

CHANGWOON CHOI

Ph.D. Candidate
Seoul National University

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🏠 <https://changwoon.info>

Education

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|---------------------------|-----------------------------------|---|
| Seoul National University | Electrical & Computer Engineering | M.S.&Ph.D., 2020.9 - |
| Seoul National University | Electrical & Computer Engineering | B.S., <i>summa cum laude</i> , 2014 - 2020 |
| Seoul Science High School | - | 2011 - 2013 |

Publications

1. **Changwoon Choi**, Jeongjun Kim, Geonho Cha, Minkwan Kim, Dongyoon Wee, and Young Min Kim, *Humans as a Calibration Pattern: Dynamic 3D Scene Reconstruction from Unsynchronized and Uncalibrated Videos*, in *ICCV* (2025).
2. Jaeah Lee, **Changwoon Choi**, Young Min Kim, and Jaesik Park, *Recovering Dynamic 3D Sketches from Videos*, in *CVPR* (2025).
3. Gwangtak Bae*, **Changwoon Choi***, Hyeongjun Heo, Sang Min Kim, and Young Min Kim, *I2-SLAM: Inverting Imaging Process for Robust Photorealistic Dense SLAM*, in *ECCV* (2024).
4. **Changwoon Choi**, Jaeah Lee, Jaesik Park, and Young Min Kim, *3Doodle: Compact Abstraction of Objects with 3D Strokes*, in *SIGGRAPH (ACM TOG)* (2024).
5. Sang Won Im*, Dongsu Zhang*, Jeong Hyun Han, Ryeong Myeong Kim, **Changwoon Choi**, Young Min Kim**, and Ki Tae Nam**, *Investigating Chiral Morphogenesis of Gold Using Generative Cellular Automata*, in *Nature Materials* (2024).
6. **Changwoon Choi***, Juhyeon Kim*, and Young Min Kim, *IBL-NeRF: Image-Based Lighting Formulation of Neural Radiance Fields*, in *Pacific Graphics (Computer Graphics Forum)* (2023).
7. Sang Min Kim, **Changwoon Choi**, Hyeongjun Heo, and Young Min Kim, *Color Transform Module for Robust Novel View Synthesis*, in *Pacific Graphics (Computer Graphics Forum)* (2023).
8. Junho Kim, **Changwoon Choi**, Hojun Jang, and Young Min Kim, *LDL: Line Distance Functions for Panoramic Localization*, in *ICCV* (2023).
9. **Changwoon Choi**, Sang Min Kim, and Young Min Kim, *Balanced Spherical Grid for Egocentric View Synthesis*, in *CVPR* (2023).
10. Junho Kim, Hojun Jang, **Changwoon Choi**, and Young Min Kim, *CPO: Change Robust Panorama to Point Cloud Localization*, in *ECCV* (2022).
11. Dongsu Zhang, **Changwoon Choi**, Inbum Park, and Young Min Kim, *Probabilistic Implicit Scene Completion*, in *ICLR* (2022, *Spotlight*).
12. Junho Kim, **Changwoon Choi**, Hojun Jang, and Young Min Kim, *PICCOLO: Point Cloud-Centric Omnidirectional Localization*, in *ICCV* (2021).
13. Dongsu Zhang, **Changwoon Choi**, Jeonghwan Kim, and Young Min Kim, *Learning to Generate 3D Shapes with Generative Cellular Automata*, in *ICLR* (2021).

(*Equally contributed.)

Experiences

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| Research Scientist Intern | Meta Reality Labs, London | 2025.06-2025.12 |
| Research Scientist Intern | NAVER Cloud, Seoul | 2023.12-2024.03 |
| Visiting Researcher | UCSD, hosted by Hao Su | 2023.05-2023.12 |
| Conference Reviewer | SIGGRAPH, SIGGRAPH Asia, Pacific Graphics CVPR, ICCV, ECCV, ACCV, 3DV, NeurIPS | |
| Journal Reviewer | ACM TOG, The Journal of Supercomputing | |

Invited Talks

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| <i>"Computer Vision, Computer Graphics, and AI" @ Seoul Science High School</i> | 2025.04. |
| <i>"3Doodle" @ Korea Computer Graphics Society (KCGS)</i> | 2024.07. |
| <i>"Towards Robust Indoor Visual Localization with Omnidirectional Camera" @ 42dot</i> | 2022.05. |

Honors and Awards

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| Best poster presentation award (IPIU 2025) | 2025 |
| Young researcher award (SNU INMC) | 2025 |
| Brain Korea 21 Ph.D. fellowship (NRF) | 2024 spring |
| Ph.D. Study-abroad program scholarship (SNU OIA, \$10,000) | 2023 spring |
| University outstanding T.A. award | 2022 spring |
| Samsung humantech paper award, Honorable mention (\$2,000) | 2021 |
| Merit-based scholarship (SNU, Full-Funding) | 2015 - 2020 |
| Funding for gifted students (science), Woongjin Foundation | 2011 - 2012 |

Patents

- KR 10-2813248

Teaching Experience

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| Basic Calculus 1 (Tutor) | 2015, 2016, 2018, 2020 spring |
| Basic Calculus 2 (Tutor) | 2018 fall |
| Basic Physics 1 (Tutor) | 2015, 2016, 2019 spring |
| Basic Physics 2 (Tutor) | 2015, 2019 fall |
| Programming Methodology (Tutor) | 2019 fall |
| Engineering Mathematics 2 (Tutor) | 2019 fall, 2021 spring |
| Signals and Systems (Tutor) | 2020 spring |
| Theory and Lab of IoT, AI, and Big Data (T.A.) | 2019 fall, 2020 spring |
| Signals and Systems (T.A.) | 2021 spring |
| 3D Computer Vision Track for AI Experts (Samsung) (T.A.) | 2021, 2022 summer |
| Introduction to Random Variables and Processes (T.A.) | 2022 spring |
| Physics Lab (T.A.) | 2022 fall |