



Akshay Chaudhari

DAPER Departmentwide Ops, Rad/Radiological Sciences Laboratory

Bio

BIO

Dr. Akshay Chaudhari is a Research Scientist in the department of Radiology working alongside Dr. Brian Hargreaves and Dr. Garry Gold at the interface of radiology and artificial intelligence. His research interests include developing efficient and safer medical imaging acquisition techniques, along with repeatable and accurate image analysis tools, as well as an emphasis on multi-modality sensor fusion. He completed his Ph.D. from Stanford Bioengineering in 2017 focusing on novel MRI methods to perform rapid quantitative musculoskeletal imaging. Dr Chaudhari received the National Science Foundation Graduate Research Fellowship, the Whitaker Fellowship, and the Siebel Fellowship to support his doctoral research. He graduated with honors with a B.S. in Bioengineering from the University of California San Diego in 2012.

Dr. Chaudhari is the winner of the ISMRM W.S. Moore Young Investigator Award, and has won 6 additional young investigator awards for his work on advanced medical imaging acquisition and analysis techniques.

CURRENT ROLE AT STANFORD

Research Scientist

HONORS AND AWARDS

- W.S. Moore Young Investigator Award, International Society for Magnetic Resonance in Medicine (2019)
- Best Young Investigator Award, 12th Intl. Workshop on Osteoarthritis (2019)
- Best Emerging Investigator, Imaging Elevated Symposium (2019)
- 2nd - 'Best Science' Presentation, ISMRM and RSNA Workshop on Value in MRI (2018)
- 2nd - 'Best Value' Presentation, ISMRM and RSNA Workshop on Value in MRI (2018)
- 2x Magna Cum Laude Merit Award, International Society for Magnetic Resonance in Medicine Annual Meeting (2018)
- Best Healthcare Poster, NVIDIA GPU Technology Conference (2018)
- Best Junior Investigator Abstract, 11th Intl. Workshop on Osteoarthritis (2018)
- Best Overall Poster, NVIDIA GPU Technology Conference (2018)
- Editor's Monthly Pick, Magnetic Resonance in Medicine (2018)
- Outstanding Teacher Award, International Society for Magnetic Resonance in Medicine Annual Meeting (2018)
- Best Young Investigator Award, 10th Intl. Workshop on Osteoarthritis (2017)
- Biodesign NEXT Fellow, Stanford Biodesign (2017)
- Magna Cum Laude Merit Award, International Society for Magnetic Resonance in Medicine (2017)

- Best Young Investigator Award, 9th Intl. Workshop on Osteoarthritis (2016)
- Mobile Biodesign Innovation Award, Stanford Biodesign (2016)
- Siebel Scholar for Engineering Leadership, Siebel Foundation (2016)
- Award of Merit for Highly Rated Trainee Abstract, 8th Intl. Workshop on Osteoarthritis (2015)
- Whitaker International Program Summer Fellow, Whitaker Foundation (2015)
- Best Poster, Center for Biomedical Imaging at Stanford Symposium (2014)
- Graduate Research Fellow, National Science Foundation (2012)
- Best Undergraduate Research Poster, University of California San Diego Bioengineering Day (2011)
- Chuao Chocolate Alumni Scholar, University of California San Diego (2010)
- Most Informative Poster, Genentech Summer Intern Poster Expo (2010)
- Outstanding UCSD Junior, Genentech Process Research and Development (2010)
- Best Oral Presentation, Biomedical Engineering Society Lab Expo (2009)
- Gordon Scholar, Jacobs School of Engineering (UCSD) (2009)

Publications

PUBLICATIONS

- **Utility of deep learning super-resolution in the context of osteoarthritis MRI biomarkers.** *Journal of magnetic resonance imaging : JMRI*
Chaudhari, A. S., Stevens, K. J., Wood, J. P., Chakraborty, A. K., Gibbons, E. K., Fang, Z., Desai, A. D., Lee, J. H., Gold, G. E., Hargreaves, B. A.
2019
- **Combined 5-minute double-echo in steady-state with separated echoes and 2-minute proton-density-weighted 2D FSE sequence for comprehensive whole-joint knee MRI assessment.** *Journal of magnetic resonance imaging : JMRI*
Chaudhari, A. S., Stevens, K. J., Sveinsson, B., Wood, J. P., Beaulieu, C. F., Oei, E. H., Rosenberg, J. K., Kogan, F., Alley, M. T., Gold, G. E., Hargreaves, B. A.
2018
- **Super-resolution musculoskeletal MRI using deep learning.** *Magnetic resonance in medicine*
Chaudhari, A. S., Fang, Z., Kogan, F., Wood, J., Stevens, K. J., Gibbons, E. K., Lee, J. H., Gold, G. E., Hargreaves, B. A.
2018
- **Five-minute knee MRI for simultaneous morphometry and T2 relaxometry of cartilage and meniscus and for semiquantitative radiological assessment using double-echo in steady-state at 3T.** *Journal of magnetic resonance imaging : JMRI*
Chaudhari, A. S., Black, M. S., Eijgenraam, S., Wirth, W., Maschek, S., Sveinsson, B., Eckstein, F., Oei, E. H., Gold, G. E., Hargreaves, B. A.
2018; 47 (5): 1328–41
- **Deep Learning Super-Resolution Enables Rapid Simultaneous Morphological and Quantitative Magnetic Resonance Imaging**
Chaudhari, A., Fang, Z., Lee, J., Gold, G., Hargreaves, B., Knoll, F., Maier, A., Rueckert, D.
SPRINGER INTERNATIONAL PUBLISHING AG.2018: 3–11
- **connective tissues in the knee using ultrashort echo-time double-echo steady-state (UTEDESS).** *Magnetic resonance in medicine*
Chaudhari, A. S., Sveinsson, B., Moran, C. J., McWalter, E. J., Johnson, E. M., Zhang, T., Gold, G. E., Hargreaves, B. A.
2017
- **Simultaneous NODDI and GFA parameter map generation from subsampled q-space imaging using deep learning** *MAGNETIC RESONANCE IN MEDICINE*
Gibbons, E. K., Hodgson, K. K., Chaudhari, A. S., Richards, L. G., Majersik, J. J., Adluru, G., DiBella, E. R.
2019; 81 (4): 2399–2411
- **Evaluation of a Flexible 12-Channel Screen-printed Pediatric MRI Coil.** *Radiology*
Winkler, S. A., Corea, J., Lechene, B., O'Brien, K., Bonanni, J. R., Chaudhari, A., Alley, M., Taviani, V., Grafendorfer, T., Robb, F., Scott, G., Pauly, J., Lustig, et al
2019: 181883

- **3D Ultrashort TE MRI for Evaluation of Cartilaginous Endplate of Cervical Disk In Vivo: Feasibility and Correlation With Disk Degeneration in T2-Weighted Spin-Echo Sequence** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Kim, Y., Cha, J., Shin, Y., Chaudhari, A. S., Suh, Y., Yoon, S., Gold, G. E.
2018; 210 (5): 1131–40
- **Simultaneous bilateral-knee MR imaging.** *Magnetic resonance in medicine*
Kogan, F., Levine, E., Chaudhari, A. S., Monu, U. D., Epperson, K., Oei, E. H., Gold, G. E., Hargreaves, B. A.
2018; 80 (2): 529–37
- **A simple analytic method for estimating T2 in the knee from DESS.** *Magnetic resonance imaging*
SVEINSSON, B., Chaudhari, A. S., Gold, G. E., Hargreaves, B. A.
2016; 38: 63-70