



Prof Ehsan Samei

United States

Dr. Ehsan Samei, (PhD, DABR, FAAPM, FSPIE, FAIMBE, FIOMP, FACR) is a Persian-American medical physicist. He is the Reed and Martha Rice Distinguished Professor of Radiology, and Professor of Medical Physics, Biomedical Engineering, Physics, and Electrical and Computer Engineering at Duke University. He serves as the Chief Imaging Physicist for Duke University Health System, the Director of the Carl E Ravin Advanced Imaging Laboratories and the Center for Virtual Imaging Trials (CVIT), and Co-Director of the Triangle Centers of Excellence in Regulatory Science and Innovation (Triangle CERSI). Certified by the American Board of Radiology, he is recognized as a Distinguished Investigator by the Academy of Radiology Research, awarded Fellow by five professional organizations, and has been the recipient of the Jimmy O. Fenn Lifetime Achievement Award of SEAAPM and the Marie Sklodowska-Curie Award by IOMP. He founded/co-founded the Duke Medical Physics Program, the Duke Imaging Physics Residency Program, the Duke Clinical Imaging Physics Group, the Center for Virtual Imaging Trials, and the Society of Directors of Academic Medical Physics Programs (SDAMPP). He has held senior leadership positions in the AAPM, SPIE, SDAMPP, and RSNA, including election to the presidency of the SEAAPM (2010-2011), SDAMPP (2011), and AAPM (2023). He is ranked 11th among over 56,000 medical physicists worldwide for his lifetime contribution to medical physics.

Dr. Samei's scientific expertise includes x-ray imaging, theoretical imaging models, simulation methods, and experimental techniques in medical image formation, quantification, and perception. His research aims to bridge the gap between scientific scholarship and clinical practice, facilitating the meaningful realization of translational research and informing clinical processes with scientific evidence. He has advanced image quality and safety metrics and radiometrics that are clinically relevant and that can be used to design, optimize, and monitor interpretive and quantitative performance of imaging techniques. These have been implemented in advanced imaging performance characterization, procedural optimization, and clinical dose and quality analytics. His most recent research interests have been virtual clinical trials across a broad spectrum of oncologic, pulmonary, cardiac, and vascular diseases, and developing methodological advances that provide smart fusions of principle-informed and AI-based, data-informed approaches to scientific inquiry.

Dr. Samei has mentored over 150 trainees (graduate and postgraduate). He has about 1400 scientific publications, including over 400 refereed journal articles, over 600 conference presentations, and 4 books. Citations to his work is reflected in an h-index of 79 and a Weighted Relative Citation Ratio of 628. His laboratory has been supported continuously for over two decades by 47 extramural grants totaling over \$49 million. Those include a Program Project grant from the NIH in 2021 to establish the National Center for Virtual Imaging Trials (CVIT), and a multi-institutional grant in 2023 from the FDA to establish the Triangle Center of Excellence in Regulatory Science and Innovation (Triangle CERSI), both joining a highly selective biomedical research and regulatory science centers nationwide.
