Last updated - March, 2026

Hyunwoo Yuk, Ph.D.

100 Chestnut Street, Suite 300
Somerville, MA, 02143, United States
Phone: +1 (857) 241 - 7832
E-mail: hyunwooyuk@sanaheal.com | Webpage: hyunwooyuk.com

Degree & Education

Ph.D. in Mechanical Engineering **Jun 2016 - Dec 2020**
Massachusetts Institute of Technology, Cambridge, MA, United States
(Thesis: Wet Adhesion and Bioadhesive Technology)

M.S. in Mechanical Engineering **Sep 2014 - Jun 2016**
Massachusetts Institute of Technology, Cambridge, MA, United States
(Thesis: Tough Wet Adhesion of Hydrogel on Various Materials)

B.S. in Mechanical Engineering **Feb 2007 - Feb 2014**
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea
Graduation with *Summa Cum Laude*
(Note: Military Service during June 2011 - June 2013)

Professional Positions & Experience

Adjunct Professor **Jul 2023 - Present**
Graduate School of Health Science and Technology, UNIST

Adjunct Professor **Sep 2023 - Present**
Department of Mechanical Engineering, KAIST

Founder & CTO **Oct 2021 - Present**
SanaHeal, Inc.

Research Scientist **Jan 2021 - Mar 2022**
Department of Mechanical Engineering, MIT

Graduate Research Assistant **Sep 2014 - Jan 2021**
Zhao Laboratory (PI: Prof. Xuanhe Zhao), MIT

Awards & Honors

- **Critical Care Innovation Incubator Award**, Society of Critical Care Medicine, 2025
- **Ray of Hope Accelerator Cohort**, Biomimicry Institute, 2024
- **Execution Award,** MedTech Innovator, 2024
- **Spinoff Prize**, Springer Nature, 2023
- **Innovator Under 35**, MIT Technology Review, 2022

- **MIT Sloan Healthcare Innovations Prize (SHIP)**, MIT Sloan, 2022
- **Collegiate Inventors Competition Graduate Winner,** National Inventors Hall of Fame, 2020
- **BMES Student Design and Research Award,** Biomedical Engineering Society, 2019
- **de Florez Graduate Design Award - 1st Place**, Department of Mechanical Engineering, MIT, 2019
- **Wunsch - Outstanding Graduate Research Award**, Department of Mechanical Engineering, MIT, 2019
- **MRS Graduate Student Award - Gold**, Materials Research Society, 2019
- **Peebles Award**, The Adhesion Society, 2019
- **Forbes 30 Under 30 2019: Science**, Forbes, 2019
- **Face of the Year**, Samsung Scholarship, 2018
- **MRS Graduate Student Award - Silver**, Materials Research Society, 2018
- **2015 Samsung Scholarship**, Samsung Scholarship Foundation, 2015
- ***Summa Cum Laude***, KAIST, 2014
- **2013 Samsung Scholarship**, Samsung Scholarship Foundation, 2013
- **Outstanding Achievement Cum Laude Award**, Department of Mechanical Engineering, KAIST, 2010
- **Outstanding Achievement Cum Laude Award**, Department of Mechanical Engineering, KAIST, 2009
- **Korean Governmental Scholarship**, KAIST, 2007-2010

PUBLICATIONS

PEER-REVIEWED JOURNALS

Notes: # indicates equally contributing authors. * indicates the corresponding author(s).

First/Corresponding Authored Papers

including 3 in ***Nature*** | 3 in ***Nature Materials*** | 2 in ***Nature Biomedical Engineering*** | 6 in ***Nature Communications*** | 2 in ***Science Translational Medicine*** | 1 in ***Science Advances*** | 7 in ***Advanced Materials*** | 2 in ***PNAS*** | 1 in ***Nature Reviews Materials*** | 1 in ***Chemical Society Reviews***

1. H. Li#, J. Cao#, R. Wan, V. R. Feig, C. M. Tringides, **H. Yuk***, B. Lu*, PEDOTs-based conductive hydrogels: design, fabrications, and applications, *Advanced Materials* **37**, 2415151 (2025)
2. K. S. Nam#, G. Park#, Y. Kim#, K. Hwang#, M. Kim, J. Chong, J. Jeon, C. Yang, Y. H. Lu, C. Paniccia, J. Choi, D. G. Kim, H. Lee, S. W. Oh, S. Kim, J.-W. Rhyu, J. Kang, J. K. Hyun, Y. Lee*, **H. Yuk***, S. Park*, A pressure-sensitive, repositionable bioadhesive for instant, atraumatic surgical application on internal organs, *Advanced Materials* **37**, 2407116 (2025)
3. J. Deng, J. Wu, X. Chen, T. L. Sarrafian, C. E. Varela, W. Whyte, C. F. Guo, E. T. Roche, L. G. Griffiths*, **H. Yuk***, C. S. Nabzdyk*, X. Zhao*, A bioadhesive pacing lead for atraumatic cardiac monitoring and stimulation in rodent and porcine models, *Science Translational Medicine* **16**, eado9003 (2024)
4. J. Wu, J. Deng, G. Theocharidis, T. L. Sarrafian, G. G. Griffiths, R. T. Bronson, A. Veves, J. Chen, **H. Yuk***, X. Zhao*, Adhesive anti-fibrotic interfaces on diverse organs, *Nature* **630**, 360–367 (2024)
5. S. J. Wu, J. Wu, S. J. Kaser, H. Roh, R. D. Shiferaw, **H. Yuk***, X. Zhao*, A 3D printable tissue adhesive, *Nature Communications* **15**, 1215 (2024)

6. T. Zhou, **H. Yuk***, Omnidirectional printing of stretchable electronics, *Nature Electronic* **6**, 270-271 (2023) (*news & views*)
7. T. Zhou#, **H. Yuk#***, F. Hu, J. Wu, F. Tian, H. Roh, Z. Shen, G. Gu, J. Xu, B. Lu*, X. Zhao*, 3D printable high performance conducting polymer hydrogel for all-hydrogel bioelectronic interfaces, *Nature Materials* **22**, 895–902 (2023) (bioRxiv pre-print)
8. **H. Yuk***, J. Wu, X. Zhao*, Hydrogel interfaces for merging humans and machines, *Nature Reviews Materials* **7**, 935–952 (2022) (*review article*)
9. G. Theocharidis#, **H. Yuk#***, H. Roh#, L. Wang#, I. Mezghani, J. Wu, A. Kafanas, M. Contreras, B. Sumpio, Z. Li, E. Wang, L. Chen, C. F. Guo, N. Jayaswal, X.-L. Katopodi, N. Kalavros, C. S. Nabzdyk, I. S. Vlachos, A. Veves*, X. Zhao*, A strain-programmed patch for the healing of diabetic wounds, *Nature Biomedical Engineering* **6**, 1118-1133 (2022)
10. J. Wu#, **H. Yuk#***, T. L. Sarrafian#, L. G. Griffiths, C. S. Nabzdyk*, X. Zhao*, An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects, *Science Translational Medicine* **14**, eabh2857 (2022) (*selected as cover*)
11. **H. Yuk#***, J. Wu#, X. Mao, C. V. Varela, E. T. Roche, C. S. Nabzdyk*, X. Zhao*, Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue, *Nature Biomedical Engineering* **5**, 1131–1142 (2021)
12. S. Park#, **H. Yuk#**, R. Zhao, Y. S. Yim, E. W. Woldeghebriel, J. Kang, A. Canales, Y. Fink, G. B. Choi, X. Zhao*, P. Anikeeva*, Adaptive, multifunctional hydrogel hybrid probes for long-term sensing and modulation of neural activity, *Nature Communications* **12**, 3435 (2021)
13. S. Wu#, **H. Yuk#***, J. Wu, C. S. Nabzdyk, X. Zhao*, A multifunctional origami patch for minimally invasive tissue sealing, *Advanced Materials* **33**, 2007667 (2021) (*selected as cover*)
14. W. Pan*, B. Matsuda, **H. Yuk***, Biocompatible hydrogel ostomy adhesive, *Medical Devices & Sensors* **3**, e10132 (2020)
15. J. Deng#, **H. Yuk#**, C. E. Varela, J. Wu, X. Chen, E. T. Roche, C. F. Guo*, X. Zhao*, Electrical bioadhesive interface for bioelectronics, *Nature Materials* **20**, 229-236 (2021)
16. X. Chen#, **H. Yuk#**, J. Wu, C. S. Nabzdyk, X. Zhao*, Instant tough bioadhesive with triggerable benign detachment, *Proceedings of National Academy of Science* **117**, 15497-15503 (2020)
17. **H. Yuk**, B. Lu, S. Lin, K. Qu, J. Xu, J. Luo, X. Zhao*, 3D printing of conducting polymers, *Nature Communications* **11**, 1604 (2020)
18. A. Inoue#, **H. Yuk#**, B. Lu, X. Zhao*, Strong adhesion of wet conducting polymers on diverse substrates, *Science Advances* **6**, eaay5394 (2020)
19. **H. Yuk**, C. E. Varela, C. S. Nabzdyk, X. Mao, R. F. Padera, E. T. Roche, X. Zhao*, Dry double-sided tape for adhesion of wet tissues and devices, *Nature* **575**, 169-174 (2019)
20. B. Lu#, **H. Yuk#**, S. Lin, N. Jian, K. Qu, J. Xu, X. Zhao*, Pure PEDOT:PSS hydrogels, *Nature Communications* **10**, 1043 (2019)
21. Y. Yu#, **H. Yuk#**, G. A. Parada#, Y. Wu, X. Liu, C. S. Nabzdyk, K. Youcef-Toumi, J. Zang, X. Zhao*, Multifunctional hydrogel skins on diverse polymers with arbitrary shapes, *Advanced Materials* **31**, 1807101 (2019) (*selected as cover*)
22. **H. Yuk**, B. Lu, X. Zhao*, Hydrogel bioelectronics, *Chemical Society Reviews* **48**, 1642-1667 (2019) (*review article*)

23. Y. Km#, **H. Yuk#**, R. Zhao#, S. Chester, X. Zhao*, Printing ferromagnetic domains for untethered fast-transforming soft materials, *Nature* **558**, 274-279 (2018) (*selected as cover*)
24. X. Liu#, **H. Yuk#**, S. Lin, G. A. Parada, T.-C. Tang, E. Tham, C. Fuente, T. K. Lu, X. Zhao*, 3D printing of living responsive materials and devices, *Advanced Materials* **30**, 1704821 (2018) (*selected as cover*)
25. **H. Yuk**, X. Zhao*, A new 3D printing strategy by harnessing deformation, instability, and fracture of viscoelastic inks, *Advanced Materials* **30**, 1704028 (2018) (*selected as cover*)
26. T, Zhang#, **H. Yuk#**, S. Lin, G. A. Parada, X. Zhao*, Tough and tunable adhesion of hydrogels: experiments and models, *Acta Mechanica Sinica* **33**, 543-554 (2017)
27. X. Liu#, T.-C. Tang#, E. Tham#, **H. Yuk#**, S. Lin, T. K. Lu*, X. Zhao*, Stretchable living materials and devices with hydrogel-elastomer hybrids hosting programmed cells, *Proceedings of National Academy of Science* **114**, 2200-2205 (2017)
28. **H. Yuk**, S. Lin, C. Ma, M. Takaffoli, N. Fang, X. Zhao*, Hydraulic hydrogel actuators and robots optically and sonically camouflaged in water, *Nature Communications* **8**, 14230 (2017)
29. **H. Yuk**, T. Zhang, G. A. Parada, X. Liu, X. Zhao*, Skin-inspired hydrogel-elastomer hybrids with robust interfaces and functional microstructures, *Nature Communications* **7**, 12028 (2016)
30. S. Lin#, **H. Yuk#**, T. Zhang#, H. Koo, C. Yu, X. Zhao*, Stretchable hydrogel electronics and devices, *Advanced Materials* **28**, 4497-4505 (2016)
31. **H. Yuk**, T. Zhang, S. Lin, G. Parada, X. Zhao*, Tough bonding of hydrogels to diverse non-porous surfaces, *Nature Materials* **15**, 190-196 (2016)
32. **H. Yuk**, D. Kim, H. Lee, S. Jo*, J. H. Shin*, Shape memory alloy-based small crawling robots inspired by C.elegans, *Bioinspiration and Biomimetics* **6**, 046002 (2011)

Contributing Authored Papers

33. C. Sung, K. S. Nam, Y. Kim, H. Kang, K. Kim, C. Yoon, S. Lee, A. Chung, J. Kang, Y-G. Park, A. J. Park, H. Butt, **H. Yuk**, S. Park*, Thermally drawn multifunctional all-hydrogel fibers for anti-fibrotic and multimodal neural interfaces, *Advanced Materials* **38**, e11634 (2026)
34. K. L. Mendez, C. E. Varela, J. Bonnemain, J. Deng, **H. Yuk**, B. Ayers, W. Whyte, X. Zhao, E. T. Roche*, SmartSleve: A sutureless soft robotic epicardial device that enables switchable on-off drug delivery in response to epicardial ECG sensing, *Device* **2**, 100419 (2024)
35. S. Luo, M. Jiang, S. Zhang, J. Zhu, S. Yu, I. D. Silva, T. Wang, E. Rouse, B. Zhou, **H. Yuk**, X. Zhou, H. Su*, Experiment-free exoskeleton assistance via learning in simulation, *Nature* **630**, 353–359 (2024)
36. C. D. Londono, S. F. Cones, J. Deng, J. Wu, **H. Yuk**, D. E. Guza, T. A. Mooney*, X. Zhao*, Bioadhesive interface for marine sensors on diverse soft fragile species, *Nature Communications* **15**, 2958 (2024)
37. M. Singh, D. L. Teodorescu, M. Rowlett, S. X. Wang, M. Balcells, C. Park, B. Bernardo, S. McGarel, C. Reeves, M. R. Mehra, X. Zhao, **H. Yuk**, E. T. Roche*, A tunable soft silicone bioadhesive for secure anchoring of diverse medical devices to biological tissue, *Advanced Materials* **36**, 2307288 (2024)
38. D. Wang, S. Maharjan, X. Kuang, Z. Wang, L. S. Mille, M. Tao, P. Yu, X. Cao, L. Lian, L. Lv, J. J. He, G. Tang, **H. Yuk**, C. K. Ozaki*, X. Zhao*, Y. S. Zhang*, Microfluidic bioprinting of

tough hydrogel-based vascular conduits for functional blood vessels, *Science Advances* **8**, eabq6900 (2022)

39. K. Park, **H. Yuk**, M. J. Yang, J. Cho, H. Lee, J. Kim*, A biomimetic elastomeric robot skin using electrical impedance and acoustic tomography for tactile sensing, *Science Robotics* **7**, eabm7187 (2022)
40. A. Tabet, M.-J. Antonini, A. Sahasrabudhe, J. Park, D. Rosenfeld, F. Koehler, **H. Yuk**, S. Hason, J. Stinson, M. Stok, X. Zhao, C. Wang, P. Anikeeva*, Modular Integration of Hydrogel Neural Interfaces, *ACS Central Science* **7**, 1516-1523 (2021)
41. X. Zhao*, X. Chen#, **H. Yuk#**, S. Lin#, X. Liu, G. Parada, Soft materials by design: Unconventional polymer networks give extreme properties, *Chemical Reviews* **212**, 4309–4372 (2021)
42. T.-C. Tang*, E. Tham, X. Liu, K. Yell, A. J. Rovner, **H. Yuk**, C. de la Fuente-Nunez, F. J. Isaacs, X. Zhao*, T. K. Lu*, Hydrogel-based biocontainment of bacteria for continuous sensing and computation, *Nature Chemical Biology* **17**, 724-731 (2021)
43. C. Park, Y. Fan, G. Hager, **H. Yuk**, M. Singh, A. Rojas, A. Hameed, M. Saeed, N. V. Vasilyev, T. W. J. Steele, X. Zhao, C. T. Nguyen* and E. T. Roche*, An organosynthetic dynamic heart model with enhanced biomimicry guided by cardiac diffusion tensor imaging, S*cience Robotics* **5**, eaay9106 (2020)
44. X. Mao, **H. Yuk**, X. Zhao*, Hydration and swelling of dry polymers for wet adhesion, *Journal of the Mechanics and Physics of Solids* **137**, 103863 (2020)
45. X. Liu#, C. Steiger#, S. Lin#, G. A. Parada, J. Liu, H. F. Chan, **H. Yuk**, N. V. Phan, J. Collins, S. Tamang, G. Traverso, X. Zhao*, Ingestible hydrogel device, *Nature Communications* **10**, 493 (2019)
46. S. Lin#, X. Liu#, J. Liu#, **H. Yuk**, H.-C. Loh, G. A. Parada, C. Settens, J. Song, A. Masic, G. H. McKinley, X. Zhao*, Anti-fatigue-fracture hydrogels, *Science Advances* **5**, eaau8528 (2019)
47. R. Zhao, S. Lin, **H. Yuk**, X. Zhao*, Kirigami enhancing film adhesion: mechanism and applications to Kirigami wearables, *Soft Matter* **14**, 2515-2525 (2018)
48. S. Lin, Y. Mao, **H. Yuk**, X. Zhao*, Material-stiffening suppresses elastic fingering and fringe instabilities, *International Journal of Solids and Structures* **139**, 96-104 (2018)
49. G. A. Parada, **H. Yuk**, X. Liu. A. Hsieh, X. Zhao*, Impermeable robust hydrogels via hybrid lamination, *Advanced Healthcare Materials* **6**, 1700520 (2017)
50. S. Lin#, T. Cohen#, T. Zhang#, **H. Yuk**, R. Abeyaratne, X. Zhao*, Fringe instability in constrained soft elastic layers, *Soft Matter* **12**, 8899-8906 (2016)
51. J. Guo, X. Liu, N. Jiang, A. K. Yetisen, **H. Yuk**, C. Yang, A. Khademhosseini, X. Zhao, S-H. Yun*, Highly stretchable, strain sensing hydrogel optical fibers, *Advanced Materials* **28**, 10244-10249 (2016)
52. T. Zhang#, S. Lin#, **H. Yuk**, X. Zhao*, Predicting fracture energies and crack-tip fields of soft tough materials, *Extreme Mechanics Letters* **4**, 1 (2015)

PEER-REVIEWED CONFERENCE PROCEEDINGS

1. **H. Yuk**, J. H. Shin, S. Jo*, Design and control of thermal SMA based small crawling robot mimicking C.elegans, Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Taipei, Taiwan, Oct 2010 (**doi: 10.1109/IROS.2010.5651043**)

PATENTS

1. **H. Yuk**, Bioadhesive microneedle patch and method of making, U.S. Application No. 63/984.533
2. **H. Yuk**, Y. Zheng, Strain-memorized film and method of making, U.S. Application No. 63/876,246
3. **H. Yuk**, G. Bao, E. D'Agostino, Granular bioadhesive powder, U.S. Application No. 63/876,231
4. **H. Yuk**, G. Bao, E. D'Agostino, Tissue adhesive material, U.S. Application No. 63/876,219
5. **H.Yuk**, G. Bao, E. D'Agostino, Bioadhesive paste, U.S. Application No. 63/876,202
6. **H. Yuk**, G. Bao, E. D'Agostino, Y. Zheng, Dry bioadhesive, U.S. Application No. 63/876,192
7. **H. Yuk**, X. Zhao, H. Roh, A. Veves, G. Theocharidis, Shape memory adhesive materials for diabetic wound healing, U.S. Application No. 63/148,901 (licensed to SanaHeal, Inc.)
8. **H. Yuk**, H. Roh, X. Zhao, Hydration-based shape memory adhesive materials and methods of making, US 2022/0259463 (licensed to SanaHeal, Inc.)
9. **H. Yuk**, S. Wu, C. S. Nabzdyk, X. Zhao, Bioadhesive materials and minimally invasive methods for adhering tissues with bioadhesive materials, US 2022/0110619 (licensed to SanaHeal, Inc.)
10. **H. Yuk**, S. Wu, X. Zhao, Anti-fouling tissue adhesive patch, U.S. Application No. 63/091,076
11. **H. Yuk**, X. Chen, X. Zhao, Adhesive material with triggerable on-demand detachment, US 2021/0380848 (licensed to SanaHeal, Inc.)
12. **H. Yuk**, X. Mao, C. S. Nabzdyk, X. Zhao, Body fluid resistant tissue adhesives, US 2021/0163797 (licensed to SanaHeal, Inc.)
13. **H. Yuk**, X. Zhao, Dry double-sided tape for instant tough bonding of wet tissues and devices, US 2020/0353120 (licensed to SanaHeal, Inc.)
14. **H. Yuk**, A. Inoue, X. Zhao, Strong adhesion of conducting polymers on diverse substrates, US 2020/0377677
15. B. Lu, **H. Yuk**, X. Zhao, Pure PEDOT:PSS hydrogels with extraordinary electrical, mechanical, and swelling properties, US 2020/0299466
16. **H. Yuk**, Y. Kim, X. Zhao, Programmable Soft Materials Containing Ferromagnetic Domains and Methods of Making, US 2020/0223099
17. X. Zhao, X. Liu, S. Lin, G. A. Parada, **H. Yuk**, Fast-swelling, highly-swellable, robust hydrogel balloons, US 2021/0038871
18. **H. Yuk**, X. Zhao, Systems, devices, and methods for 3D printing by harnessing deformation, instability, and fracture of viscoelastic inks, US 2020/0368962
19. G. A. Parada, **H. Yuk**, X. Zhao, Tough hydrogel coating and method of manufacture, US 2019/0125934

20. **H. Yuk,** X. Zhao, Hydrogel-elastomer hybrids, US 2019/0070826 (licensed to CIRS, Inc.)
21. **H. Yuk**, S. Lin, T. Zhang, X. Zhao, Stretchable, robust and biocompatible hydrogel electronics and devices, US 2017/0136180
22. **H. Yuk**, S. Lin, T. Zhang, G. Parada, X. Zhao, Multifunctional bonding of hydrogels, US 10,954,375
23. **H. Yuk**, S. Lin, X. Zhao, Extremely compliant yet tough hydrogel system as ultrasound transmission agents, 2016/0176128

INVITED TALKS & SEMINARS (SELECTED LIST)

- Rapid and Preparation-free Tissue Sealants for Wet and Bleeding Tissues, Biointerface Workshop, Sep, 2025
- Bioadhesive Biomaterials for Biomedical Applications, Syracuse University, Sep, 2025
- Bioadhesive Biomaterials for Biomedical Applications, Michigan State University, May, 2025
- Bioadhesive Biomaterials for Biomedical Applications, Seoul National University, Sep 2024
- Bioadhesive Biomaterials for Biomedical Applications, Harvard Medical School, Mar 2024
- Development and Translation of MedTech Innovation, Michigan State University, Feb 2024
- Future Creation Seminar (미래창조연구회), AmorePacific, Feb 2023
- PSK-INNOX Young Investigator Webinar, The Polymer Society of Korea, Nov 2022
- Asian American and Native Hawaiian/Pacific Islander Innovation and Entrepreneurship 2022: Innovating for real-world solutions, USPTO, May 2022
- Conducting Polymer Hydrogels for Hydrogel Bioelectronics, EECS Seminar, GIST, Apr 2022
- Mechanical Engineer's Journey for Biomedical Applications, Mechanical Engineering Seminar, Seoul National University, Mar 2022
- Soft Materials for Hard Problems in Healthcare: Hydrogels for Biomedical Applications, BME Seminar, UNIST, Mar 2022
- Soft Materials for Tough Problems in Human Health, Chemical and Biological Engineering Seminar, Seoul National University, Jan 2022
- Soft Materials for Biomedical Applications: Learning from Collaborative Journey, Korea-New England Science and Technology Collaboration Forum, NEBS and South Korea Consulate Boston, Oct 2021
- Hydrogel Bioelectronics: Mechanism, Material and Fabrication, Materials Science and Engineering Seminar, Seoul National University, Sep 2021
- 3D Printing of Soft Functional Materials, Mechanical Engineering Seminar, Yonsei University, Sep 2021
- Soft Materials for Tough Problems: Hydrogel Technologies for Biomedical Applications, New England Bioscience Society (NEBS), July 2021
- Versatile Hydrogel Technologies: Adhesive, Conductive, and Printable Hydrogels, Mechanical Engineering Faculty Seminar, Yonsei University, May 2021
- Soft Materials for Tough Problems: Hydrogel Technologies for Biomedical Applications, Biomedical Engineering and Physiology (BMEP) Seminar, Mayo Clinic, April 2021
- Soft Materials for Tough Problems: Hydrogel Technologies for Biomedical Applications, Graduate School of Medical Science and Engineering Seminar, KAIST, April 2021
- Bedside-to-Bench-to-Bedside: Ongoing Journey on Bioadhesive Technology Translation, The Martlets Society, Feb 2021

- Sticky Solutions for Sticky Problems: Translational Wet Adhesion Technologies, EASF Webinar, Jun 2020
- Soft materials for hard problems in human-machine interfacing, Mechanical Engineering Seminar, KAIST, Jul 2019
- Soft materials platform for living materials and devices, DGIST, Jul 2017
- Tough wet adhesion of hydrogels, IRG meeting, MIT, Dec 2015
- Multi-scale multi-mechanism design of tough and bioactive hydrogels: Theory, experiment and application, Invited graduate student seminar, University of Connecticut, Apr 2015

MEDIA COVERAGES (SELECTED LIST)

1. The paper "An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects (published in *Science Translational Medicine*)" was covered in MIT News
2. The paper "Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue (published in *Nature Biomedical Engineering*)" was covered in MIT News, c&en, WIRED, WIPO Magazine
3. My story on motivation, development, and translation of bioadhesive technologies is featured in MIT News
4. The paper "A multifunctional origami patch for minimally invasive tissue sealing (published in *Advanced Materials*)" was covered in MIT News, Mayo Clinic Discovery's Edge
5. I am selected as 2020 Collegiate Inventors Competition Graduate Winner
6. The paper "Instant tough bioadhesive with triggerable benign detachment (published in *PNAS*)" was covered in MIT News, Tech Xplore, Medgadget
7. The paper "3D printing of conducting polymers (published in *Nature Communications*)" was covered in MIT News, The Medical News, Tech Xplore
8. The paper "Strong adhesion of wet conducting polymers on diverse substrates (published in *Science Advances*)" was covered in MIT News, Phys.org, Science Daily
9. The paper "Dry double-sided tape for adhesion of wet tissues and devices (published in *Nature*)" was covered in MIT News, Science Translational Medicine Editor's Choice, BBC, US News, Smithsonian Magazine
10. I am selected as Forbes 30 Under 30 2019: Science
11. The paper "Printing ferromagnetic domains for untethered fast-transforming soft materials (published in *Nature*)" was covered in MIT News, Forbes, BBC, National Geographic
12. The paper "A new 3D printing strategy by harnessing deformation, instability, and fracture of viscoelastic inks (published in *Advanced Materials*)" was covered in Advanced Science News
13. The paper "3D printing of living responsive materials and devices (published in *Advanced Materials*)" was covered in MIT News, Advanced Science News
14. The paper "Impermeable robust hydrogels via hybrid lamination (published in *Advanced Healthcare Materials*)" was covered in MIT News
15. The paper "Stretchable living materials and devices with hydrogel-elastomer hybrids hosting programmed cells (published in *PNAS*)" was covered in MIT News, Gizmodo
16. The paper "Hydraulic hydrogel actuators and robots optically and sonically camouflaged in water (published in *Nature Communications*)" was covered in MIT News, Gizmodo, The Verge, Fox News, Popular Science

17. The paper “Highly stretchable, strain sensing hydrogel optical fibers (published in *Advanced Materials*)” was covered in MIT News, Fox News
18. The paper “Skin-inspired hydrogel-elastomer hybrids with robust interfaces and functional microstructures (published in *Nature Communications*)” was covered in MIT News, Boston Magazine, Bloomberg
19. The paper “Stretchable hydrogel electronics and devices (published in *Advanced Materials*)” was covered in MIT News, NBC News, Boston Herald, MIT Technology Review, Smithsonian Magazine
20. The paper “Tough bonding of hydrogels to diverse non-porous surfaces (published in *Nature Materials*)” was covered in MIT News, Forbes, Vice, Materials Today