

Special Program in Applied Mathematics and Applied Mechanics

D-Histo: A novel imaging tool for assessing CNS pathology, and nerve function

Prof. Sheng-Kwei Song

2017 - 11 - 08 (Wed.)

15:00 - 18:00

308, Mathematics Research Center Building (ori. New Math. Bldg.)

Sheng-Kwei “Victor” Song, PhD, professor of radiology, at Washington University has developed two innovative diffusion MRI technologies — diffusion functional magnetic resonance imaging (diffusion fMRI) and diffusion MRI histology (D-Histo), which noninvasively visualize the functional activation of nerves and the damage resulting from various diseases and injury. One of the many utilities of D-Histo is its ability to detect and quantify inflammation. Dr. Song has extended the use of D-Histo to detect and distinguish inflammation versus solid tumors in the brain, breast, cervix, pancreas, and prostate. This work is poised to improve clinical diagnosis and personalized therapeutic intervention for neurological disorders and various cancers. He is now translating the use of D-Histo to image patients with multiple sclerosis, spinal cord injury, cervical spondylotic myelopathy, HIV, Alzheimer’s disease, Parkinson’s disease, major depression, glaucoma, and various solid tumors



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