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### **Education**

- Ph.D. Seoul National University, Korea,** Feb. 2013  
School of Electrical Engineering and Computer Science  
Thesis: Implantable Neural Devices for Regenerative Neural Axon Regeneration and Injury Monitoring of Spinal Cord  
Advisor: Prof. Kukjin Chun
- M.S. Seoul National University, Korea,** Aug. 2007  
School of Electrical Engineering and Computer Science  
Thesis: Fabrication and Analysis of Si-Through-Via for Stacked Wafer-Level MEMS Packaging  
Advisor: Prof. Kukjin Chun
- B.S. Seoul National University, Korea,** Aug. 2003  
School of Electrical Engineering and Computer Science

### **Research Interests**

- Microelectromechanical Systems (MEMS)
- Neural Devices for Bionic Interface
- Nano Bio Sensors and Applications

### **Publications (International Journal)**

1. Min Woo Lee, Namseon Jang, Nara Choi, Sungwook Yang, Jinwoo Jeong, Hyeong Soo Nam, Sang-Rok Oh, Keehoon Kim, and Donghyun Hwang, "In Vivo Cellular-Level 3D Imaging of Peripheral Nerves Using a Dual-Focusing Technique for Intra-Neural Interface Implantation," *Advanced Science* **9**, Nov. 2021.
2. Ockchul Kim, Wonsuk Choi, Woohyun Jung, Sunyoung Jung, HyungDal Park, Jinwoo Jeong, Jun-Uk Chu, Jong-Woong Park, and Jinseok Kim, "Spirally Arrayed Electrode for Spatially Selective and Minimally Displacive Peripheral," *Journal of Microelectromechanical Systems* **29**, Aug. 2020.

3. Namseon Jang, Yong Seok Ihn, Nara Choi, Gangyong Gu, Jinwoo Jeong, Sungwook Yang, Sehyuk Yim, Keehoon Kim, Sang-Rok Oh, and Donghyun Hwang, "Compact and Lightweight End-Effectors to Drive Hand-Operated Surgical Instruments for Robot-Assisted Microsurgery," *IEEE-ASME Transactions on Mechatronics* **25**, May 2020.
4. Sungwoo Park, Namseon Jang, Yong Seok Ihn, Sungwook Yang, Jinwoo Jeong, Sehyuk Yim, Sang-Rok Oh, Keehoon Kim, and Donghyun Hwang, "A Tele-Operated Microsurgical Forceps-Driver with a Variable Stiffness Haptic Feedback Master Device," *IEEE Robotics and Automation Letters* **5**, Apr. 2020.
5. Sehyuk Yim, Ye-Eun Oh, Jinwoo Jeong, Yong Seok Ihn, Donghyun Hwang, Sang-Rok Oh, and Keehoon Kim, "Handheld Nerve Electrode Insertion Tool," *IEEE-ASME Transactions on Mechatronics* **23**, Aug. 2018.
6. Hyungchul Park, Ji Yong Ahn, Hyungil Seo, Gyu Young Pih, Hee Kyong Na, Jeong Hoon Lee, Kee Wook Jung, Do Hoon Kim, Kee Don Choi, Ho June Song, Gin Hyug Lee, Hwoon-Yong Jung, Jisuk Lee, Jinwoo Jeong, Seon Ok Kim, and Jung Bok Lee, "Validation of a novel endoscopic program for measuring the size of gastrointestinal lesions," *Surgical Endoscopy and Other Interventional Techniques* **31**, Apr. 2017.
7. Hoyeon Kim, Jamel Ali, U Kei Cheang, Jinwoo Jeong, Jin Seok Kim, and Min Jun Kim, "Micro manipulation using magnetic microrobots," *Journal of Bionic Engineering* **13**, Nov. 2016.
8. Hyowon Moon, Jinwoo Jeong, Sungchul Kang, Keri Kim, Yong-Won Song, and Jinseok Kim, "Fiber-Bragg-grating-based ultrathin shape sensors displaying single-channel sweeping for minimally invasive surgery," *Optics and Lasers in Engineering* **59**, Apr. 2014.
9. Byeungleul Lee\*, Jinwoo Jeong\*, Jinseok Kim, Bonghwan Kim, and Kukjin Chun, "Cantilever arrayed blood pressure sensor for arterial applanation tonometry," *IET Nanobiotechnology* **8**, Mar. 2014 (\*co-first author).

### **Presentations (International Conference)**

1. Jinwoo Jeong, Woohyun Jung, Ockchul Kim, Jun-Uk Chu, Inchan Youn, Keehoon Kim, Sang Rok Oh, Jong Woong Park, and Jinseok Kim, "64-channel double-layered sieve electrode with increased porosity for improved axon regeneration and high spatial resolution", 6th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BioRob), UTown.Singapore, Jun. 2016.
2. Jinwoo Jeong, Wonsuk Choi, Taehyung Kim, Sungmin Han, Inchan Youn, Jun-Kyo Francis Suh, Kuiwon Choi, and Jinseok Kim, "Flexible sieve-type electrodes embedded in multi-lumen hydrogels for in-vivo neural signal sensing of spinal cord", International Biomedical Engineering Conference 2014 (IBEC 2014), Gwangju.Korea, Nov. 2014.
3. Jinwoo Jeong, Jongpal Kim, Byeungleul Lee, and Kukjin Chun, "Wafer level packaged cantilever array type contact force sensor", The 8th IEEE Conference on Sensors (IEEE SENSORS 2009), Christchurch.New Zealand, Oct. 2009.

4. Jinwoo Jeong, Hyeon Cheol Kim, and Kukjin Chun, “An align-insensitive through-wafer-via for wafer-stacked structure”, IEEE Region 10 Conference (IEEE TENCON 2008), Hyderabad.India, Nov. 2008.
5. Jinwoo Jeong, Hyeon Cheol Kim, and Kukjin Chun, “Investigation of wafer warpage resulted from deep trench isolation in multi-layered SOI”, 2007 Asia-Pacific Workshop on Fundamentals and Applications of Advanced Semiconductor Devices (AWAD2007), Gyeongju.Korea, Jun. 2007.
6. Jinwoo Jeong, Eunsung Lee, Hyeon Cheol Kim, Changyool Moon, and Kukjin Chun, “Si via interconnection technique for 3D MEMS package”, The 5th IEEE Conference on Sensors (IEEE SENSORS 2006), Daegu.Korea, Oct. 2006.

### **Patents (Registered)**

1. J Kim, J Park, J Jeong, I Youn, O Kim, S Roh, K Kim, J Chu, Neural Probe Array of high performance and for minimized damage of neuron, US 10,206,597, 2019.02.19.
2. J Kim, Y Song, J Jeong, H Moon, Multi-Functional Sensor assembly, US 10,117,584, 2018.11.06.
3. J Kim, J Jin, J Jeong, J You, J Zhang, B Lee, T Kim, Electrode Array for analyzing electrical characteristics of Cell Spheroid, US 9,658,205, 2017.05.23.
4. J Kim, J Jeong, JKF Suh, I Youn, K Choi, Neural Tube for recovering function of injured nerve, US 9,220,426, 2015.12.29.
5. J Kim, Y Song, J Jeong, H Moon, Multi-Functional Sensor assembly, Korea 10-1714377, 2017.03.03.
6. J Kim, M Kim, J Jeong, H Moon, J You, J Jin, T Kim, J Zhang, In-vivo moving micro robot, Korea 10-1709574, 2017.02.17.
7. J Kim, J Park, J Jeong, I Youn, O Kim, S Roh, K Kim, J Chu, Neural probe array of high performance and for minimized damage of neuron, Korea 10-1700886, 2017.01.23.
8. J Kim, J Jin, J Jeong, J You, J Zhang, B Lee, T Kim, Electrode Array for analyzing electrical characteristics of Cell Spheroid, Korea 10-1631479, 2016.06.13.
9. J Kim, Y Song, J Jeong, O Kim, W Choi, Apparatus for collecting tear, Korea 10-1571467, 2015-11-18.
10. J Kim, JKF Suh, B Lee, J Cho, J Jeong, H Moon, T Kim, J Jin, Neural Probe Array having a channel for injecting medical substances, Korea 10-1518245, 2015.04.30.
11. J Kim, JKF Suh, T Kim, J Jeong, B Lee, J Jin, Neural Probe Array having vertical type probe, Korea 10-1500653, 2015.03.17.
12. J Kim, J Jeong, JKF Suh, I Youn, K Choi, Implantable in vivo sensor for monitoring glial scar, Korea 10-1446514, 2014.09.25.

13. J Kim, J Jeong, JKF Suh, I Youn, K Choi, Jig for manufacturing a neural tube for recovering function of injured nerve, Korea 10-1370004, 2014.02.26.
14. J Kim, J Jeong, JKF Suh, I Youn, K Choi, Neural Tube for recovering function of injured nerve, Korea 10-1370003, 2014.02.26.
15. H Kim, E Lee, K Chun, C Moon, E Kim, J Jeong, MEMS Structure and Method of Manufacturing thereof Using Method of Forming Through Electrode, Korea 10-1184612, 2012.09.14.

### **Awards**

Dec. 2019      Minister of Science and ICT Commendation