

Ke Wang

Curriculum Vitae

Pika Labs
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Education

2018–2023 **PhD, Electrical Engineering and Computer Sciences, University of California, Berkeley.**
Computer vision, Inverse problem, Computational imaging, Signal Processing, Medical Imaging, Magnetic resonance imaging.
Thesis: Magnetic Resonance Image Reconstruction with Greater Fidelity and Efficiency
Advisors: Prof. Michael (Miki) Lustig and Prof. Stella Yu

2014–2018 : **Bachelor of Engineering, Biomedical Engineering, Tsinghua University, Summa Cum Laude.**
GPA : 91/100, Ranked 1st/28 in the department of Biomedical Engineering

Work Experience

Sep 2025 – **Head of Applied Research at Pika Labs.**
Leading applied research for next-generation GenAI applications. More to come!

Jan 2024 – **Research Scientist at Adobe Inc..**
Sep 2025 Imaging researcher on [Marc Levoy](#)'s computational photography team at Adobe. Building next-gen camera for mobile devices. Developing GenAI models for image enhancement and editing. Tech lead of burst super-resolution technology.
[Project Indigo](#) – a software-defined computational photography app: [App Store](#) | [The Verge](#) | [Engadget](#) | [PetaPixel](#) | [DPReview](#)

May 2023 – **Senior Research Engineer at Samsung Research America (SRA).**
Jan 2024 Imaging researcher at SRA MPI lab working on real-world computational photography and computer vision problems for next-generation smartphone cameras.

May 2022 – **Research Scientist Intern at Adobe Research.**
March 2023 Proposed a novel semi-supervised training strategy for parametric image harmonization. Our model is fully parametric and learns complex local appearance harmonization from unpaired real composites, where foreground and background come from different images. Our method outperforms previous work on established benchmarks and real composites.
[Paper published at CVPR 2023; patent filed.](#)
Advisors : [Michaël Gharbi](#), [Eli Schechtman](#), [Zhihao Xia](#), and [He Zhang](#).

May 2021 – **Research Intern at Adobe Emerging Product Group (EPG).**
August 2021 Developed low-cost algorithms for real-time high-resolution image matting. Our approach yields high quality matting results on 4k images without additional access to Trimap and background information.
[Paper submitted to ICCV 2023; Successfully deployed in PhotoShop Camera v1.5; manuscript available upon request; patent filed.](#)
Advisors : [Xin Lu](#) and [Zichuan Liu](#)

Publications

Journal Articles and Preprints

2025 Zhiyuan You, **Ke Wang**, He Zhang, Xin Cai, Jinjin Gu, Tianfan Xue, Chao Dong, and Zhou-tong Zhang. Photoframer: Multi-modal image composition instruction. *arXiv preprint arXiv:2512.00993*, 2025.

2023 **Ke Wang**, Michaël Gharbi, He Zhang, Zhihao Xia, and Eli Shechtman. Semi-supervised parametric real-world image harmonization. *arXiv preprint arXiv:2303.00157 (Accepted to CVPR 2023)*, 2023.

2023 **Ke Wang**, Mariya Doneva, Jakob Meineke, Thomas Amthor, Ekin Karasan, Fei Tan, Jonathan I Tamir, Stella X Yu, and Michael Lustig. High-fidelity direct contrast synthesis from magnetic resonance fingerprinting. *Magnetic Resonance in Medicine*. Wiley Online Library, 2023.

2022 **Ke Wang**, Mariya Doneva, Jakob Meineke, Thomas Amthor, Ekin Karasan, Fei Tan, Jonathan I Tamir, Stella X Yu, and Michael Lustig. High-fidelity direct contrast synthesis from magnetic resonance fingerprinting. *arXiv preprint arXiv:2212.10817*, 2022.

2022 Efrat Shimron, Jonathan I Tamir, **Ke Wang**, and Michael Lustig. Implicit data crimes: Machine learning bias arising from misuse of public data. *Proceedings of the National Academy of Sciences*, volume 119, page e2117203119. National Acad Sciences, 2022.

2021 **Ke Wang**, Michael Kellman, Christopher M Sandino, Kevin Zhang, Shreyas S Vasanawala, Jonathan I Tamir, Stella X Yu, and Michael Lustig. Memory-efficient learning for high-dimensional mri reconstruction. *Accepted by MICCAI 2021 arXiv preprint arXiv:2103.04003*, 2021.

2021 **Ke Wang**, Enhao Gong, Yuxin Zhang, Suchadrima Banerjee, Greg Zaharchuk, and John Pauly. Outcomes: Rapid under-sampling optimization achieves up to 50% improvements in reconstruction accuracy for multi-contrast mri sequences. *arXiv preprint arXiv:2103.04566*, 2021.

2020 Jonathan I Tamir, Frank Ong, Suma Anand, Ekin Karasan, **Ke Wang**, and Michael Lustig. Computational mri with physics-based constraints: Application to multicontrast and quantitative imaging. *IEEE Signal Processing Magazine*, volume 37, pages 94–104. IEEE, 2020.

2020 Oliver Maier, Steven H Baete, Alexander Fyrdahl, Kerstin Hammernik, Seb Harreveldt, Lars Kasper, Agah Karakuzu, Michael Loecher, Franz Patzig, Ye Tian, **Ke Wang**, Daniel Gallichan, Martin Uecker, and Florian Knoll. Cg-sense revisited: Results from the first ismrm reproducibility challenge. *arXiv preprint arXiv:2008.04308 (Accepted to Magnetic Resonance in Medicine)*, 2020.

2018 **Ke Wang**, Han Song, Jiahui Zhang, Xinran Zhang, and Hongen Liao. Reconstruction and registration of large-scale medical scene using point clouds data from different modalities. *arXiv preprint arXiv:1809.01318*, 2018.

In Conference Proceedings

2024 Zichuan Liu, **Ke Wang**, Mingyuan Wu, Lantao Yu, Klara Nahrstedt, and Xin Lu. I-matting: Improved trimap-free image matting. In *2024 IEEE International Conference on Multimedia and Expo (ICME)*, pages 1–6. IEEE, 2024.

2023 **Ke Wang**, Michaël Gharbi, He Zhang, Zhihao Xia, and Eli Shechtman. Semi-supervised parametric real-world image harmonization. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

2023 Fei Tan, **Ke Wang**, Michael Lustig, and Peder Larson. Iterative motion-compensated reconstruction with convolutional neural network (imoco-net) for ultrashort echo time (ute) proton lung mri. In *Proc. Intl. Soc. Mag. Reson. Med*, 2023.

2023 Alfredo De Goyeneche, Shreya Ramachandran, **Ke Wang**, Ekin Karasan, Joseph Yitan Cheng, Stella X. Yu, and Michael Lustig. Physics-informed deep learning framework for mri off-resonance correction trained with noise instead of data. *Advances in Neural Information Processing Systems*, 2023.

2022 **Ke Wang**, Anastasios Angelopoulos, Alfredo De Goyeneche1, Amit Kohli, Efrat Shimron, Stella Yu, Jitendra Malik, and Michael Lustig. Rigorous uncertainty estimation for mri reconstruction (**Oral**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2022.

2022 Efrat Shimron, Alfredo De Goyeneche, **Ke Wang**, Ali B. Syed, Shreyas Vasanawala, and Michael Lustig. Bladenet: Rapid propeller acquisition and reconstruction for high spatio-temporal resolution abdominal mri (**Oral**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2022.

2022 Alfredo De Goyeneche1, Shreya Ramachandran, **Ke Wang**, Ekin Karasan, Stella Yu, and Michael Lustig. Resonet: Physics informed deep learning based off-resonance correction trained on synthetic data (**Oral**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2022.

2021 **Ke Wang**, Michael Kellman, Christopher Sandino, Kevin Zhang, Shreyas S. Vasanawala, Jonathan I. Tamir, Stella X. Yu, and Michael Lustig. Memory-efficient learning for high-dimensional mr reconstruction (**Magna cum Laude Award**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2021.

2021 Efrat Shimron, Jonathan I. Tamir, **Ke Wang**, and Michael Lustig. Subtle inverse crimes: Naively using publicly available images could make reconstruction results seem misleadingly better! (**Oral, Magna cum Laude Award**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2021.

2021 Christopher Sandino, Frank Ong, **Ke Wang**, Michael Lustig, and Shreyas S. Vasanawala. Dslr+: Enhancing deep subspace learning reconstruction for high-dimensional mri (**Oral**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2021.

2021 Somnath Rakshit, **Ke Wang**, and Jonathan I. Tamir. A gpu-accelerated extended phase graph algorithm for differentiable optimization and learning. In *Proc. Intl. Soc. Mag. Reson. Med*, 2021.

2020 **Ke Wang**, Jonathan I. Tamir, Stella X. Yu, and Michael Lustig. High-fidelity reconstruction with instance-wise discriminative feature matching loss (**Oral, Magna cum Laude Award**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2020.

2020 **Ke Wang**, Mariya Doneva, Thomas Amthor, Vera C. Keil, Fei Tan, Jonathan I. Tamir, Stella X. Yu, and Michael Lustig. High fidelity direct-contrast synthesis from magnetic resonance fingerprinting in diagnostic imaging (**Oral, Summa cum Laude Award**). In *Proc. Intl. Soc. Mag. Reson. Med*, 2020.

2019 **Ke Wang**, Frank Ong, Jonathan I. Tamir, and Michael Lustig. Unsupervised learning for improved fidelity multi-contrast mri. In *Proc. Intl. Soc. Mag. Reson. Med*, 2019.

2019 **Ke Wang**, Ekin Karasan, Doneva Mariya, and Michael Lustig. Towards high fidelity direct-contrast synthesis from magnetic resonance fingerprinting. In *NeurIPS 2019 Workshop on Medical Imaging*, 2019.

2019 Hao Nan, Aidan Fitzpatrick, **Ke Wang**, and Amin Arbabian. Non-invasive remote temperature monitoring using microwave-induced thermoacoustic imaging. In *2019 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, pages 6375–6378. IEEE, 2019.

2018 **Ke Wang**, Enhao Gong, Suchandrima Banerjee, and John M. Pauly. Real-time personalized acquisition optimization: 30%-50% reconstruction improvements from a 10-second undersampling optimization. In *Proc. Intl. Soc. Mag. Reson. Med*, 2018.

Fellowships & Awards

2021 **ISMRM Magna cum Laude Award**

2020 **ISMRM Summa cum Laude Award**

2020 **ISMRM Magna cum Laude Award**

2019-present **ISMRM Educational Fellowship**

2018 **Best Poster Award for ACCAS 2018**

2018 **Berkeley EECS Department Fellowship**

2018 **Tsinghua Excellent Graduate Honor**

2018 **Beijing Excellent Graduate Honor**

2015, 2017 **National Scholarship**

Computer skills

Deep Learning	Proficient with PyTorch, TensorFlow. Familiar with MXNet.
Programming Languages	Proficient with Python, MATLAB, C/C++, Shell script, \LaTeX
Additional Skills	Deep Learning, Computational Imaging, Computer Vision, Inverse problem, Signal processing, Spectrum analysis, MRI reconstruction, GE sequence programming, and reconstruction platform

Service

2026 **Reviewer for CVPR.**

2025 **Reviewer for NeurIPS, ICML, ICLR.**

2024 **Reviewer for NeurIPS, ICML, ICLR, Siggraph, MICCAI.**

2023 **Reviewer for ISMRM, Siggraph, Siggraph Asia, MICCAI, NeurIPS.**

2022 **Reviewer for MICCAI, EMBC, ISMRM.**

2023-present **Reviewer for Scientific Report.**

2023-present **Reviewer for Quantitative Imaging in Medicine and Surgery.**

2022-present **Reviewer for Magnetic Resonance in Medicine.**

2022-present **Reviewer for IEE Transaction on Medical Imaging.**

2022-present **Reviewer for Frontiers in Oncology.**

2022-present **Reviewer for Computational and Mathematical Methods in Medicine.**

2020-present **Reviewer for IEEE Transactions on Circuits and Systems for Video Technology.**

References

Dr. Michael (Miki) Lustig

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Dr. Stella Yu

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