

# THE HILTI SLAM-CHALLENGE [1]



Report - Team Iviso

## Overview:

- Graph Based Approach
  - Casual approach only using past information
  - Using sliding window for optimization and BA
  - No loop closing
  - Same parameter set for all evaluations
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- Sensor Setup: 5 Cameras + IMU
  - Hardware: Intel Core i7-4770 CPU 3.40GHz × 8  
No GPU usage

## Runtimes per Dataset:

Dataset	Runtime [s]
Basement_1	59.372
Basement_3	332.319
Basement_4	344.107
Campus_1	415.256
Campus_2	360.709
Construction_Site_1	225.514
Construction_Site_2	473.945
IC_Office_1	153.005
LAB_Survey_2	118.195
Office_Mitte_1	132.714
Parking_1	394.790
uzh_tracking_area_run2	63.396

[1] Michael Helmberger, Kristian Morin, Nitish Kumar, Danwei Wang, Yufeng Yue, Giovanni Cioffi, and Davide Scaramuzza. The hilti slam challenge dataset, 2021.