

Curriculum Vitae

Sung-In Kim, MD

EDUCATION

- B.S., Department of Statistics and Data science, Korea National Open University* 2021/3 –
- B.S., College of Medicine, Seoul National University* 2016/3 – 2020/3
- B.S., Mechanical and Aerospace Engineering, Seoul National University* 2009/3 – 2015/8
- Thesis : SMA(Shape Memory Alloy)-based head and neck immobilizer for radiotherapy
 - Advisor : Sung-Hoon Ahn (*Mechanical and Aerospace Engineering, SNU*)

RESEARCH INTERESTS

*Human-Computer Interaction, Assistive Technology, Medical Device Design and Manufacturing, ,
Appropriate Technology*

EXPERIENCE

- Medical division, Dasseosegi Welfare Center* 2022/4 –
- *Public health doctor*
 - *Outpatients clinic for homeless*
- Medical division, Daegu Correctional Institution* 2020/4 – 2022/3
- *Public health doctor*
 - *Outpatients clinic for inmates*
- DoBrain.Inc* 2020/1 – 2022/2
- *Research Intern*
 - *Designing Autism Spectrum disorder(ASD) diagnostic application using sensors
(Eye-tracking, hand gestures etc.)*

Activities

Independent Undergraduate Study Program

2016/6 – 2016/8

- Thesis : Development & Survey for Validity of a Schedule Management Program for Children with Autism Spectrum Disorder
- Advisor : Hee-Jeong Yoo (*Department of Neuropsychiatry, SNU*)
- Sponsor : *Liberal Education Center, Seoul National University*

Nepal Damage Support Idea Research Competition

2016/11 – 2017/2

- Thesis : Development of a Water Disinfection Device Using Solar Energy for Nepal People in Disastrous Situation
- Advisor : Sung-Hoon Ahn (*Mechanical and Aerospace Engineering, SNU*)
Jeyong Yoon (*Chemical and Biology Engineering, SNU*)
- Sponsor : *Institute for Global Social Responsibility, Seoul National University*

Writing in Science and Technology (2013 2nd semester course)

2013/9-2013/12

- Thesis : A Universal Design Proposal of Door Handle for Wheelchair Users in SNU
- Advisor : Soo-Ah Kim (*Liberal Education, SNU*)

Medicine and Engineering Interdisciplinary Research

2013/4 – 2014/2

- Thesis : Development of a Radiotherapy Immobilizer for Head and Neck Using Shape Memory Alloy
- Advisor : Sung-Hoon Ahn (*Mechanical and Aerospace Engineering, SNU*)
Hong-Gyun Wu (*Department of Radiation Oncology, SNU*)
- Sponsor : *Seoul National University Research Support Center*

QoLT(Quality of Life Technology) Catch Program

2012/9 – 2014/2

- Thesis : Development of a Neurocognitive Rehabilitation Program & Device using Kinect for Developmental Disability Children
- Advisor : Kun Woo Lee (*Mechanical and Aerospace Engineering, SNU*)
- Sponsor : *Quality of Life Technology Center, Ministry of Trade, Industry and Energy*

Undergraduate Research Program

2012/5 – 2012/12

- Thesis : Biomechanical Analysis on Cervical Disc Herniation and Development of A Variable Geometry Pillow for Physiotherapy and Rehabilitation
- Advisor : Sun G. Chung (*Department of Rehabilitation Medicine, SNU*)
- Sponsor : *Korea Foundation for the Advancement of Science and Creativity (KOFAC)*

Integrated Design and Analysis (2011 2nd semester course)

2011/9 – 2011/12

- Collaborating with engineering students at the *Penn State University(PSU)*,

Chunnam National University(CNU) and a Robot Vacuum Cleaner Development Division in Samsung Electronics.

- Thesis : Tangle-Free Brush Design for the Samsung Tango Robotic Vacuum Cleaner
- Advisor : Kyu-Jin Cho (*Mechanical and Aerospace Engineering, SNU*)
Leland Engel (*Mechanical and Nuclear Engineering, PSU*)
Hyunggu Park (*Mechanical Engineering, CNU*)
- Sponsor : *Samsung Electronics*

Design for Manufacturing (2011 1st semester course)

2011/3 – 2011/6

- Development of On-demand Products for Low Resourced Nepal as an Application of Appropriate Technology
- Thesis : Solar Water Purifying System
- Advisor : Sung-Hoon Ahn (*Mechanical and Aerospace Engineering, SNU*)

PUBLICATIONS

Journal papers

- Bogoan Kim, **Sung-In Kim**, Sangwon Park, Heejeong Yoo, Hwajung Hong, Kyungsik Han. A Study on Mobile Game Design to Support Daily Routines of Individuals with Autism (2022) *Journal of the HCI Society of Korea*
- Oh, J., Hwang, S., Long, K. Q., Kim, M., Park, K., Kwon, S., **Kim S.I.**... & McKee, M. (2021). Real World Evidence of Trace, Test, Isolation, and Quarantine Impact on the COVID-19 Pandemic Response Performance. *Lancet*
- Kang, J., Yun, S., & **Kim, S. I.** (2019). A journey toward building friendship with the marginalized in global health. *Journal of Global Health Science, 1(2)*. (Corresponding author)
- Yoon-Ho Kim, **Sung-In Kim**, Seongjun Park, Sung Hwan Hong, Sun G Chung, “Effects of Cervical Extension on Deformation of Intervertebral Disk and Migration of Nucleus Pulposus”, *PM&R, 2016*.
- Lee, H.T., **Kim, S. I.**, Park, J. M., Kim, H.J., Song, D.S., Kim, H.I., Wu, H. G., Ahn, S.H., 2015, "Shape Memory Alloy (SMA)-based Head and Neck immobilizer for Radiotherapy," *Journal of computational design and engineering, Vol. 2, No. 3, pp. 176–182, July 2015*

Conference papers

- Jennifer G Kim, Taewan Kim, **Sung-In Kim**, So-youn Jang, Eun Bin (Stephanie) Lee, Heejeong Yoo, Kyungsik Han, Hwajung Hong. The Workplace Playbook VR: Exploring the Design Space of Virtual Reality to Foster Understanding of and Support for Autistic People (2022) *Proc. ACM on Human-Computer Interaction, CSCW 2022*

- Cha, I., **Kim, S. I.**, Hong, H., Yoo, H., & Lim, Y. K. (2021, May). Exploring the Use of a Voice-based Conversational Agent to Empower Adolescents with Autism Spectrum Disorder. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (pp. 1-15).
- Cha, I., **Kim, S. I.**, Hong, H., Lim, Y. K., & Yoo, H. (2020, May). A study to explore the use of a Voice-based Conversational Agent as a conversational partner for adolescents with Autism Spectrum Disorder. In *INSAR International Society for Autism Research*. INSAR International Society for Autism Research.
- **Kim, S. I.**, Jo, E., Ryu, M., Cha, I., Kim, Y. H., Yoo, H., & Hong, H. (2019, May). Toward becoming a better self: Understanding self-tracking experiences of adolescents with autism spectrum disorder using custom trackers. In *Proceedings of the 13th EAI International Conference on Pervasive Computing Technologies for Healthcare* (pp. 169-178).
- **Kim, S. I.**, Ryu, M., Jo, E., Cha, I., Kim, Y. H., Yoo, H., & Hong, H., (2019, Feb) “A study for specializing a Chatbot-based Self-Management Program for Adolescents with Autism Spectrum Disorder”, *HCI Korea*, pp. 280-285.
- Ryu, M., Jo, E., & **Kim, S. I.** (2017, October). COSMA: Cooperative Self-Management Tool for Adolescents with Autism. In *Proceedings of the 19th International ACM SIGACCESS Conference on Computers and Accessibility* (pp. 409-410).
- **Sung-In Kim**, Abhas Maskey, Kyeong Tak Youm, Ho Jun Park, Je Seok Lee, Jin Su Eun, Ji Min Byun, Dong-Pyoun Sheen, Kunwoo Lee, (2014, Feb) “Development of a Kinect based serious game for improving cognitive development in children with Autism Spectrum Disorder”, *HCI Korea*, pp. 21-24
- Sun. G. Chung, Yoon-Ho Kim, Seongjun Park, and **Sung-In Kim**, “Effects of Cervical Extension on the Deformation of Intervertebral Disc and the Migration of Nucleus Pulposus,” *PM&R*, vol. 5, no. 9, pp. S134–S134, 2013. **Selected to present during the Best Pain and Spine Medicine Research Podium Presentations at the 2013 AAPM&R**
- Yoon-Ho Kim, **Sung-In Kim**, Seongjun Park, and Sun. G. Chung, “Effects of Cervical Extension on the Deformation of Intervertebral Disc and the Migration of Nucleus Pulposus,” *23rd Spring Conference of the Korean Association of Pain Medicine (Clinical Pain)*, 2013. **Best Podium Research Presentation Award**
- Yoon-Ho Kim, Seongjun Park, **Sung-In Kim**, HyunTaek Lee, Chiyul Yoon, Sung-Hoon Ahn, and Sun G. Chung, “Development of a Variable Geometry Pillow Assisting Neck Extension Movement for Patients with Cervical Disc Herniation,” *34th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS)*, 2012

PATENT

- Y. H. Kim, **S. I. Kim**, S. J. Park, C. Y. Yoon, S. H. Ahn, S. G. Chung, “Pillow for cervical disc herniation patients”, Republic of Korea Patent (App. No. 10-1443971)

SCHOLARSHIP

Korean President Science Scholarship 2009/3 - 2012/12
Ministry of Education, Science and Technology

LICENSE

License of Medical Doctor 2020/3
Minister Health and Social Affairs, Korea

Engineer General Machinery (일반기계기사) 2013/8
Human Resources Development Service of Korea

AWARDS

Best Poster Presentation Award (1st Place) *10th COSMOS Symposium*
Seoul National University Bundang Hospital, 2018

Gold medal (1st Place) *Student Research Competition - Undergraduate Category*
ACM ASSETS Conference, 2017

Best Paper Award (2nd Place) *Independent Undergraduate Study Program*
Liberal Education Center, SNU, 2017

Grand Prize (1st Place) *Nepal Damage Support Idea Research Competition*
IGSR, SNU, 2015

The Best Oral Presentation Award *Korean Clinical Pain Conference, 2013*

The Best Oral Presentation Award *AAPM&R Annual Assembly, 2013*

Best Product Development Award (1st Place) *Design Competition-Manufacturing Process*
School of Engineering, SNU, 2013

Encouragement Prize (3rd Place) *Symposium on Writing in Science and Technology*
School of Engineering, SNU, 2013

Best Paper Award (2nd Place) *Independent Undergraduate Study Program*
Liberal Education Center, SNU, 2013

Special Prize

*Design Contest on QoLT CATCH Program
Quality of Life Technology Center, 2012*

Best Paper Award (2nd Place)

*Undergraduate Research Program
KOFAC, 2012*