

**CURRICULUM VITAE****Zang-Hee Cho**

Distinguished Research Fellow, Advanced Institute of Convergence Technology (AICT), Seoul National University & Professor Emeritus, Radiological Sciences, Psychiatry and Human Behavior, University of California, Irvine, USA

**PERSONAL**

**Address:** Advanced Institute of Convergence Technology, Seoul National University, 145

Gwanggyo-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea

Tel: +82-31-888-9388

E-mail: zcho1@snu.ac.kr/zhcho36@gmail.com

**EDUCATION**

1972 Stockholm University, Sweden. Fil. Dr. (Docent) in Nuclear Physics

1966 Uppsala University, Sweden. PhD. in Physics

1962 Seoul National University, Korea. MS. in Electronics

1960 Seoul National University, Korea. B.S. in Electronics

**RESEARCH AND/OR PROFESSIONAL EXPERIENCES**

2014-Present Distinguished Research Fellow Advanced Institute of Convergence Technology (AICT), Seoul National University

2004-2014 University Professor, Neuroscience Research Institute, Gachon University, Incheon, Korea

2006-Present Professor Emeritus, University of California, Irvine, California, USA

1985-2006 Professor, Radiological Sciences and Psychiatry and Human Behavior, University of California, Irvine, California, USA

1995-1997 Visiting Endowed Chair Professor, Korea Advanced Institute of Science And Technology, Seoul, Korea

1979-1985 Professor of Radiology and Co-Director of Imaging Research Center, Columbia University, New York, New York, USA

1972-1976 Associate Professor (Docent) of Physics, Institute of Physics, University of Stockholm, Stockholm, Sweden.



- 1972-1978 Associate Research Physicist and Adjunct Assoc. Professor, Laboratory of Nuclear Medicine & also Applied Science & Engineering, University of California, Los Angeles
- 1970-1971 Visiting Scientist, Wallenberg Fellow, Brookhaven National Laboratory, Upton, Long Island, New York, USA
- 1966-1971 Research Staff, Swedish Atomic Research Council, Institute of Physics, University of Stockholm, Sweden.

#### **HONORS**

- 1998-2006 Member, The National Academy of Sciences, Republic of Korea  
Republic of Korea, Seoul, Korea
- 1997-Present Member, US National Academy of Sciences - Institute of Medicine, Washington, D.C., USA

#### **MEMBERS OF EDITORIAL BOARD STEERING COMMITTEE**

Editor in Chief in emeritus, International Journal of Imaging Systems & Technology, John Wiley & Sons, New York, NY, 1993. Plus editorial board member of 6 scientific journals



# Some New Insights to the Dorsal Pathways, Superior Longitudinal Fasciculus

- Observation with 7T MR Super- Resolution Tractography

**Zang-Hee Cho**

*Advanced Institute of Convergence Technology, Seoul National University, Seoul. Korea*

Superior longitudinal fasciculus (SLF), the well known dorsal pathway believed to be the major language pathway as well as for the movement and cognitive function, which often includes the arcuate fasciculus (AF) as well as superior fronto-occipital (SFO) fasciculus. More recently, sub-components of the SLF have been designated such as SLF I, II, III, and AF. Although substantially thorough investigations have been made including the MRI diffusion tensor imaging (DTI) as well as non-human primates, details of the SLF in human remains unclear and not well understood due to the limited resolution of those previous DTI studies.

Considering the importance of the roles and functions that the SLF is playing in the neural circuitry, especially in the field of the language processing as well as in movement controls and cognitive functions as a part of dorsal stream in the human brain, it would be a worth while endeavor to study in depth such as the exact locations and putative functional roles based on the known cytoarchitectonic classification as well as some functional MRI experimental data with the connectivity map we have obtained from the DTI data of 7.0T MRI.

In this talk, therefore, will discuss the fiber structures and connectivity of the SLF in details with newly developed super-resolution tractography obtained from the ultra high field 7.0T MRI. In this study, in addition to the microstructural analysis, we have generated a functionally relevant "functional-connectivity map" with which one can analyze or identify, for example, expected roles of the language circuitry.

MEMO



MEMO

MEMO

