Seungjun Nah

Contact Information

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Google Scholar	profile

Research Interests

I am interested in improving the quality of visual content and accelerating such content creation algorithms. My research topics include deblurring, super-resolution, image/video generation, and neural network acceleration.

Education

March 2014 - August 2021	Seoul National University Ph.D. in School of Electrical and Computer Engineering Advisor: Kyoung Mu Lee
March 2010 - February 2014	Seoul National University B.S. in School of Electrical and Computer Engineering

Experiences

- Senior Research Scientist, NVIDIA Corporation, Santa Clara, CA, USA, 04.2024 - current
- Research Scientist, NVIDIA Corporation, Santa Clara, CA, USA, 01.2022 - 03.2024
- Postdoctoral Researcher, Seoul National University, Seoul, Korea, 09.2021 - 11.2021
- Guest Scientist, Max Planck Institute for Intelligent Systems, Tübingen, Baden-Württemberg, Germany, 04.2019 - 10.2019
- Research Intern, Microsoft Corporation, Redmond, WA, USA, 05.2017 - 08.2017

Awards and Honors

- Outstanding Reviewer: CVPR 2021, ICCV 2019, 2021, ECCV 2020, 2022
- KCCV Sang-Uk Lee Prize, 2022
- Distinguished Dissertation Award: Department of ECE, SNU, 2021
- CVPR 2021 Doctoral Consortium
- Highly Cited Paper Award: Department of ECE, SNU, 2018
- AWS Cloud Credits for Research, 2018
- Challenge Winner & Best Paper: NTIRE 2017 Challenge on Single Image Super-Resolution
- Microsoft Azure Research Award, 2017

Scholarships

- Youlchon AI Star Scholarship, Youlchon Foundation, 2020
- Ph. D. Scholarship, Max Planck Society, 04.2019 - 10.2019
- Electrical Engineering and Computer Science Graduate Student program, Korea Foundation for Advanced Studies, 2014 - 2018
- National Scholarship for Science & Engineering, Korea Student Aid Foundation, 2010 - 2013

Community Activities

• Conference Area Chair: ICLR 2024
• Conference Reviewer: CVPR, ICCV, ECCV, WACV, SIGGRAPH, SIGGRAPH Asia, NeurIPS, AAAI, ICLR, ICML
• Journal Reviewer: IEEE TPAMI, TIP, TNNLS, JSTSP, TMM, TCI, SPL. Springer IJCV, TVCJ, Elsevier CVIU
• Workshop Reviewer: NTIRE 2019-2021. AIM 2019-2020, LCI 2021
• Workshop Co-organizer: NTIRE 2019-2021. AIM 2019-2020, AI4CC 2022-2023

Publications (Selected)

• Songwei Ge, **Seungjun Nah**, Guilin Liu, Tyler Poon, Andrew Tao, Bryan Catanzaro, David Jacobs, Jia-Bin Huang, Ming-Yu Liu, Yogesh Balaji, "Preserve Your Own Correlation: A Noise Prior for Video Diffusion Models," ICCV 2023. PDF

• Yogesh Balaji, **Seungjun Nah**, Xun Huang, Arash Vahdat, Jiaming Song, Qinsheng Zhang, Karsten Kreis, Miika Aittala, Timo Aila, Samuli Laine, Bryan Catanzaro, Tero Karras, and Ming-Yu Liu, "eDiff-I: Text-to-Image Diffusion Models with an Ensemble of Expert Denoisers," arXiv 2022. arXiv

• Cheeun Hong, Sungyong Baik, Heewon Kim, **Seungjun Nah**, and Kyoung Mu Lee, "Content-Aware Dynamic Quantization for Image Super-Resolution," ECCV 2022. PDF

• Junghun Oh, Heewon Kim, **Seungjun Nah**, Cheeun Hong, Jonghyun Choi, and Kyoung Mu Lee, "Attentive Fine-Grained Structured Sparsity for Image Restoration," CVPR 2022. PDF

• **Seungjun Nah**, Sanghyun Son, Jaerin Lee, and Kyoung Mu Lee, "Clean Images are Hard to Reblur: Exploiting the Ill-Posed Inverse Task for Dynamic Scene Deblurring," ICLR 2022. PDF

• Joonkyu Park, **Seungjun Nah**, and Kyoung Mu Lee, "Recurrence-in-Recurrence Networks for Video Deblurring," BMVC 2021. PDF

• **Seungjun Nah**, Sanghyun Son, Suyoung Lee, Radu Timofte and Kyoung Mu Lee *et al.*, "NTIRE 2021 Challenge on Image Deblurring," CVPRW 2021. PDF

• Sanghyun Son, Jaerin Lee, **Seungjun Nah**, Radu Timofte and Kyoung Mu Lee *et al.*, "AIM 2020 Challenge on Video Temporal Super-Resolution," ECCVW 2020. PDF

• **Seungjun Nah**, Sanghyun Son, Radu Timofte and Kyoung Mu Lee *et al.*, "NTIRE 2020 Challenge on Image and Video Deblurring," CVPRW 2020. PDF

• **Seungjun Nah**, Sanghyun Son, Radu Timofte and Kyoung Mu Lee *et al.*, "AIM 2019 Challenge on Video Temporal Super-Resolution: Methods and Results," ICCVW 2019. PDF

• **Seungjun Nah**, Sungyong Baik, Seokil Hong, Gyeongsik Moon, Sanghyun Son, Radu Timofte, and Kyoung Mu Lee, "NTIRE 2019 Challenge on Video Deblurring and Super-Resolution: Dataset and Study," CVPRW 2019. PDF

• **Seungjun Nah**, Sanghyun Son, and Kyoung Mu Lee, "Recurrent Neural Networks with Intra-Frame Iterations for Video Deblurring," CVPR 2019. PDF

• Sanghyun Son, **Seungjun Nah**, and Kyoung Mu Lee, "Clustering Convolutional Kernels to Compress Deep Neural Networks," ECCV 2018. PDF

• Tae Hyun Kim, **Seungjun Nah**, and Kyoung Mu Lee, "Dynamic Video Deblurring using a Locally Adaptive Linear Blur Model," IEEE TPAMI, 2018. PDF

• Bee Lim, Sanghyun Son, Heewon Kim, **Seungjun Nah**, and Kyoung Mu Lee, "Enhanced Deep Residual Networks for Single Image Super-Resolution," CVPRW 2017. (**Challenge Winner, Workshop Best Paper**) PDF

• **Seungjun Nah**, Tae Hyun Kim, and Kyoung Mu Lee, "Deep Multi-scale Convolutional Neural Network for Dynamic Scene Deblurring," CVPR 2017. (**Spotlight**) PDF

References

Ph.D. Advisor	Prof. Kyoung Mu Lee Professor at Seoul National University kyoungmu@snu.ac.kr https://cv.snu.ac.kr
Collaborator	Prof. Tae Hyun Kim Professor at Hanyang University taehyunkim@hanyang.ac.kr https://sites.google.com/site/lliger9