

Sangin Kim, M.S.

Curriculum Vitae

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Research interests

Flexible and stretchable electronics; Stretchable interconnects; Energy harvesting devices; Analog hardware circuit design

Education

Yonsei University, Seoul, KR Present

- Master of Science, Electrical Engineering
- GPA: 3.8/4.3
- Advisor: Prof. Jungmok Seo

Chung-Ang University (CAU), Seoul, KR Spring, 2022

- Bachelor of Science, Electrical Electronics Engineering
- GPA: 3.8/4.5

Research and Industry Experience

Yonsei University, Seoul, KR (Advisor: [Prof. Jungmok Seo](#)) Spring, 2022 - Present

Researcher in Biological Interface and Sensor Systems (BLISS) Lab

- Stretchable Interconnects
 - Developing a solvent-free liquid metal paste through an ultrasonication process.
 - Fabricating biosensors including wearable keypads, temperature sensors, and EC sensors.

Seoul National University College of Medicine, Seoul, KR (Advisor: [Prof. Jae Sung Lee](#)) Spring, 2022

Research Assistant in Functional & Molecular Imaging System Lab

- Positron Emission Tomography (PET)
 - Designed analog front-end circuit of sensor technology in the Positron Emission Tomography (PET) detector for diagnosing cancer.
 - Measured and optimized the efficiency of the Silicon Photomultiplier (SiPM) using developed PCBs.

Power Master Semiconductor Company (PMS Co.), Gyeonggi-do, KR Spring, 2021

Research Internship

- Power master semiconductor
 - Analyzed and revised the design of the Power Management Integrated Circuits.
 - Performed testing and simulation on newly designed and manufactured SiC power semiconductor chips.
 - Utilized equipment such as Source Meters, Function Generators, and Oscilloscopes for accurate measurements.

Publications

[1] **S. Kim*** et al., "Highly Adhesive Liquid Metal Paste for Stretchable Electronics", in preparation.

[2] S. Kim, **S. Kim**, et al., "Sintering-free Liquid Metal Ink for Stretchable Printed Electronics", in preparation.

[3] T. Kim, S. An, Y. Kim, S. Han, J. Lee, K. Park, **S. Kim**, J. Park, S. Kim, J. Chung, S. Cho, J. Seo., (2024) "Lubricant-Infused Polymeric Interfaces: A Stretchable and Anti-Fouling Surface for Implantable Biomaterials", *Advanced Functional Materials*, 34, 2312740 (2024)

Conferences

[1] **S. Kim** et al., (2023). “Scalable Manufacturing of Stretchable Electronic Devices based Biphasic Liquid Metal Paste”. Abstract and Poster at IEEE Nanomed Conference 2023, Okinawa, JP (**Selected as Best Poster Competition**)

Awards

Academic Research Fellowship, Yonsei University Sep 2023

- Award given to a graduate student who has derived outstanding research to lead the future, awarded by the President of Yonsei University

Teaching Experience

Yonsei University, Seoul, KR

Fall, 2023

Teaching Assistant, “Fundamentals of Semiconductors” & “Capstone Design”

- Prepared “Fundamentals of Semiconductors” lectures, helped students with term papers, and graded homework.
- Provided support to students in “Capstone Design” courses in the field of bioelectronics.

Private Educational Institute, Seoul, KR

2018-2020

Mathematics Teacher

- Educated high school students in Seoul, Korea, including all aspects of classroom management, lesson planning, instructional delivery, and academic support.
- Topics included Algebra I & II, Functions & Calculus, Geometry, Probability & Statistics & Discrete Mathematics.

Leadership

CAU Band “Muse” club, Seoul KR

2018-2021

VP of Community Relations, Treasurer

- Organized and facilitated various club events and hosted band performances.

Relevant Skills

- Hardware Design: LT spice, Pspice, and Altium design
- Computer: Microsoft Word, Excel, PowerPoint, MATLAB, and basic C++
- Graphic design: Photoshop, Illustrator, Lightroom and Premier Pro

References

Prof. Jungmok Seo

Professor

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Electrical Engineering
Yonsei University

Research Advisor

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Prof. Jae Sung Lee

Professor

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Medicine, Bioengineering
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