Stanford



Praneeta R. Konduri

Postdoctoral Scholar, Neurology and Neurological Sciences

Bio

BIO

Dr. Konduri is a Postdoctoral scholar at the Department of Neurology and Neurological Sciences. With a background in biomedical engineering, she conducted her PhD research as part of a European consortium that developed computational stroke models, while also analyzing post-treatment brain tissue damage from multicenter clinical trials to assess prognosis. After completing her PhD, she continued as a Postdoctoral Researcher within the European consortium GEMINI, that aimed to implement digital twins for personalized stroke treatment. At the Stanford Stroke Center, she now focusses on developing AI tools for stroke diagnosis, treatment evaluation, prognostication, and personalized treatment development.

HONORS AND AWARDS

- Paul Dudley White International Scholar Award-Netherlands, American Heart Association (2025)
- Invited Speaker on "Towards digital twins of stroke patients", Society of Neurointerventional Surgery Annual Meeting (2024)
- Invited Speaker on "In silico trials for treatment of acute ischemic stroke", Conference: Thrombolysis and Thrombectomy treatment for AIS (2023)
- Invited speaker: New solutions and innovative study designs to running international clinical trials, European Stroke Organisation Trials Alliance Meeting (2023)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Amsterdam (2023)
- Bachelor of Technology, Manipal Institute of Technology (2015)
- Master of Science, Technische Universiteit Delft (2017)
- PhD, University of Amsterdam , Image analysis and in-silico simulation of acute ischemic stroke (2023)
- MSc., Delft University of Technology , Biomedical Engineering - Medical Physics (2017)
- B. Tech, Manipal Institute of Technology, Manipal, Karnataka, India , Biomedical Engineering (2015)

STANFORD ADVISORS

- Maarten Lansberg, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Artery and Vein Segmentation on Brain CTA Using CTP for Contrast-Phase Augmentation**
  van Voorst, H., de Wilde, D., Canals, P., Schwartz, M., Kesten, J., Konduri, P., Zamarud, A., Jiang, B., Christensen, S., Kim, D., Liu, Y., Albers, G., Sharma, et al
  edited by Yang, G., Adeli, E., DeBruijne, M., Papiez, B. W., Speidel, S., Tiwari, P., Zheng, G., Yaqub, M., Dou, Q., Rekik
  SPRINGER INTERNATIONAL PUBLISHING AG.2027: 25-35

- **Fast Few-Shot Embolization Simulations in Ischemic Stroke Using Equivariant Neural Fields**
  Kuipers, T. P., Mojtahedi, M., den Haan, E. D., Konduri, P. R., Marquering, H. A., Bekkers, E. J.
  edited by Yang, G., Adeli, E., DeBruijne, M., Papiez, B. W., Speidel, S., Tiwari, P., Zheng, G., Yaqub, M., Dou, Q., Rekik
  SPRINGER INTERNATIONAL PUBLISHING AG.2027: 170-179

- **Deep learning-based segmentation of the ischemic core and severe hypodensity on noncontrast head CT compared with CT perfusion and diffusion-weighted imaging** *EUROPEAN RADIOLOGY*
  van Voorst, H., Jiang, B., Konduri, P., ter Schiphorst, A., Zamarud, A., Dehkharghani, S., vandeWalle, L., Heylen, E., Liu, Y., Mlynash, M., Christensen, S., Yuen, N., Verhaaren, et al
  2026

- **Temporal Net Water Uptake Evolution and its Association with Functional Outcome in Acute Ischemic Stroke.** *AJNR. American journal of neuroradiology*
  Olszewski, W., Cavalcante, F., van Poppel, L., Beenen, L., Emmer, B. J., van den Wijngaard, I., Lemmens, R., Roos, Y., Marquering, H., Majoie, C., Konduri, P.
  2026

- **Deep learning-based non-contrast CT imaging markers enhance post-transfer DWI core volume prediction.** *AJNR. American journal of neuroradiology*
  van Voorst, H., Konduri, P., Ter Schiphorst, A., Vandewalle, L., Liu, Y., Jiang, B., Heylen, E., Mlynash, M., Christensen, S., Dehkharghani, S., Albers, G. W., Zaharchuk, G., Lansberg, et al
  2026

- **Macrovascular angiographic and tissue-level perfusion collateral scoring to predict inter-hospital infarct growth rate**
  Konduri, P. R., van Voorst, H., de Wilde, D., Seners, P., Vandewalle, L., ter Schiphorst, A., Wouters, A., Christensen, S., Yuen, N., Kemp, S., Zaharchuk, G., Mlynash, M., Albers, et al
  LIPPINCOTT WILLIAMS & WILKINS.2026

- **Aggregate Multi-tiered Normalization to Enhance Detection of Impairment in Dynamic BOLD-CVR for Assessment of Hemodynamic Impairment**
  Zhu, Y., Wang, X., Dogra, S., Voorst, H., Heylen, E., Konduri, P. R., Schiphorst, A., Heit, J., Lansberg, M., Albers, G., Dehkharghani, S.
  LIPPINCOTT WILLIAMS & WILKINS.2026

- **Automated Quantification of Infarct Growth in Endovascular Thrombectomy Using Deep Learning**
  Talati, I., Voorst, H., Yu, Y., Liu, Y., Konduri, P. R., Albers, G., Zaharchuk, G., Heit, J.
  LIPPINCOTT WILLIAMS & WILKINS.2026

- **Deep generative models for vessel segmentation in CT angiography of the brain.** *Computers in biology and medicine*
  van Voorst, H., Su, J., Konduri, P. R., Majoie, C. B., Roos, Y. B., Emmer, B. J., Marquering, H. A., de Vos, B. D., Caan, M. W., Isgum, I., MR CLEAN Registry collaborators
  2026; 202: 111432

- **Subacute edema progression after acute ischemic stroke: impact of intravenous alteplase administration and reperfusion degree** *FRONTIERS IN NEUROLOGY*
  Olszewski, W., Cavalcante, F., van Poppel, L., Beenen, L., Emmer, B. J., van den Wijngaard, I., Lemmens, R., Roos, Y., Marquering, H., Konduri, P., Majoie, C., MRCLEAN NO IV Trial Investigators Multictr Randomized Clin Trial
  2025; 16

- **Subacute edema progression after acute ischemic stroke: impact of intravenous alteplase administration and reperfusion degree.** *Frontiers in neurology*
  Olszewski, W., Cavalcante, F., van Poppel, L., Beenen, L., Emmer, B. J., van den Wijngaard, I., Lemmens, R., Roos, Y., Marquering, H., Konduri, P., Majoie, C.
  2025; 16: 1698480

- **White matter lesion effect modification of aspirin and unfractionated heparin during endovascular stroke treatment.** *Insights into imaging*
  van Poppel, L. M., de Vries, L., Mojtahedi, M., van Voorst, H., Konduri, P. R., van de Graaf, R. A., van der Steen, W., Martou, L., Bentley, P., Marquering, H. A., Emmer, B. J., Majoie, C. B.
  2025; 16 (1): 224

- **Hypodensity Beyond the Ischemic Core: Penumbral Changes Detected With Relative Noncontrast Computed Tomography.** *Stroke*

Vandewalle, L., Konduri, P. R., Christensen, S., Seners, P., Wouters, A., Yuen, N., Mlynash, M., Kemp, S., Heit, J. J., Albers, G. W., Demeestere, J., Lansberg, M. G., Lemmens, et al

2025

- **Sex differences in clot, vessel and tissue characteristics in patients with a large vessel occlusion treated with endovascular thrombectomy** *EUROPEAN STROKE JOURNAL*

  van der Meij, A., Holswilder, G., Bernsen, M. E., van Os, H. J. A., Hofmeijer, J., Spaander, F. H. M., Martens, J. M., van den Wijngaard, I. R., Lingsma, H. F., Konduri, P. R., Majoie, C., Schonewille, W. J., Dippel, et al

  2024; 9 (3): 600-612

- **Generation of a Virtual Cohort of Patients for in Silico Trials of Acute Ischemic Stroke Treatments** *APPLIED SCIENCES-BASEL*

  Bridio, S., Luraghi, G., Ramella, A., Matas, J., Dubini, G., Luisi, C. A., Neidlin, M., Konduri, P., Terreros, N., Marquering, H. A., Majoie, C. M., Migliavacca, F.

  2023; 13 (18)

- **Role of intravenous alteplase on late lesion growth and clinical outcome after stroke treatment** *JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM*

  Konduri, P., Cavalcante, F., van Voorst, H., Rinkel, L., Kappelhof, M., van Kranendonk, K., Treurniet, K., Emmer, B., Coutinho, J., Wolff, L., Hofmeijer, J., Uyttenboogaart, M., van Zwam, et al

  2023: 271678X231167755

- **Prognostic Value of Thrombus Volume and Interaction With First-Line Endovascular Treatment Device Choice** *STROKE*

  van Voorst, H., Bruggeman, A. A. E., Andriessen, J. W., Hoving, J. R., Konduri, P., Yang, W., Kappelhof, M., Terreros, N., Roos, Y. H., van Zwam, W., van der Lugt, A., van der Hoorn, A., Boiten, et al

  2023; 54 (4): 1056-1065

- **Infarct Evolution in Patients with Anterior Circulation Large-Vessel Occlusion Randomized to IV Alteplase and Endovascular Treatment versus Endovascular Treatment Alone** *AMERICAN JOURNAL OF NEURORADIOLOGY*

  Hoving, J. W., van Voorst, H., Kappelhof, M., Tolhuisen, M., Treurniet, K. M., LeCouffe, N. E., Rinkel, L. A., Koopman, M. S., Cavalcante, F., Konduri, P. R., van den Wijngaard, I. R., Ghariq, E., Meijer, et al

  2023: 434-440

- **Infarct volume after ischemic stroke as a mediator of the effect of endovascular thrombectomy on early postprocedural neurologic deficit** *JOURNAL OF STROKE & CEREBROVASCULAR DISEASES*

  Samuels, N., Compagne, K. C. J., van der Ende, N. A. M., Chalos, V., Konduri, P. R., van Doormaal, P., van Zwam, W. H., Majoie, C. M., Marquering, H. A., Roozenbeek, B., Lingsma, H. F., Dippel, D. W. J., van der Lugt, et al

  2023; 32 (2): 106906

- **Prognostic Value of Combined Radiomic Features from Follow-Up DWI and T2-FLAIR in Acute Ischemic Stroke** *JOURNAL OF CARDIOVASCULAR DEVELOPMENT AND DISEASE*

  Gerbasi, A., Konduri, P., Tolhuisen, M., Cavalcante, F., Rinkel, L., Kappelhof, M., Wolff, L., Coutinho, J. M., Emmer, B. J., Costalat, V., Arquizan, C., Hofmeijer, J., Uyttenboogaart, et al

  2022; 9 (12)

- **In silico thrombectomy trials for acute ischemic stroke** *COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE*

  Miller, C., Konduri, P., Bridio, S., Luraghi, G., Terreros, N., Boodt, N., Samuels, N., Matas, J., Migliavacca, F., Lingsma, H., van der Lugt, A., Roos, Y., Dippel, et al

  2023; 228: 107244

- **Risk factors of late lesion growth after acute ischemic stroke treatment** *FRONTIERS IN NEUROLOGY*

  Konduri, P., Bucker, A., Boers, A., Dutra, B., Samuels, N., Treurniet, K., Berkhemer, O., Yoo, A., van Zwam, W., van Oostenbrugge, R., van der Lugt, A., Dippel, D., Roos, et al

  2022; 13: 977608

- **Unsupervised Deep Learning for Stroke Lesion Segmentation on Follow-up CT Based on Generative Adversarial Networks.** *AJNR. American journal of neuroradiology*

  van Voorst, H., Konduri, P. R., van Poppel, L. M., van der Steen, W., van der Sluijs, P. M., Slot, E. M., Emmer, B. J., van Zwam, W. H., Roos, Y. B., Majoie, C. B., Zaharchuk, G., Caan, M. W., Marquering, et al

  2022

- **Thrombus radiomics in patients with anterior circulation acute ischemic stroke undergoing endovascular treatment** *JOURNAL OF NEUROINTERVENTIONAL SURGERY*

van Voorst, H., Bruggeman, A. A. E., Yang, W., Andriessen, J., Welberg, E., Dutra, B. G., Konduri, P. R., Terreros, N., Hoving, J. W., Tolhuisen, M. L., Kappelhof, M., Brouwer, J., Boodt, et al

2022: e79-e85

- **Thrombus imaging characteristics within acute ischemic stroke: similarities and interdependence** *JOURNAL OF NEUROINTERVENTIONAL SURGERY*

  Arrarte Terreros, N., Bruggeman, A. A. E., Kappelhof, M., Tolhuisen, M. L., Brouwer, J., Hoving, J. W., Konduri, P. R., van Kranendonk, K. R., Dutra, B. G., Alves, H. R., Dippel, D. W. J., van Zwam, W. H., Beenen, et al

  2023; 15 (E1): E60-E68

- **Association of thrombus density and endovascular treatment outcomes in patients with acute ischemic stroke due to M1 occlusions** *NEURORADIOLOGY*

  Bruggeman, A. A. E., Aberson, N., Kappelhof, M., Dutra, B. G., Hoving, J. W., Brouwer, J., Tolhuisen, M. L., Terreros, N., Konduri, P. R., Boodt, N., Roos, Y. M., van Zwam, W. H., Bokkers, et al

  2022; 64 (9): 1857-1867

- **Bifurcation occlusions and endovascular treatment outcome in acute ischemic stroke** *JOURNAL OF NEUROINTERVENTIONAL SURGERY*

  Terreros, N., Bruggeman, A. A. E., van Voorst, H., Konduri, P. R., Jansen, I. G. H., Kappelhof, M., Tolhuisen, M. L., Boodt, N., Dippel, D. W. J., van der Lugt, A., van Zwam, W. H., van Oostenbrugge, R. J., van der Worp, et al

  2023; 15 (4): 355-362

- **Fully Automated Thrombus Segmentation on CT Images of Patients with Acute Ischemic Stroke** *DIAGNOSTICS*

  Mojtahedi, M., Kappelhof, M., Ponomareva, E., Tolhuisen, M., Jansen, I., Bruggeman, A. A. E., Dutra, B. G., Yo, L., LeCouffe, N., Hoving, J. W., van Voorst, H., Brouwer, J., Terreros, et al

  2022; 12 (3)

- **Development of a patient-specific cerebral vasculature fluid-structure-interaction model** *JOURNAL OF BIOMECHANICS*

  Moerman, K. M., Konduri, P., Fereidoonnezhad, B., Marquering, H., van der Lugt, A., Luraghi, G., Bridio, S., Migliavacca, F., Matas, J., McGarry, P.

  2022; 133: 110896

- **Endovascular treatment for calcified cerebral emboli in patients with acute ischemic stroke** *JOURNAL OF NEUROSURGERY*

  Bruggeman, A. A. E., Kappelhof, M., Terreros, N., Tolhuisen, M. L., Konduri, P. R., Boodt, N., van Beusekom, H. M. M., Hund, H. M., Taha, A., van der Lugt, A., Roos, Y. M., van Es, A. M., van Zwam, et al

  2021; 135 (5): 1402-1412

- **Posttreatment Ischemic Lesion Evolution Is Associated With Reduced Favorable Functional Outcome in Patients With Stroke** *STROKE*

  Konduri, P., van Voorst, H., Bucker, A., van Kranendonk, K., Boers, A., Treurniet, K., Berkhemer, O., Yoo, A. J., van Zwam, W., van Oostenbrugge, R., van der Lugt, A., Dippel, D., Roos, et al

  2021; 52 (11): 3523-3531

- **Automated Final Lesion Segmentation in Posterior Circulation Acute Ischemic Stroke Using Deep Learning** *DIAGNOSTICS*

  Zoetmulder, R., Konduri, P. R., Obdeijn, I., Gavves, E., Isgum, I., Majoie, C. M., Dippel, D. W. J., Roos, Y. M., Goyal, M., Mitchell, P. J., Campbell, B. C., Lopes, D. K., Reimann, et al

  2021; 11 (9)

- **Impact of the Internal Carotid Artery Morphology on in silico Stent-Retriever Thrombectomy Outcome** *FRONTIERS IN MEDICAL TECHNOLOGY*

  Bridio, S., Luraghi, G., Matas, J. F., Dubini, G., Giassi, G. G., Maggio, G., Kawamoto, J. N., Moerman, K. M., McGarry, P., Konduri, P. R., Terreros, N., Marquering, H. A., van Bavel, et al

  2021; 3: 719909

- **The first virtual patient-specific thrombectomy procedure** *JOURNAL OF BIOMECHANICS*

  Luraghi, G., Bridio, S., Matas, J., Dubini, G., Boodt, N., Gijsen, F. J. H., van der Lugt, A., Fereidoonnezhad, B., Moerman, K. M., McGarry, P., Konduri, P. R., Terreros, N., Marquering, et al

  2021; 126: 110622

- **The Role of Edema in Subacute Lesion Progression After Treatment of Acute Ischemic Stroke** *FRONTIERS IN NEUROLOGY*

  Konduri, P., van Kranendonk, K., Boers, A., Treurniet, K., Berkhemer, O., Yoo, A. J., van Zwam, W., van Oostenbrugge, R., van der Lugt, A., Dippel, D., Roos, Y., Bot, J., Majoie, et al

  2021; 12: 705221

- **Coupling one-dimensional arterial blood flow to three-dimensional tissue perfusion models for in silico trials of acute ischaemic stroke** *INTERFACE FOCUS*
  Padmos, R. M., Jozsa, T., El-Bouri, W. K., Konduri, P. R., Payne, S. J., Hoekstra, A. G.
  2021; 11 (1): 20190125

- **In-Silico Trials for Treatment of Acute Ischemic Stroke** *FRONTIERS IN NEUROLOGY*
  Konduri, P. R., Marquering, H. A., van Bavel, E. E., Hoekstra, A., Majoie, C. M., INSIST Investigators
  2020; 11