



## Kilian M. Pohl, PhD

Professor (Research) of Psychiatry and Behavioral Sciences (Major Labs and Incubator) and, by courtesy, of Electrical Engineering

 Curriculum Vitae available Online

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### Bio

#### BIO

The research of my lab focuses on computational neuroscience aimed at identifying biomedical phenotypes to improve the mechanistic understanding, diagnosis, and treatment of neuropsychiatric disorders.

#### ACADEMIC APPOINTMENTS

- Professor (Research), Psychiatry and Behavioral Sciences
- Professor (Research) (By courtesy), Electrical Engineering
- Member, Bio-X
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Wu Tsai Neurosciences Institute

#### ADMINISTRATIVE APPOINTMENTS

- Co-Director, AI for Mental Health, (2025- present)
- Senior Editor, Medical Image Analysis, (2024- present)
- Assistant Editor, Medical Image Analysis, (2017-2024)
- Associate Editor, IEEE Transactions on Medical Imaging, (2016- present)

#### HONORS AND AWARDS

- Creative and Novel Ideas in HIV Research Award, The 20th International AIDS Conference (2014)
- Two Top 10 most accessed papers, IEEE Transactions on Medical Image Analysis (2012)
- Top 10 Paper (of 736 submissions), 8th International Symposium on Biomedical Imaging (2011)
- IBM Research Accomplishment, IBM (2009)
- Best Paper Prize (of 575 submissions), Medical Image Analysis-MICCAI 06 (2007)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Program Committee Member, Workshop on Biomedical Image Registration (2012 - 2018)
- Program Committee Member, International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) (2011 - 2016)
- Session Chair, National Alliance for Medical Image Computing Registration Retreat (2011 - 2011)
- Program Committee Member, Biennial International Conference on Information Processing in Medical Imaging (2009 - 2017)
- Program Committee Member, 9th Workshop on Mathematical Methods in Biomedical Image Analysis (2008 - 2008)

## PROFESSIONAL EDUCATION

- Ph.D., Massachusetts Institute of Technology , Computer Science (2005)
- M.S., University of Karlsruhe, Karlsruhe, Germany , Mathematics (1999)
- B.S., University of Karlsruhe, Karlsruhe, Germany , Mathematics (1995)

## LINKS

- AI for Mental Health Initiative: <https://ai4mh.stanford.edu>
- Computational Neuroscience Laboratory: <https://cnslab.stanford.edu>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

The foundation of the laboratory is computational science aimed at identifying biomedical phenotypes improving the mechanistic understanding, diagnosis, and treatment of neuropsychiatric disorders. The biomedical phenotypes are discovered by unbiased, machine learning-based searches across biological, neuroimaging, and neuropsychological data. This data-driven discovery currently supports the adolescent brain research of the NIH-funded National Consortium on Alcohol and NeuroDevelopment in Adolescence (NCANDA). The laboratory also investigates brain patterns specific to alcohol use disorder, depression, and the human immunodeficiency virus (HIV) across the adult age range, and have advanced the understanding of a variety of brain diseases including schizophrenia, Alzheimer's disease, glioma, and aging.

## Teaching

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### COURSES

#### 2024-25

- Machine Learning for Neuroimaging: BIOS 227, PSYC 121, PSYC 221 (Aut)

#### 2023-24

- Machine Learning for Neuroimaging: BIOS 227, PSYC 121, PSYC 221 (Aut)

#### 2022-23

- Current Topics in Machine Learning for Neuroimaging: PSYC 121 (Aut)
- Current Topics in Machine Learning for Neuroimaging: PSYC 221 (Aut)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Chase Antonacci

#### Postdoctoral Faculty Sponsor

Kalin Salinas

#### Doctoral Dissertation Advisor (AC)

Yixin Wang

## Publications

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### PUBLICATIONS

- **Evaluation of 3D Counterfactual Brain MRI Generation.** *Deep generative models : 5th MICCAI workshop, DGM4MICCAI 2025, held in conjunction with MICCAI 2025, Daejeon, South Korea, September 23, 2025, Proceedings. DGM4MICCAI (Workshop) (5th : 2025 : Taejon-si, Korea)*

- Sun, P., Peng, W., Li, L. Y., Wang, Y., Pohl, K. M.  
2026; 16128: 46-56
- **Latent Causal Modeling for 3D Brain MRI Counterfactuals.** *Deep generative models : 5th MICCAI workshop, DGM4MICCAI 2025, held in conjunction with MICCAI 2025, Daejeon, South Korea, September 23, 2025, Proceedings. DGM4MICCAI (Workshop) (5th : 2025 : Taejon-si, Korea)*  
Peng, W., Xia, T., De Sousa Ribeiro, F., Bosschieter, T., Adeli, E., Zhao, Q., Glocker, B., Pohl, K. M.  
2026; 16128: 192-201
  - **Generating Novel Brain Morphology by Deforming Learned Templates.** *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*  
Wang, A. Q., Huang, F., Trang, B., Peng, W., Abbasi, M., Pohl, K. M., Sabuncu, M. R., Adeli, E.  
2026; 15961: 207-217
  - **Using deep learning to identify brain networks mediating cognitive and motor impairments in alcohol use disorder.** *Translational psychiatry*  
Wang, Y., Müller-Oehring, E. M., Sassoon, S. A., Salinas, K. Z., Pfefferbaum, A., Sullivan, E. V., Zhao, Q., Pohl, K. M.  
2026
  - **Divergent Pathways Taken in Adolescence Predict Embracing or Resisting Moderate to Heavy Drinking in Young Adulthood.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*  
González, C., Nguyen-Louie, T. T., Sullivan, E. V., Pfefferbaum, A., Klo, J., Dehoney, J., Zhao, Q., Adeli, E., Tapert, S. F., Pohl, K. M.  
2026
  - **The most important features in generalized additive models might be groups of features.** *Scientific reports*  
Bosschieter, T., Franca, L., Wolk, J., Wu, Y., Mehta, B., Dehoney, J., Kiss, O., Baker, F. C., Zhao, Q., Caruana, R., Pohl, K. M.  
2026
  - **Evaluation of 3D Counterfactual Brain MRI Generation**  
Sun, P., Peng, W., Li, L., Wang, Y., Pohl, K. M.  
edited by Mukhopadhyay, A., Oksuz, Engelhardt, S., Mehrof, D., Yuan, Y.  
SPRINGER INTERNATIONAL PUBLISHING AG.2026: 46-56
  - **Generating Novel Brain Morphology by Deforming Learned Templates**  
Wang, A. Q., Huang, F., Trang, B., Peng, W., Abbasi, M., Pohl, K., Sabuncu, M. R., Adeli, E.  
edited by Gee, J. C., Alexander, D. C., Hong, J., Iglesias, J. E., Sudre, C. H., Venkataraman, A., Golland, P., Kim, J. H., Park, J.  
SPRINGER INTERNATIONAL PUBLISHING AG.2026: 207-217
  - **Brain-Cognition Fingerprinting via Graph-GCCA with Contrastive Learning.** *Machine learning in clinical neuroimaging : 7th international workshop, MLCN 2024, held in conjunction with MICCAI 2024, Marrakesh, Morocco, October 10, 2024, proceedings. MLCN (Workshop) (7th : 2024 : Marrakesh, Morocco)*  
Wang, Y., Peng, W., Zhang, Y., Adeli, E., Zhao, Q., Pohl, K. M.  
2025; 15266: 24-34
  - **Structural brain recovery following reductions in adolescent and young adult binge drinking: A longitudinal NCANDA study.** *Developmental cognitive neuroscience*  
Gonzalez, M. R., Brumback, T., Wickershiem, M. K., Sullivan, E. V., Pfefferbaum, A., Clark, D. B., Goldston, D. B., Meloy, M. J., Naber, F., Müller-Oehring, E. M., Morales, A. M., Baker, F. C., Nooner, et al  
2025; 77: 101653
  - **Sex-specific differences in brain activity dynamics of youth with a family history of substance use disorder** *NATURE MENTAL HEALTH*  
Schilling, L., Singleton, S., Tozlu, C., Hedo, M., Zhao, Q., Pohl, K. M., Jamison, K., Kuceyeski, A.  
2025
  - **Sex-specific differences in brain activity dynamics of youth with a family history of substance use disorder.** *Nature. Mental health*  
Schilling, L., Singleton, S. P., Tozlu, C., Hédo, M., Zhao, Q., Pohl, K. M., Jamison, K., Kuceyeski, A.  
2025; 3 (12): 1493-1511
  - **Multi-level patterns predict cannabis use onset among youth.** *Developmental cognitive neuroscience*  
Wang, Y., Fraser, R., Aguinaldo, L., Nguyen-Louie, T. T., Baker, F. C., Tapert, S. F., Pohl, K. M.  
2025; 76: 101639

- **Spectral Graph Sample Weighting for Interpretable Sub-cohort Analysis in Predictive Models for Neuroimaging.** *PRedictive Intelligence in Medicine. PRIME (Workshop)*  
Paschali, M., Jiang, Y. H., Siegel, S., Gonzalez, C., Pohl, K. M., Chaudhari, A., Zhao, Q.  
2025; 15155: 24-34
- **Neurocognitive Latent Space Regularization for Multi-Label Diagnosis from MRI.** *Predictive Intelligence in Medicine. PRIME (Workshop)*  
Manasseh-Lewis, J., Godoy, F., Peng, W., Paul, R., Adeli, E., Pohl, K.  
2025; 15155: 185-195
- **Mutual age-varying influences of binge drinking and cannabis use during emerging adulthood in the NCANDA cohort.** *Alcohol, clinical & experimental research*  
Waddell, J. T., Brumback, T., Baker, F. C., Cheek, S., Clark, D. B., Goldston, D. B., Grove, J. L., Nagel, B. J., Nooner, K. B., Pfefferbaum, A., Pohl, K. M., Sullivan, E. V., Tapert, et al  
2025
- **Socioemotional and Executive Control Mismatch in Adolescence and Risks for Initiating Drinking.** *JAMA network open*  
Zhao, Q., Milecki, L., Kuceyeski, A., Grosenick, L., Brumback, T., Pfefferbaum, A., Sullivan, E. V., Pohl, K. M.  
2025; 8 (9): e2531378
- **Physiological and brain mechanisms contributing to postural tremor in aging with and without alcohol use disorder.** *Translational psychiatry*  
Sullivan, E. V., Sassoon, S. A., Pohl, K. M., Saranathan, M., Zahr, N. M., Pfefferbaum, A.  
2025; 15 (1): 338
- **Statistical variability in comparing accuracy of neuroimaging based classification models via cross validation.** *Scientific reports*  
Jafrasteh, B., Adeli, E., Pohl, K. M., Kuceyeski, A., Sabuncu, M. R., Zhao, Q.  
2025; 15 (1): 28745
- **Efficient one-shot federated learning on medical data using knowledge distillation with image synthesis and client model adaptation.** *Medical image analysis*  
Kang, M., Chikontwe, P., Kim, S., Jin, K. H., Adeli, E., Pohl, K. M., Park, S. H.  
2025; 105: 103714
- **Confounder-Free Continual Learning via Recursive Feature Normalization.** *Proceedings of machine learning research*  
Shah, Y., Gonzalez, C., Abbasi, M. H., Zhao, Q., Pohl, K. M., Adeli, E.  
2025; 267: 54112-54142
- **Confounder-Free Continual Learning via Recursive Feature Normalization.** *Proceedings of machine learning research*  
Shah, Y., Gonzalez, C., Abbasi, M. H., Zhao, Q., Pohl, K. M., Adeli, E.  
2025; 267: 54112-54142
- **Artificial Intelligence in Obsessive-Compulsive Disorder: A Systematic Review.** *Current treatment options in psychiatry*  
Kim, J., Pacheco, J. P., Golden, A., Aboujaoude, E., van Roessel, P., Gandhi, A., Mukunda, P., Avanesyan, T., Xue, H., Adeli, E., Kim, J. P., Saggarr, M., Stirman, et al  
2025; 12 (1): 23
- **Identifying unique pathways towards heavy alcohol drinking during adolescence**  
Gonzalez, C., Nguyen-Louie, T., Sullivan, E., Pfefferbaum, A., Zhao, Q., Adeli, E., Tapert, S., Pohl, K.  
WILEY.2025
- **Risks and effects of alcohol use during dual-system brain and cognitive development in adolescence and young adulthood**  
Zhao, Q., Milecki, L., Pfefferbaum, A., Sullivan, E., Pohl, K.  
WILEY.2025
- **Postural instability in alcohol use disorder: Relations to thalamic regional and nuclear volumes**  
Sassoon, S., Fama, R., Saranathan, M., Pohl, K., Sullivan, E., Pfefferbaum, A.  
WILEY.2025
- **Family History of Substance Use Disorder Alters Brain Dynamics in a Sex-Dependent Manner in Substance-Naïve Youth: Findings From the ABCD Study**  
Schilling, L., Singleton, S., Hedo, M., Tozlu, C., Zhao, Q., Pohl, K., Jamison, K., Kuceyeski, A.

ELSEVIER SCIENCE INC.2025

- **Amyloid- $\beta$  PET Positivity Among Cognitively Impaired People with HIV Over Age 60.** *Journal of acquired immune deficiency syndromes (1999)*  
Wilson, S., Milicic, A., Javandel, S., Yballa, C., Milanini, B., Pohl, K., Paul, R., Valcour, V.  
2025
- **Thalamic Nuclear Volumes in Fetal Alcohol Spectrum Disorders: from Adolescence to Middle-Age 20 Years Later.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*  
Pfefferbaum, A., Sullivan, E. V., Saranathan, M., Pohl, K. M., Bischoff-Grethe, A., Stoner, S. A., Riley, E. P.  
2025
- **Communication Efficient Federated Learning for Multi-Organ Segmentation via Knowledge Distillation with Image Synthesis.** *IEEE transactions on medical imaging*  
Kim, S., Park, H., Chikontwe, P., Kang, M., Jin, K. H., Adeli, E., Pohl, K. M., Park, S. H.  
2025; PP
- **The Transition From Homogeneous to Heterogeneous Machine Learning in Neuropsychiatric Research** *BIOLOGICAL PSYCHIATRY: GLOBAL OPEN SCIENCE*  
Zhao, Q., Nooner, K. B., Tapert, S. F., Adeli, E., Pohl, K. M., Kuceyeski, A., Sabuncu, M. R.  
2025; 5 (1)
- **Neurocognitive Latent Space Regularization for Multi-label Diagnosis from MRI**  
Manasseh-Lewis, J., Godoy, F., Peng, W., Paul, R., Adeli, E., Pohl, K.  
edited by Rekik, Adeli, E., Park, S. H., Cintas, C.  
SPRINGER INTERNATIONAL PUBLISHING AG.2025: 185-195
- **SpaRG: Sparsely Reconstructed Graphs for Generalizable fMRI Analysis.** *Machine learning in clinical neuroimaging : 7th international workshop, MLCN 2024, held in conjunction with MICCAI 2024, Marrakesh, Morocco, October 10, 2024, proceedings. MLCN (Workshop) (7th : 2024 : Marrakesh, Morocco)*  
Gonzalez, C., Miraoui, Y., Fan, Y., Adeli, E., Pohl, K. M.  
2025; 15266: 46-56
- **The Transition From Homogeneous to Heterogeneous Machine Learning in Neuropsychiatric Research.** *Biological psychiatry global open science*  
Zhao, Q., Nooner, K. B., Tapert, S. F., Adeli, E., Pohl, K. M., Kuceyeski, A., Sabuncu, M. R.  
2025; 5 (1): 100397
- **Multi-domain predictors of grip strength differentiate individuals with and without alcohol use disorder.** *Addiction biology*  
Paschali, M., Zhao, Q., Sassoon, S. A., Pfefferbaum, A., Sullivan, E. V., Pohl, K. M.  
2024; 29 (11): e70007
- **Aging, HIV infection, and alcohol exert synergist effects on regional thalamic volumes resulting in functional impairment.** *NeuroImage. Clinical*  
Pfefferbaum, A., Zahr, N. M., Sassoon, S. A., Fama, R., Saranathan, M., Pohl, K. M., Sullivan, E. V.  
2024; 44: 103684
- **Evaluating the Quality of Brain MRI Generators.** *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*  
Wu, J., Peng, W., Li, B., Zhang, Y., Pohl, K. M.  
2024; 15010: 297-307
- **SOM2LM: Self-Organized Multi-Modal Longitudinal Maps.** *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*  
Ouyang, J., Zhao, Q., Adeli, E., Zaharchuk, G., Pohl, K. M.  
2024; 15002: 400-410
- **Anterior and Posterior Thalamic Volumes Differentially Correlate with Memory, Attention, and Motor Processes in HIV Infection and Alcohol Use Disorder Comorbidity.** *Brain research bulletin*  
Fama, R., Sassoon, S. A., Müller-Oehring, E. M., Saranathan, M., Pohl, K. M., Zahr, N. M., Pfefferbaum, A., Sullivan, E. V.  
2024: 111085

- **Sex-specific differences in brain activity dynamics of youth with a family history of substance use disorder.** *bioRxiv : the preprint server for biology*  
Schilling, L., Singleton, S. P., Tozlu, C., Hédo, M., Zhao, Q., Pohl, K. M., Jamison, K., Kuceyeski, A.  
2024
- **Data-Driven Discovery of Movement-Linked Heterogeneity in Neurodegenerative Diseases.** *Nature machine intelligence*  
Endo, M., Nerrise, F., Zhao, Q., Sullivan, E. V., Fei-Fei, L., Henderson, V. W., Pohl, K. M., Poston, K. L., Adeli, E.  
2024; 6 (9): 1034-1045
- **Metadata-conditioned generative models to synthesize anatomically-plausible 3D brain MRIs.** *Medical image analysis*  
Peng, W., Bosschieter, T., Ouyang, J., Paul, R., Sullivan, E. V., Pfefferbaum, A., Adeli, E., Zhao, Q., Pohl, K. M.  
2024; 98: 103325
- **Data-driven discovery of movement-linked heterogeneity in neurodegenerative diseases** *NATURE MACHINE INTELLIGENCE*  
Endo, M., Nerrise, F., Zhao, Q., Sullivan, E. V., Fei-Fei, L., Henderson, V. W., Pohl, K. M., Poston, K. L., Adeli, E.  
2024
- **Multi-dimensional predictors of first drinking initiation and regular drinking onset in adolescence: A prospective longitudinal study.** *Developmental cognitive neuroscience*  
Nguyen-Louie, T. T., Thompson, W. K., Sullivan, E. V., Pfefferbaum, A., Gonzalez, C., Ebersone-Shumate, S. C., Wade, N. E., Clark, D. B., Nagel, B. J., Baker, F. C., Luna, B., Nooner, K. B., de Zambotti, et al  
2024; 69: 101424
- **Identifying high school risk factors that forecast heavy drinking onset in understudied young adults.** *Developmental cognitive neuroscience*  
Zhao, Q., Paschali, M., Dehoney, J., Baker, F. C., de Zambotti, M., De Bellis, M. D., Goldston, D. B., Nooner, K. B., Clark, D. B., Luna, B., Nagel, B. J., Brown, S. A., Tapert, et al  
2024; 68: 101413
- **Multi-level prediction of substance use: Interaction of white matter integrity, resting-state connectivity and inhibitory control measured repeatedly in every-day life.** *Addiction biology*  
Chirokoff, V., Pohl, K. M., Berthoz, S., Fatseas, M., Misdrahi, D., Serre, F., Auriacombe, M., Pfefferbaum, A., Sullivan, E. V., Chanraud, S.  
2024; 29 (5): e13400
- **Contributions of Cerebral White Matter Hyperintensities to Postural Instability in Aging with and without Alcohol Use Disorder.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*  
Sullivan, E. V., Zahr, N. M., Zhao, Q., Pohl, K. M., Sassoon, S. A., Pfefferbaum, A.  
2024
- **Contributions of cerebral white matter hyperintensities, age, and pedal perception to postural sway in people living with HIV.** *AIDS (London, England)*  
Sullivan, E. V., Zahr, N. M., Zhao, Q., Pohl, K. M., Sassoon, S. A., Pfefferbaum, A.  
2024
- **Federated learning with knowledge distillation for multi-organ segmentation with partially labeled datasets.** *Medical image analysis*  
Kim, S., Park, H., Kang, M., Jin, K. H., Adeli, E., Pohl, K. M., Park, S. H.  
2024; 95: 103156
- **Frontal cortical volume deficits as enduring evidence of childhood abuse in community adults with AUD and HIV infection comorbidity.** *Neurobiology of stress*  
Sassoon, S. A., Fama, R., Pohl, K. M., Pfefferbaum, A., Sullivan, E. V.  
2024; 29: 100608
- **FedNN: Federated learning on concept drift data using weight and adaptive group normalizations** *PATTERN RECOGNITION*  
Kang, M., Kim, S., Jin, K., Adeli, E., Pohl, K. M., Park, S.  
2024; 149
- **Evaluating the Quality of Brain MRI Generators**  
Wu, J., Peng, W., Li, B., Zhang, Y., Pohl, K. M.  
edited by Linguraru, M. G., Dou, Q., Feragen, A., Giannarou, S., Glocker, B., Lekadir, K., Schnabel, J. A.  
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 297-307

- **Few Shot Part Segmentation Reveals Compositional Logic for Industrial Anomaly Detection**  
Kim, S., An, S., Chikontwe, P., Kang, M., Adeli, E., Pohl, K. M., Park, S.  
edited by Wooldridge, M., Dy, J., Natarajan, S.  
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2024: 8591-8599
- **SOM2LM: Self-Organized Multi-Modal Longitudinal Maps**  
Ouyang, J., Zhao, Q., Adeli, E., Zaharchuk, G., Pohl, K. M.  
edited by Linguraru, M. G., Dou, Q., Feragen, A., Giannarou, S., Glocker, B., Lekadir, K., Schnabel, J. A.  
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 400-410
- **Brain Volume in Fetal Alcohol Spectrum Disorders Over a 20-Year Span. *JAMA network open***  
Pfefferbaum, A., Sullivan, E. V., Pohl, K. M., Bischoff-Grethe, A., Stoner, S. A., Moore, E. M., Riley, E. P.  
2023; 6 (11): e2343618
- **One-shot Federated Learning on Medical Data using Knowledge Distillation with Image Synthesis and Client Model Adaptation. *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention***  
Kang, M., Chikontwe, P., Kim, S., Jin, K. H., Adeli, E., Pohl, K. M., Park, S. H.  
2023; 14221: 521-531
- **An Explainable Geometric-Weighted Graph Attention Network for Identifying Functional Networks Associated with Gait Impairment. *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention***  
Nerrise, F., Zhao, Q., Poston, K. L., Pohl, K. M., Adeli, E.  
2023; 14221: 723-733
- **Generating Realistic Brain MRIs via a Conditional Diffusion Probabilistic Model. *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention***  
Peng, W., Adeli, E., Bosschieter, T., Hyun Park, S., Zhao, Q., Pohl, K. M.  
2023; 14227: 14-24
- **LSOR: Longitudinally-Consistent Self-Organized Representation Learning. *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention***  
Ouyang, J., Zhao, Q., Adeli, E., Peng, W., Zaharchuk, G., Pohl, K. M.  
2023; 14220: 279-289
- **Brain structural covariance network features are robust markers of early heavy alcohol use. *Addiction (Abingdon, England)***  
Ottino-Gonzalez, J., Cupertino, R. B., Cao, Z., Hahn, S., Pancholi, D., Albaugh, M. D., Brumback, T., Baker, F. C., Brown, S. A., Clark, D. B., de Zambotti, M., Goldston, D. B., Luna, et al  
2023
- **White matter microstructural integrity continues to develop from adolescence to young adulthood in mice and humans: Same phenotype, different mechanism. *Neuroimage. Reports***  
Piekarski, D. J., Zahr, N. M., Zhao, Q., Ferizi, U., Pohl, K. M., Sullivan, E. V., Pfefferbaum, A.  
2023; 3 (3)
- **Age-Accelerated Increase of White Matter Hyperintensity Volumes is Exacerbated by Heavy Alcohol Use in People Living with HIV. *Biological psychiatry***  
Pfefferbaum, A., Zhao, Q., Pohl, K. M., Sassoon, S. A., Zahr, N. M., Sullivan, E. V.  
2023
- **An Explainable Geometric-Weighted Graph Attention Network for Identifying Functional Networks Associated with Gait Impairment. *ArXiv***  
Nerrise, F., Zhao, Q., Poston, K. L., Pohl, K. M., Adeli, E.  
2023
- **Episodic memory deficit in HIV infection: common phenotype with Parkinson's disease, different neural substrates. *Brain structure & function***  
Fama, R., Müller-Oehring, E. M., Levine, T. F., Sullivan, E. V., Sassoon, S. A., Asok, P., Brontë-Stewart, H. M., Poston, K. L., Pohl, K. M., Pfefferbaum, A., Schulte, T.  
2023

- **Machine Learning Approaches to Understand Cognitive Phenotypes in People With HIV.** *The Journal of infectious diseases*  
Mukerji, S. S., Petersen, K. J., Pohl, K. M., Dastgheyb, R. M., Fox, H. S., Bilder, R. M., Brouillette, M. J., Gross, A. L., Scott-Sheldon, L. A., Paul, R. H., Gabuzda, D.  
2023; 227 (Supplement\_1): S48-S57
- **Postural instability in HIV infection: relation to central and peripheral nervous system markers.** *AIDS (London, England)*  
Sullivan, E. V., Zahr, N. M., Sassoos, S. A., Pohl, K. M., Pfefferbaum, A.  
2023
- **Brain volumetrics differ by feibig stage in acute HIV infection.** *AIDS (London, England)*  
Bolzenius, J., Sacdalan, C., Ndhlovu, L. C., Sailasuta, N., Trautmann, L., Tipsuk, S., Crowell, T. A., Suttichom, D., Colby, D. J., Phanuphak, N., Chan, P., Premeaux, T., Kroon, et al  
2023
- **The distortions of the free water model for diffusion MRI data when assuming single compartment relaxometry and proton density.** *Physics in medicine and biology*  
Ferizi, U., Müller-Oehring, E. M., Peterson, E. T., Pohl, K. M.  
2023
- **One-Shot Federated Learning on Medical Data Using Knowledge Distillation with Image Synthesis and Client Model Adaptation**  
Kang, M., Chikontwe, P., Kim, S., Jin, K., Adeli, E., Pohl, K. M., Park, S.  
edited by Greenspan, H., Madabhushi, A., Mousavi, P., Salcudean, S., Duncan, J., Syeda-Mahmood, T., Taylor, R.  
SPRINGER INTERNATIONAL PUBLISHING AG.2023: 521-531
- **Imputing Brain Measurements Across Data Sets via Graph Neural Networks.** *PRedictive Intelligence in MEDicine. PRIME (Workshop)*  
Wang, Y., Peng, W., Tapert, S. F., Zhao, Q., Pohl, K. M.  
2023; 14277: 172-183
- **Disentangling Normal Aging From Severity of Disease via Weak Supervision on Longitudinal MRI** *IEEE TRANSACTIONS ON MEDICAL IMAGING*  
Ouyang, J., Zhao, Q., Adeli, E., Zaharchuk, G., Pohl, K. M.  
2022; 41 (10): 2558-2569
- **Multi-atlas thalamic nuclei segmentation on standard T1-weighted MRI with application to normal aging.** *Human brain mapping*  
Pfefferbaum, A., Sullivan, E. V., Zahr, N. M., Pohl, K. M., Saranathan, M.  
2022
- **Multiple Instance Neuroimage Transformer.** *PRedictive Intelligence in MEDicine. PRIME (Workshop)*  
Singla, A., Zhao, Q., Do, D. K., Zhou, Y., Pohl, K. M., Adeli, E.  
2022; 13564: 36-48
- **Bridging the Gap between Deep Learning and Hypothesis-Driven Analysis via Permutation Testing.** *PRedictive Intelligence in MEDicine. PRIME (Workshop)*  
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