

# Hyunho Yeo

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RESEARCH INTERESTS	Video Streaming, Video Analytics, Video Compression, Video Storage	
EDUCATION	<b>Ph.D. in Electrical Engineering</b> Korea Advanced Institute of Science and Technology (KAIST) Advisor: Dongsu Han	FEB. 2017 ~ FEB. 2023 (Expected)
	<b>B.S. in Electrical Engineering</b> (Magna Cum Laude) Korea Advanced Institute of Science and Technology (KAIST)	FEB. 2012 ~ FEB. 2017
PUBLICATIONS	<b>Conference</b> <ol style="list-style-type: none"><li><b>NEMO: Enabling Neural-enhanced Video Streaming on Commodity Mobile Devices</b> <u>Hyunho Yeo</u>, Chan Ju Chong, Youngmok Jung, Juncheol Ye, and Dongsu Han <b>ACM MobiCom 2020</b> (Acceptance Rate 62/384: 16.1%)<ul style="list-style-type: none"><li>Homepage: <a href="http://ina.kaist.ac.kr/nemo/">http://ina.kaist.ac.kr/nemo/</a></li></ul></li><li><b>Neural-Enhanced Live Streaming: Improving Live Video Ingest via Online Learning</b> Jaehong Kim*, Youngmok Jung*, <u>Hyunho Yeo</u>, Juncheol Ye, and Dongsu Han <b>ACM SIGCOMM 2020</b> (Acceptance Rate 53/250: 21.2%)<ul style="list-style-type: none"><li>Homepage: <a href="http://ina.kaist.ac.kr/livenas/">http://ina.kaist.ac.kr/livenas/</a></li></ul></li><li><b>Neural Adaptive Content-aware Internet Video Delivery</b> <u>Hyunho Yeo</u>, Youngmok Jung, Jaehong Kim, Jinwoo Shin, and Dongsu Han <b>USENIX OSDI 2018</b> (Acceptance Rate 47/257: 18.2%)<ul style="list-style-type: none"><li>Homepage: <a href="http://ina.kaist.ac.kr/nas/">http://ina.kaist.ac.kr/nas/</a></li><li>Note: First paper from KAIST in the history of OSDI</li></ul></li></ol> <b>Workshop</b> <ol style="list-style-type: none"><li><b>How will Deep Learning Change Internet Video Delivery?</b> <u>Hyunho Yeo</u>, Sunghyun Do, Dongsu Han <b>ACM HotNets 2017</b> (Acceptance Rate 28/124: 22.5%)<ul style="list-style-type: none"><li>Homepage: <a href="https://dl.acm.org/doi/10.1145/3152434.3152440">https://dl.acm.org/doi/10.1145/3152434.3152440</a></li></ul></li></ol>	
HONORS AND AWARDS	<ol style="list-style-type: none"><li><b>Kim Youngwhan Global Leader Scholarship, Outstanding Research Achievement</b> KAIST, 2020</li><li><b>Microsoft Fellowship Asia Nomination Award</b> Microsoft Research Asia, November, 2019</li><li><b>Kim Choongki Award, Best Research Achievement</b> School of Electrical Engineering, KAIST, 2018</li></ol>	
RESEARCH PROJECTS	<ol style="list-style-type: none"><li><b>Neural-enhanced Mobile Streaming</b> Developed a method to accelerate super-resolution DNNs on mobile devices and integrated it with adaptive streaming</li></ol>	NOVEMBER 2018 ~ JULY 2020

	2. <b>Neural-enhanced Live Injest</b>	NOVEMBER 2018 ~ JULY 2020
	Developed a video delivery system that integrates super-resolution DNNs with live ingest.	
	3. <b>Neural-enhanced Adaptive Streaming</b>	JUNE 2017 ~ OCTOBER 2018
	Developed a video delivery system that integrates super-resolution DNNs with adaptive streaming.	
INVITED TALKS	1. <b>NEMO: Enabling Neural-enhanced Video Streaming on Commodity Mobile Devices</b>	
	Conference talk at MobiCom, September, 2020	
	Invited talk at KAIST EE computing lunch, September, 2020	
	2. <b>Neural Adaptive Content-aware Internet Video Delivery</b>	
	Conference talk at OSDI, October, 2018	
	Invited talk at KAIST EE computing lunch, October, 2018	
	Invited talk at NVIDIA AI conference, July, 2019	
	3. <b>How will Deep Learning Change Internet Video Delivery?</b>	
	Workshop talk at HotNets, November, 2017	
ACADEMIC ACTIVITIES	<b>Journal Review</b>	
	1. IEEE Multimedia	
	2. IEEE Transactions on Networking	
	<b>Mentorship (KAIST Undergraduate Research Program)</b>	
	Suro Kim (Spring-Fall 2020), Yonatan Gizachew (Fall 2019)	
	<b>Mentorship (KAIST Individual Study)</b>	
	Seung Ho Baek, Seung Jun Lee, Tee Won Lee, Chan Ju Chong, Su Min Shin, Ji Hoon Shin, Sung Whan Kim, Jae Hong Kim, Young Mok Jung, Sunghyun Do	
PATENTS	1. "Acceleration method and device for real-time video super-resolution in commercial mobile devices", Dongsu Han, <u>Hyunho Yeo</u> , Youngmok Jung, Chanju Jung	
	US patent (Filing date: 2021-02-03, No.17174506)	
	2. "Method for Enhancing Live Video Delivery at Ingest Point utilizing Content-aware Neural Network", Dongsu Han, Jaehong Kim, Youngmok Jung, <u>Hyunho Yeo</u>	
	US patent (Filing date: 2021-02-03, No.17265680)	
	3. "Method for Computational Adaptive Video Delivery Utilizing Real-time Content-aware Neural Network", Dongsu Han, <u>Hyunho Yeo</u> , Youngmok Jung, Jaehong Kim, Jinwoo Shin	
	US patent (Filing date: 2019-11-11, No.16612498)	
	4. "Machine learning based content-aware video delivery method and content distribution network architecture", Dongsu Han, <u>Hyunho Yeo</u> , Sunghyun Do	
	US patent (Filing date: 2018-03-19, No.15924637; Issued date: 2020-02-11, No.10,560,731)	
COURSES	Recent Advances in Deep Learning (EE807)	AUTUMN 2018
	Advanced Image Restoration and Quality Enhancement (EE838)	AUTUMN 2018
	Advanced Networking and Cloud System (EE817)	SPRING 2018
	Foundation of Big Data Analytics (EE412)	FALL 2017
	Deep Learning and AlphaGo (EE488)	FALL 2017
	Deep Learning for Computer Vision (EE837)	FALL 2017
	Information Security (IS511)	SPRING 2017
	Statistical Learning Theory (EE531)	SPRING 2017
	Network Systems and Security (EE513)	SPRING 2017

PROFICIENT  
SKILLS

Programming Languages: Python, C, C++, UNIX shell scripting, Latex  
Deep Learning Frameworks: Tensorflow, Pytorch, Qualcomm SNPE  
Languages: Korean (native), English