Stanford

Donghoon Kim

Postdoctoral Scholar, Radiology

Bio

BIO

Dr. Donghoon Kim is a postdoctoral scholar at Stanford's Center for Advanced Functional Neuroimaging (CAFN), working in close collaboration with the Stanford Alzheimer's Disease Research Center (ADRC). His work develops cutting-edge deep learning approaches for multimodal neuroimaging analysis, with an emphasis on the early detection and characterization of Alzheimer's disease pathology.

Before joining Stanford, he earned his Ph.D. in Biomedical Engineering from the University of California, Davis. His Ph.D. thesis was titled "Deep Learning-Driven Technical Developments and Clinical Applications of Arterial Spin Labeling MRI." During his Ph.D. studies, he focused on the development of advanced deep learning techniques for ASL MRI and its clinical applications. During his master's degree in Biomedical Engineering at Virginia Tech–Wake Forest University, he studied the functional connectivity of the default mode network using resting-state BOLD fMRI among youth football players.

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Committee member, Ad Hoc AI Committee of American Society of Neuroradiology (2025 - present)

PROFESSIONAL EDUCATION

- Ph.D., University of California, Davis , Biomedical Engineering (2023)
- M.S., Virginia Tech - Wake Forest University , Biomedical Engineering (2019)
- B.S., Ohio State University , Electrical and Computer Engineering (2017)

STANFORD ADVISORS

- Greg Zaharchuk, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Evaluation of Image-Level Harmonization Methods for Multi-Center MR Neuroimaging.** *Journal of magnetic resonance imaging : JMRI*
  Ho, B. C., Kim, D., Kumar, A., Weiss, S., Vossler, H., Mormino, E., Zaharchuk, G.
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- **The differential relationship between white matter cerebrovascular perfusion and microstructure between normal cognition and mild cognitive impairment.** *Journal of Alzheimer's disease : JAD*
  Kim, D., Yoon, S., Hughes, T. M., Wu, Y. C., Harvey, D., Lipford, M. E., Lockhart, S. N., Craft, S., Baker, L. D., Whitlow, C. T., Okonmah-Obazee, S. E., Hugenschmidt, C. E., Bobinski, et al
  2025: 13872877251360740

- **Deep Learning-Based Prediction of PET Amyloid Status Using MRI.** *AJNR. American journal of neuroradiology*
  Kim, D., Ottesen, J. A., Kumar, A., Ho, B. C., Bismuth, E., Young, C. B., Mormino, E., Zaharchuk, G.
  2025

- **Deep Learning Applications in Imaging of Acute Ischemic Stroke: A Systematic Review and Narrative Summary.** *Radiology*
  Jiang, B., Pham, N., van Staalduinen, E. K., Liu, Y., Nazari-Farsani, S., Sanaat, A., van Voorst, H., Fettahoglu, A., Kim, D., Ouyang, J., Kumar, A., Srivatsan, A., Hussein, et al
  2025; 315 (1): e240775

- **Parametric cerebral blood flow and arterial transit time mapping using a 3D convolutional neural network** *MAGNETIC RESONANCE IN MEDICINE*
  Kim, D., Lipford, M. E. E., He, H., Ding, Q., Ivanovic, V., Lockhart, S. N. N., Craft, S., Whitlow, C. T. T., Jung, Y.
  2023; 90 (2): 583-595

- **Relationship Between Cerebrovascular Reactivity and Cognition Among People With Risk of Cognitive Decline.** *Frontiers in physiology*
  Kim, D., Hughes, T. M., Lipford, M. E., Craft, S., Baker, L. D., Lockhart, S. N., Whitlow, C. T., Okonmah-Obazee, S. E., Hugenschmidt, C. E., Bobinski, M., Jung, Y.
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- **Preliminary Study for Designing a Novel Vein-Visualizing Device.** *Sensors (Basel, Switzerland)*
  Kim, D., Kim, Y., Yoon, S., Lee, D.
  2017; 17 (2)