

# GRANT T. GULLBERG

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## PATENTS AND PUBLICATIONS

### Intellectual Property (Total of 18)

- 1986: US 4,633,398 Attenuation Compensated Emission Reconstruction with Simultaneous Attenuation Factor Evaluation
- 1988: US 4,740,753 Magnet Shimming Using Information Derived From Chemical Shift Imaging
- 1992: US 5,170,439 Cone Beam Reconstruction Using Combined Circle and Line Orbits
- 1993: US 5,210,421 Simultaneous Transmission and Emission Converging Tomography
- 1996: US 5,481,115 Electronic Calibration of Single Photon Emission Computed Tomography Camera
- 1998: US 5,841,141 Image Reconstruction from V-Projections Acquired by Compton Camera
- 2013: US 8,535,061 Elastic Deformable Heart and Torso Phantom for Nuclear Imaging of Heart with Realistic Modes of Cardiac and Respiratory Motion

### Selected Peer-Reviewed Publications (Total of 199, h-index = 40)

1. Gullberg GT, Morgan HT, Zeng GL, Christian PE, Di Bella EVR, Tung C-H, Maniawski PJ, Hsieh Y-L, Datz FL: The design and performance of a simultaneous transmission and emission tomography system. *IEEE Trans on Nucl Sci* 45:1676-98, 1998.
2. Cheryauka AB, Lee JN, Samsonov AA, Defrise M, Gullberg GT: MRI diffusion tensor reconstruction with PROPELLER data acquisition. *Magnetic Resonance Imaging* 22:139-48, 2004.
3. Rohmer D, Sitek A, Gullberg GT: Reconstruction and visualization of fiber and laminar structure in the normal human heart from ex vivo DTMRI data. *Investigative Radiology*, 42:777-89, 2007.
4. Gullberg GT, Reutter BW, Sitek A, Maltz J, Budinger TF: Dynamic single photon emission computed tomography—basic principles and cardiac applications. *Phys Med Biol* 55:R111-91, 2010.
5. Hernandez AM, Murphy ST, Zeng GL, Janabi M, Huber JS, Brennan KM, O’Neil JP, Seo Y, Gullberg GT: Longitudinal evaluation of left ventricular substrate metabolism, perfusion, and dysfunction in the SHR model of hypertrophy using microPET imaging. *J Nucl Med* 54:1938-45, 2013.
6. Abdalah M, Boutchko R, Mitra D, Gullberg GT: Reconstruction of 4D dynamic SPECT images from inconsistent projections using a spline initialized FADS algorithm (SIFADS). *IEEE Trans Med Imag* 34(1):216-228, 2015
7. Veress A, Segars P, Fung GSK, Lee T-S, Tsui BMW, Gullberg GT: The direct incorporation of perfusion defect information to define ischemia and infarction in the finite element model of the left ventricle. *J Biomech Eng* 137(5):051004, 2015.
8. Shrestha U, Sciammarella M, Alhassen F, Yeghiazarians Y, Ellin J, Verdin E, Boyle A, Seo Y, Botvinick EH, Gullberg GT: Measurement of absolute myocardial blood flow in humans using dynamic cardiac SPECT and <sup>99m</sup>Tc-tetrofosmin: Method and validation. *J Nucl Cardiol*.

### Professional Memberships

APS (American Physical Society)

AAPM (American Association of Physicists in Medicine)

IEEE NPSS (Institute of Electrical and Electronics Engineers, Nuclear and Plasma Sciences Society)

World Molecular Imaging Society

Society of Nuclear Medicine

American Society of Nuclear Cardiology  
International Society of Magnetic Resonance in Medicine