

JUNG WHO NAM

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EDUCATION

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| 2014 – July 2022
(expected) | Ph.D., Computer Science
● Advisor: Daniel F. Keefe
● Specializations: Scientific Visualization, Virtual Reality, Data Storytelling
● Thesis: Everyday Scientific Visualization: Making 3D Visualization Techniques Accessible for Day-To-Day Team-Science for Collaboration and Analysis
● Took a three-year of leave of absence for the mandatory military service (2019-2022) | University of Minnesota – Minneapolis, MN |
| 2012 – 2014 | M.S., Computer Science
● Specializations: Computer Graphics, Virtual Reality | University of Minnesota – Minneapolis, MN |
| 2008 – 2012 | B.S., Computer Science
● Specializations: Computer Graphics, User Interfaces | University of Minnesota – Minneapolis, MN |

SKILLS

Programming Languages: C#, Java, C++, HLSL/Cg, JavaScript, TypeScript, CSS, HTML, PHP, R

Development Tools: Unity3D, OpenGL, Processing, Three.js, D3.js, Google MediaPipe, OpenCV

Interaction Platforms: HTC Vive, Oculus Rift, Google Cardboard, Kinect, OptiTrack

Software: Photoshop, Illustrator, Shotcut, Blender, SolidWork

EXPERIENCE

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| 2019 – Nov 2021
(in replacement
of mandatory
military service) | Researcher
● Developed an authoring tool for capturing a live dance performance.
● Designed and developed a gesture-based interactive installation for museums to present their archived heritage data, which was showcased at the Asia Culture Center and another public venue. | Gwangju Institute of Science and Technology – Gwangju, S. Korea
<i>Korea Culture and Technology Institute (KCTI)</i> |
| 2014 – 2019 | Research Assistant
● Focuses on building novel interactive systems for experts in scientific, medical, and cultural heritage fields to analyze and present their data.
● Collaboration with the Center for Spirituality and Healing : Developed a mobile virtual reality application to practice mindfulness techniques to mitigate lower-back pains.
● Collaboration with the US National Forest Services : Developed mobile & desktop virtual reality applications to tour and analyze data-driven forests in the U.S.
● Collaboration with the Medical Device Center : Developed prototypes for using 3D printed props for interacting with medical data.
● Developed Unity3D plugins for using 3DUI techniques in different display devices, e.g., a 4-wall CAVE, TUIO multi-touch table, 3D TVs. | University of Minnesota – Minneapolis, MN
<i>Interactive Visualization Lab (IVLab)</i> |

Summer 2018	Research Intern <i>Analysis and Visualization Lab (AVIZ)</i>	INRIA – Saclay, France
	<ul style="list-style-type: none"> ● Investigated ways to leverage storytelling and lightweight communication for science collaboration. ● Developed interactive techniques for creating lightweight data-driven presentations from exploratory data visualization applications. ● Developed platform-specific applications to collaborate around exchanged stories in browsers, mobile phones, and PC settings. 	
2011 – 2014	Programmer <i>Center for Magnetic Resonance Research (CMRR)</i>	University of Minnesota – Minneapolis, MN
	<ul style="list-style-type: none"> ● Developed a Photoshop-like JAVA application to assist pathologists with assembling scanned tissue images into a complete organ and annotating cancer boundaries. ● Integrated Java3D to view drawn cancer boundaries in 3D and implemented corresponding interaction functionalities. 	

TEACHING EXPERIENCE

Spring 2018	Teaching Assistant <i>Course: CSCI 4611 Programming Interactive Computer Graphics and Games</i>	University of Minnesota – Minneapolis, MN
	<ul style="list-style-type: none"> ● Provided feedback and guidance to students on their in-class projects. 	
Spring 2015	Teaching Assistant <i>Course: CSCI 5609 Visualization</i>	University of Minnesota – Minneapolis, MN
	<ul style="list-style-type: none"> ● Developed new student projects for junior-level visualization class. ● Provided feedback and guidance to students on their in-class projects. 	

JOURNALS, CONFERENCES, BOOK CHAPTERS

2022

Daniel F. Keefe, Bridger Herman, **Jung Who Nam**, Daniel Orban, and Seth Johnson, "Hybrid data constructs: Interacting with biomedical data in augmented spaces", in *Making Data: Materializing Digital Information*, edited by Ian Gwilt, chapter 11, pages 169-182. Bloomsbury Visual Arts, June 2022. (DOI: 10.5040/9781350133266.ch-011)

2019

Jung Who Nam, Krista McCullough, Joshua Tveite, Maria M. Espinosa, Charles H. Perry, Barry T. Wilson, and Daniel F. Keefe, "Worlds-in-Wedges: Combining WIMs and Portals to Support Comparative Immersive Visualization of Forestry Data", in *IEEE VR 2019*, Osaka, Japan. (DOI: 10.1109/VR.2019.8797871)

Ethan Leng, Jonathan C. Henriksen, Anthony E. Rizzardi, Jin Jin, **Jung Who Nam**, Benjamin M. Brassuer, Andrew D. Johnson, Nicholas P. Reder, Joseph S. Koopmeiners, Stephen C. Schmechel, and Gregory J. Metzger, "Nature Scientific Reports Signature maps for automatic identification of prostate cancer from colorimetric analysis of H&E-and IHC-stained histopathological specimens", in *Nature Scientific Reports* 9, 6992, May 2019. (DOI: 10.1038/s41598-019-43486-y)

2017

Jung Who Nam and Daniel F. Keefe, "Spatial Correlation: An Interactive Display of Virtual Gesture Sculpture", in *Leonardo* (2017) 50 (1): 94–95. (DOI: 10.1162/LEON_a_01226)

2016

Hamza Farooq, Junqian Xu, **Jung Who Nam**, Daniel F. Keefe, Essa Yacoub, Tryphon Georgiou, and Christophe Lenglet, "Microstructure Imaging of Crossing (MIX) White Matter Fibers from diffusion MRI", in *Nature Scientific Reports* 6, 38927, Dec 2016. (DOI: 10.1038/srep38927)

Gregory J. Metzger , Chaitanya Kalavagunta, Benjamin Spilseth, Patrick J. Bolan, Xiufeng Li, Diane Hutter, **Jung Who Nam**, Andrew D. Johnson, Jonathan C. Henriksen, Laura Moench, Badrinath Konety, Christopher A. Warlick, Stephen C. Schmechel, and Joseph S. Koopmeiners, "Detection of Prostate Cancer: Quantitative Multiparametric MR Imaging Models Developed Using Registered Correlative Histopathology", in *Radiology*, 2016 Jun;279(3):805-16. (DOI:10.1148/radiol.2015151089)

POSTERS, WORKSHOPS, EXHIBITS

2019

(Best Poster Award)

Jung Who Nam, Charles H. Perry, Barry T. Wilson, and Daniel F. Keefe, "Linked View Visualization Using Clipboard-Style Mobile VR: Application to Communicating Forestry Data", in *IEEE VIS 2019 posters*, Vancouver, Canada.

Narae Park, Yohan Hong, Hyunjeong Pak, **Jung Who Nam**, Kyoungsu Kim, Junbom Pyo, Kyungwon Gil, and Kyoobin Lee, "Effects of Age and Motivation for Visiting on AR Museum Experiences", in *ACM VRST 2019 posters*, Sydney, Australia. (DOI: 10.1145/3359996.3364711)

2014

Jung Who Nam and Daniel F. Keefe, "Spatial Correlation: An Interactive Display of Virtual Gesture Sculpture", in *IEEE VIS 2014 Arts Program exhibits*, Paris, France.