

# YOUNGWOOK DO

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RESEARCH INTEREST	Interface development using materials that exhibit physical transformation and electrical characteristics for novel sensing technology; Tangible Media Interface that encourages better cybersecurity behaviors	
EDUCATION	<b>Georgia Institute of Technology</b> , Atlanta, GA PhD Student, School of Interactive Computing Advisor: Sauvik Das and Gregory Abowd	<i>Aug 2018 - present</i>
	<b>Carnegie Mellon University</b> , Pittsburgh, PA Master of Science, Electrical and Computer Engineering	<i>Dec 2016</i>
	<b>Yonsei University</b> , Seoul, Korea Bachelor of Science, Electrical and Electronic Engineering Magna Cum Laude	<i>Feb 2015</i>
PUBLICATIONS	<b>Papers in Conference Proceedings</b> [C2] An, B.*, Tao, Y.*, Gu, J., Cheng, T., Chen, X.A., Zhang, X., Zhao, W., <b>Do, Y.</b> , Takahashi, S., Wu, H., Zhang, T., Yao, L. 2018. Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. In <i>Proceedings of the 36th Annual ACM Conference on Human Factors in Computing Systems</i> (CHI '18). ACM, New York, NY, USA. (* Contributed Equally)  [C1] Wang, G.*, Cheng, T.*, <b>Do, Y.</b> , Yang, H., Tao, Y., Gu, J., An, B., Yao, L. 2018. Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. In <i>Proceedings of the 36th Annual ACM Conference on Human Factors in Computing Systems</i> (CHI '18). ACM, New York, NY, USA. (* Contributed Equally)  <b>Papers in Adjunct Conference Proceedings</b> [D2] Tao, Y., Gu, J., An, B., Cheng, T., Chen, X.A., Zhang, X., Zhao, W., <b>Do, Y.</b> , Zhang, T., Yao, L. 2018. Demonstrating Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. In <i>Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems</i> (CHI EA '18). ACM, New York, NY, USA.  [D1] Wang, G., <b>Do, Y.</b> , Cheng, T., Yang, H., Tao, Y., Gu, J., An, B., Yao, L. 2018. Demonstrating Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. In <i>Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems</i> (CHI EA '18). ACM, New York, NY, USA.  [V1] Wang, G.*, Cheng, T.*, <b>Do, Y.</b> , Yang, H., Tao, Y., Gu, J., An, B., Yao, L. 2018. Showcasing Printed Paper Actuator: A Low-cost Reversible Actuation and Sensing Method for Shape Changing Interfaces. In <i>Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems</i> (CHI EA '18). ACM, New York, NY, USA. (* Contributed Equally)	
FELLOWSHIPS	<b>CMHL Fellowships in Digital Health</b> (declined due to program change)	<i>2018</i>
HONORS	<b>Eta Kappa Nu (HKN) Member</b> , Carnegie Mellon University <b>Magna Cum Laude (High Honor Student)</b> , Yonsei University	<i>Apr 2016</i> <i>Feb 2015</i>
SCHOLARSHIPS	<b>National Science and Engineering Undergraduate Scholarship</b> <b>Yonsei University Scholarship Foundation</b>	<i>Mar 2013 - Feb 2015</i> <i>Sep 2009 - Feb 2010, Mar 2012 - Feb 2013</i>
AWARDS	<b>Printed Paper Actuator</b> , Ars Electronica STARTS PRIZE	<i>2018</i>
RESEARCH EXPERIENCE	Research Intern, Morphing Matter Lab, HCI Institute, Carnegie Mellon University • Researched shape changing property of composites printed by a 3D printer • Designed an electronic controller to trigger actuation and to implement sensors	<i>Aug 2017 - Aug 2018</i>

	<p>Research Associate, HCI Institute, Carnegie Mellon University  <ul style="list-style-type: none"> <li>• Developed a user interface and computer vision techniques for NoRILLA project</li> <li>• Implemented object classification using Kinect's depth camera</li> </ul> </p>	<i>May 2016 - Aug 2018</i>
	<p>Research Assistant, NavLab, Robotics Institute, Carnegie Mellon University  <ul style="list-style-type: none"> <li>• Researched pedestrian clustering algorithm for pedestrian movement prediction</li> </ul> </p>	<i>Jan 2016 - Apr 2016</i>
	<p>Research Intern, DSP Laboratory, Yonsei University  <ul style="list-style-type: none"> <li>• Established robot control system activated by speech and text recognition</li> </ul> </p>	<i>Jul 2014 - Dec 2014</i>
WORK EXPERIENCE	<p>NoRILLA, Startup Company, Pittsburgh, PA  <ul style="list-style-type: none"> <li>• Developed a mixed-reality educational game to help children learn logical thinking</li> <li>• Worked as a software engineer to implement user interface of NoRILLA game</li> </ul> </p>	<i>Dec 2016 - Aug 2018</i>
	<p>Woog Doe (or ₩oog Doe), Music Producer, Seoul, Korea  <ul style="list-style-type: none"> <li>• Worked as a producer, a composer, a lyricist, a vocalist, and a sound engineer</li> <li>• Published on Spotify and iTunes, as an artist name of 'Woog Doe' (or '₩oog Doe')</li> </ul> </p>	<i>Mar 2015 - Aug 2015</i>
	<p>Public Service, Seongnam Office of Education, Seongnam-si, Korea  <ul style="list-style-type: none"> <li>• Served an alternative service to Korean military service</li> <li>• Set up the computer network system of Facility department</li> </ul> </p>	<i>Mar 2010 - Mar 2012</i>
EXHIBITIONS AND DEMONSTRATIONS	<p><b>Morphing Matter Lab</b>  <ul style="list-style-type: none"> <li>• ACM CHI 2018</li> <li>• Next Manufacturing Expo at Carnegie Mellon University</li> <li>• Carnegie Mellon University 50<sup>th</sup> Anniversary Founders Exposition</li> <li>• Computational Design: Practices, Histories, Infrastructures at Carnegie Mellon University</li> </ul> </p>	
	<p><b>NoRILLA</b>  <ul style="list-style-type: none"> <li>• Carnegie Mellon University 50<sup>th</sup> Anniversary Founders Exposition</li> <li>• UPMC Passavant Hospital Bright Horizon Daycare Center</li> <li>• CMU HCII Demo Day 2017</li> <li>• Alphalab and Alphalab Gear Demo Day 2017</li> <li>• Carnegie Science Center</li> <li>• Remake Learning Days</li> <li>• Maker Faire Pittsburgh 2016</li> <li>• Children's Museum of Pittsburgh</li> <li>• IKEA Pittsburgh</li> </ul> </p>	
	<p><b>DSP Laboratory</b>  <ul style="list-style-type: none"> <li>• E2FESTA 2014 (Nationwide Capstone Project Expo in Korea)</li> </ul> </p>	
MEDIA	<p><b>WIRED</b>, "Prepare to be Hypnotized by These Delicate Paper Robots"  <b>Getting Smart</b>, "NoRILLA: Mixed Reality That Improves Learning"  <b>Getting Smart</b>, "Montour Schools: Home of the Evolving Educators"  <b>Galileo TV</b>, "Die Programmierten Nudeln (The Programmed Noodles)"  <b>Pittsburgh Post-Gazette</b>, "Startups target underserved communities at AlphaLab's 2017 Demo Day"</p>	<p><i>Aug 2018</i>  <i>Aug 2018</i>  <i>Dec 2018</i>  <i>Sep 2017</i>  <i>May 2017</i></p>
PRESENTATIONS	<p><b>Printed Paper Actuator</b>, ACM CHI 2018, Montreal, Canada</p>	<i>Apr 2018</i>
ACADEMIC SERVICES	<p><b>Reviewer</b>  <ul style="list-style-type: none"> <li>• ACM CHI 2019</li> <li>• ACM UIST 2018</li> </ul> </p>	
SKILLS	<p><b>Programming</b>  <ul style="list-style-type: none"> <li>• Languages    Java, Python, MATLAB, C, C++, HTML, CSS</li> <li>• Libraries    Weka, OpenCV, Tesseract-OCR, HTK</li> <li>• Platforms    Windows, macOS, Linux, Android, iOS</li> </ul> </p>	

## Tools

- Prototyping Arduino, Raspberry Pi
- Fabrication 3D Printing (FDM, PolyJet), Laser Cutting, CNC Milling, Pneumatic Control System, Computerized Embroidery Machine
- Design Tools [GUI] Processing, openFrameworks, [3D Modeling] Autodesk Fusion 360, Rhinoceros 3D [Image/Video] Adobe Photoshop, Adobe Premiere, Adobe After Effects
- Music Logic Pro

## VOLUNTEER EXPERIENCE

Tutor Program, Taeyeong 1-Dong Community Service Center, Seongnam-si, Korea *May 2010 - Aug 2010*

- Started a course of mathematics for underprivileged middle school students

Volunteer Work, Yegawon, Seongnam-si, Korea *Sep 2009 - Dec 2009*

- Served for the cognitive-impaired

## REFERENCES

**Sauvik Das**, Assistant Professor, School of Interactive Computing, Georgia Institute of Technology

**Gregory Abowd**, Regents' Professor and J.Z. Liang Chair, School of Interactive Computing, Georgia Institute of Technology

**Lining Yao**, Assistant Professor, Human-Computer Interaction Institute, Carnegie Mellon University

**Nesra Yannier**, CEO, NoRILLA