Kyounghun Lee

Curriculum Vitae

Personal infromation

Name Kyounghun Lee
Email imlkh84@gmail.com
Born July 26, 1984
Citizenship South Korea
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Research Interests

PDE-based inverse problems, inverse problems in medical imaging, electrical impedance tomography

Education

2012–2017 **Doctor of Philosophy in CSE-Mathematics (Candidate)**, *Yonsei University*, Seoul.

2008–2012 **Bachelor of Science in Mathematics**, *Inha University*, Incheon.

Doctoral Thesis

Title *Inverse problems in electrical impedance tomography and its applications*

Supervisor Professor Jin Keun Seo

Publications

[4] Mathematical modelling of conductive fabric-based flexible pressure sensor, *Applied Mathematical Modelling*, accepted, 2017 (with M. Chipot, K. Lee, and J.K. Seo)

[3] Remote real time monitoring for underground contamination in Mongolia using electrical impedance tomography, *Journal of Nondestructive Evaluation*, 2016 (with M.E. Ts, E. Lee,L. Zhou, and J.K. Seo)

[2] A pressure distribution imaging technique with conductive membrane using electrical impedance tomography, *SIAM J. on Applied Math*, 2015 (with H. Ammari, K. Kang, and J.K. Seo)

[1] Electrical Impedance Spectroscopy for Electro-mechanical Characterization of Conductive Fabrics, *Sensors*, 2014 (with T.K. Bera, Y. Mohamadou, H. Wi, T.I. Oh, E.J. Woo, M. Soleimani, J.K. Seo)

Submitted

[5] A fidelity-embedded regularization (FER) method for robust electrical impedance tomography, 2016 (with E.J. Woo, and J.K. Seo)

Experience

Talks

2014. 9. 16 Monitoring pressure-induced deformation of conductive membrane using EIT in 5th International Workshop on Process Tomography

2015. 6. 4 Frequency-difference of time-difference EIT imaging to detect regions of lung collapse in 16th International Conference on Biomedical Applications of Electrical Impedance Tomography

2015. 8. 7 A pressure sensing technique with conductive membrane based on electrical impedance tomography in A3

2015. 11. 19 A pressure sensing technique with conductive membrane based on electrical impedance tomography in KSIAM

2016. 1. 13 Boundary artifact elimination with Correlation for lung imaging in EIT in A3

2016. 5. 21 Correlation-based reconstruction method for lung imaging in Electrical Impedance Tomography in KSIAM

2016. 6. 12 A robust EIT reconstruction using sensitivity-data correlation in 17th International Conference on Biomedical Applications of Electrical Impedance Tomography

2016. 6. 28 A robust EIT reconstruction using sensitivity-data correlation in ICIP2016

Posters

2014. 12. 13 Electrical impedance tomography(EIT)-based Conductive membrane Pressure-sensing in 2014 Seoul-Tokyo Conference on Applied Partial Differential Equations : Theory and Applications

2015. 6. 3 A mathematical framework for EIT-based flexible pressure sensor in 16th International Conference on Biomedical Applications of Electrical Impedance Tomography

Teaching

2015. 1st and 2nd Semester **Teaching Assistant**.
Partial differential equation for science and engineering

Scholarship

2013∼2016 Brain Korea 21 Plus (BK21+) Scholarship, National Research Foundation of Korea

2011∼2013 World Class University (WCU) Scholarship, National Research Foundation of Korea

Military service

2005. 1. 17. ~ 2007. 1.16 Served and discharged upon completing military service as Sergeant

Patents

2016 Image reconstruction of conductivity for electrical impedance tomography (전기 임피던스 단층 촬영 영상 생성을 위한 전도도 산출 방법 및 장치), DP-2016-0673 (Korea)

Programing skills

Advanced Matlab, LaTeX

Intermediate JAVA, C#, Comsol Multiphysics

Basic C/C++

Languages

Korean **Mothertongue**

English **Intermediate**

Japanese **Intermediate**

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