans, held online due to COVID-19

2021 "Out of Thick Air: Western Pneumatics in Nineteenth Century Korea," the Inaugural Conference for the Korean Studies Research Network, Iowa, held online due to COVID-19

2021 "Collaborating Hands: Artisan, Scholar, and New Technological Knowledge in Sixteenth Century Korea," the 26th International Congress of History of Science and Technology, Prague, held online due to COVID-19

2020 "Cooking Niter in Korea: Espionage, Experiment and Vernacular Science," working group on Early Modern Science, held online by the Consortium for History of Science, Technology, and Medicine (CHSTM)

2019 "A Wheelock Landmine: Artisan, Scholar and Technological Knowledge in Seventeenth Century Korea," Society for the History of Technology annual meeting, Milan, Italy

2019 "The Workshop: Knowledge, Technology and the Military in Chosōn Korea," workshop hosted by the D. Kim Foundation, Seoul

2019 "Matériel Matters: Trade and Diplomacy across the Korea Strait," conference hosted by The World Consortium of Korean Studies, Leiden University

2018 "Divine Machine? Korea's Reception of the Gun," Society for History of Technology annual meeting, St. Louis

Winner of the Joan Cahalin Robinson Prize for the best presented paper

2018 "Divergence in an Age of Parity: Musketry and Marksmanship in Western Europe and East Asia," Society for Military History annual meeting, Louisville

2018 "Accurizing the Gun: Tactics and Technologies in East Asia," Chinese Military History Society annual meeting, Louisville

2017 "Gunrunning Diplomacy: Military Trade across the Korea Strait," Association for

Asian Studies annual meeting, Toronto

2015 "Performing Gunpowder: The Technology of Court Rituals in Chosŏn Korea," Harvard East Asia Society Graduate Student Conference, Harvard University

2013 "The Troubadour's Tournament: From Drilling Manuals to Narrative Songs in Late Chosŏn Korea," Association for Asian Studies annual meeting, San Diego

2013 "Performing Military Knowledge in Korean Armies: P'ansori and the Late Choson Military and Social Reforms," 42nd International Council for Traditional Music, Shanghai

2011 "What's Driving Fusion *Haegŭm*? New Accessibility and the Question of Authenticity," Society for Ethnomusicology Southeast and Caribbean Chapter (SEMSEC) meeting, Nashville

2011 "Managing Historicity and Accessibility: *Nanyin* of Quanzhou" Association for Chinese Music Research Meeting, Association for Asian Studies annual meeting, Philadelphia

Campus Talks

2022 "Minimum Viable Product (MVP) for Digital Humanities," graduate seminar on East Asian Print Culture and Society: Women in Print, Washington University in St. Louis

2021 "Crafting Niter, Imitating Nature: Saltpeter and Artisanal Experiment in Seventeenth Century Korea," History of Science, Medicine, and Technology Colloquia, Johns Hopkins University, held online due to COVID-19

2019 "Military Artisanship: A Way of Making and Knowing," working group on Korean Studies, Harvard University

2017 "Korea's Gunpowder Army: War, Technology, and Transformation," for undergraduate class on Traditional Korea, Harvard University

2017 "Digital Humanist as Historical Detective: Network Analysis of Arms Trafficking between Japan and Korea, 1677," series on Digital Humanities, hosted by the Harvard-Yenching Library

2015 "Closing of the Steppes? Russo-Qing Conflicts in World-Historical Perspective," working group on Central Eurasia, Harvard University

TEACHING

Washington University in St. Louis

Instructor	Korean Civilization
Instructor	Guns, Tobacco, and Sweet Potato: A History of Material Culture
Instructor	Nature, Technology, and Medicine in Korea
	Founded the student-run journal <i>WashU Ventures in Korean Studies</i> whose first two volumes are available as paperback on Amazon (link)
Instructor	Kitchen, Studio, Factory: Making in East Asia (Course website: link)

Featured in *The Ampersand*, “New course explores craft cultures in East Asia,” June 15 2022 ([link](#))

ADVISING

Graduate Advising (Washington University in St. Louis)

Charry Kang, Ph.D. in East Asian Languages and Cultures (in progress), co-supervisor, 2024–

Chang Xu, Ph.D. in History (2024), dissertation committee member, 2024

Pei-Hsu Lin, Ph.D. in History (in progress), directed studies, doctoral qualifying exam, and prospectus, 2023–24; Mentored Teaching Experience, 2022

Ran Wei, Ph.D. in Japanese & Comparative Literature (in progress), Humanities Digital Summer Workshop, 2022

Huang Gang, Ph.D. in Chinese & Comparative Literature (in progress), Mentored Teaching Experience, 2021

Zoe Richters, M.A. in East Asian Studies, thesis committee member, 2024

Campbell Stuart, M.A. in East Asian Studies, thesis committee member, 2022

Undergraduate Advising (as Vice-Chair of Fellowships, Lowell House, Harvard University)

Sophia Lugo (Schwarzman Scholar, 2017)

Adela Kim (Dumbarton Oaks Humanities Fellow, 2017)

Reylon Yount (Marshall Scholar, 2017)

Garrett Lam (Rhodes Scholar, 2016)

Rivka B. Hyland (Rhodes Scholar, 2016)

PROFESSIONAL SERVICE

To the Discipline

Co-Chair, Forum for the History of Science in Asia, History of Science Society, 2025–

Inaugurated the annual Joseph Needham Foundation Awards (Research Grant and Essay Prize)

Best Article Prize Committee, Maurice Daumas Prize, International Committee for the History of Technology (ICOHTEC), 2022

Best Presentation Prize Committee, Joan Cahalin Robinson Prize, Society for the History of Technology, 2021

Environmental History Fellow, *Sense & Sustainability* (501C3 Non-profit), 2013–15

Reviewing and Consulting

Editorial Board (Consulting Editor), *Journal of the History of Ideas*, 2022–present

Consultant, “Globalization and Creation of Korean Historical Contents through Gamification,” Economics, Humanities and Social Research Council, South Korea, 2022

Manuscript referee for journals, *Technology & Culture*, *Isis: A Journal of the History of Science Society*, *Asian Studies Review*, *International Journal of Asian Studies*, *Journal of Global History*

Contributor, "About the Cover," *Harvard Journal of Asiatic Studies* 77.1 (June 2017), 2017

University and Department Service

Co-organizer, "East Asian Medicine Week," a series of talks, a gala, and library tour, in collaboration with the Medical School Library, to be held in October 2024 ([link](#))

Search committee, up to two tenure-track positions in Japanese Studies, Department of East Asian Languages and Cultures, Washington University in St. Louis, 2024

Search committee, lecturer in Korean Studies, Department of East Asian Languages and Cultures, Washington University in St. Louis, 2023

Faculty lead, Humanities Digital Summer Workshop, 2022

Co-convener, EALC Public Lecture Series, Department of East Asian Languages and Cultures, Washington University in St. Louis, 2021–

Member, Graduate Committee, Department of East Asian Languages and Cultures, Washington University in St. Louis, 2021–

Member, "Science in the Public Square," project funded by the Incubator for Transdisciplinary Futures, Washington University in St. Louis, 2021–23

Co-founder, Korean Studies Working Group, Harvard University, 2017–18

Resident Tutor, Lowell House, Harvard University, 2014–16

Nominated for the 2016 Star Family Prize for Excellence in Advising

Vice-Chair of Fellowships, Lowell House, Harvard University, 2014–16

Graduate Fellow (Cultural & Intellectual Fellow), Dudley House, Harvard University, 2013–15

Events Organized or Coordinated

Moderator, "Ginseng for the Qa'an," panel at the 7th New Frontiers in Premodern Korea Studies, held online by the Korea Institute, Harvard University, 2024

Co-organizer, with Sau-Yi Fong, "Military Crisis and Early Modern Entanglement," panel at the 16th International Conference on the History of Science in East Asia, Frankfurt, Germany, 2023

Co-organizer, with Eric M. Gurevitch, "Vernacular Sciences in Asia," panel at the History of Science Society annual meeting, Chicago. Sponsored by the Forum for the History of Science in Asia, 2022

Organizer, "Science and Artisanal Knowledge: Towards a Global History," panel at History of Science Society annual meeting, New Orleans, held online due to COVID-19, 2021

Coordinator, "1st Annual Joint Atlantic Seminar for the History of East Asian Science, Technology, and Medicine (JAS-EASTM)," conference hosted by Johns Hopkins University, held online due to COVID-19, 2021

Graduate Coordinator, "Making History: Technologies of Production in East Asia's Past," workshop at Harvard University, 2019

Organizer, "Assimilating the Gun: Military Technology in the Long Sixteenth Century," panel at the Society for the History of Technology annual meeting, St. Louis, 2018

Organizer, "The Frontiers of Global Military History: Military Technology and Inner and East Asian Warfare," panel at the Society for Military History annual meeting, Louisville, 2018

Organizer, "Smugglers, Castaways and Sailors: Informal Diplomacy in Early Modern East Asia," panel at the annual meeting of the Association for Asian Studies, Toronto, 2017

Graduate Coordinator, "Receptions, Transformations and Innovations: Transcultural Discourses in Korean Art," conference at Harvard University, 2016

RESEARCH LANGUAGES

Korean (native); Chinese, Japanese, Spanish (advanced reading, speaking, and writing)

Literary Sinitic/Classical Chinese, Manchu (reading proficiency)

PROFESSIONAL MEMBERSHIPS

American Historical Association

Association for Asian Studies

History of Science Society

Society for the History of Technology

International Committee on History of Technology

Phi Beta Kappa, honor society (2012 induction)

Phi Alpha Theta, history honor society (2012 induction)

Phi Eta Sigma, honor society (2009 induction)