Zike Yan

CONTACT INFORMATION

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RESEARCH INTERESTS

Online Reconstruction, Implicit Scene Representation, Dense SLAM, Lifelong Learning

EDUCATION

Peking University, Beijing, China **Sep. 2019 - present**
Ph.D., Electronics Engineering and Computer Science

Harbin Engineering University, Harbin, China **Sep. 2015 - Mar. 2018**
M. Phil., Information and Communication Engineering

Harbin Institute of Technology, Harbin, China **Sep. 2010 - June 2014**
B. Eng., Electrical Engineering and Automation

PUBLICATIONS

Conference Papers

Yan Z, Yang H, Zha H. Active Neural Mapping. ICCV 2023.
Yan Z, Tian Y, Shi X, et al. Continual Neural Mapping: Learning an Implicit Scene Representation from Sequential Observations. ICCV 2021.
Yan Z, Wang X, Zha H. Online Learning of a Probabilistic and Adaptive Scene Representation. CVPR 2021.
Xue F, Wang X, Yan Z, et al. Local Supports Global: Deep Camera Relocalization with Sequence Enhancement, CVPR 2019.
Wang X, Xue F, Yan Z, et al. Continuous-time Stereo Visual Odometry Based on Dynamics Model, ACCV 2018.

Journal Papers

Yan Z, Zha H. Flow-based SLAM: From Geometry Computation to Learning. Virtual Reality & Intelligent Hardware, 2019.
Yan Z, Xiang X. Scene Flow Estimation: A Survey, *arXiv preprint arXiv:1612.02590*, 2016.
Wang X, Pan Y, Yan Z, et al. Visual-Inertial Odometry based on Kinematic Constraints in IMU Frames. IEEE Robotics and Automation Letters (RA-L), 2022.
Wang Q, Yan Z, Wang J, et al. Line Flow based Simultaneous Localization and Mapping. IEEE Trans. Robotics (T-RO), 2021.

RESEARCH PROJECTS

Incremental Map Construction **SenseTime, 2019 - present**

- Active mapping with an implicit neural representation, submitted paper in 2023
- Representation efficiency and updating efficiency of scene geometry, CVPR 2021

Fast 3D Reconstruction on a Biomimetic Vision System **BIT, 2019 - 2021**

- Efficient indoor/outdoor modeling with a binocular biomimetic camera

Indoor Scene Reconstruction in Real-time **BOE, 2018**

- Efficient indoor reconstruction with an RGB-D camera

INTERNSHIP

Intel Labs China, Beijing, China **2020.12 - 2022.12**

- Task-incremental learning for implicit neural representations
- The intransigence-forgetting trade-offs in continual learning
- Continual learning for implicit neural map updating, ICCV 2021

PATENT

Zha H, Yan Z, Fang Y, Jiang L. An Approach and Device for Localization and Reconstruction. 2020 National Invention Patent, CN111598927A

AWARDS

Award for Scientific Research, Peking University 2021

1st place (V-SLAM group) in SLAM-for-AR Competition, ISMAR 2019

SERVICES

Reviewer: CVPR 2020-2023; ICCV 2021-2023; ECCV 2020-2022; ICLR 2023; 3DV 2022; WACV 2021-2023; IJCV; RA-L 2020 - present

Invited Talk: Continual Neural Mapping: Learning An Implicit Scene Representation from Sequential Observations. *TechBeat Webinar* 2021

Invited Talk: Trends in Implicit Neural Representations. *CVRVT Doctoral Colloquium* 2021