g2o: A General Framework for Graph Optimization

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1 Resources

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2 Basic Information

2.1 Authors

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2.2 Conference

2011 IEEE International Conference on Robotics and Automation (ICRA 2011, Shanghai)

2.3 Abstract

- Simultaneous Localization And Mapping (SLAM) or Bundle Adjustment (BA) can be phrased as **least squares optimization** of an error function that can be represented by a **graph**.
- g^2o[1] is an open-source C++ framework for optimization graph-based nonlinear error functions.

2.4 Keywords

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3 Introduction

3.1 Problem & Solution

Awide range of problems in robotics as well as in computer-vision involve the minimization of a non-linear error function that can be represented as a graph. The overall goal is to find the configuration of parameters or state variables that maximally explain a set of measurements affected by Gaussian noise.

3.2 Objective

3.3 Formulation

3.4 Contributions

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4 Related Work

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5 Method Description

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6 Experiment Evaluation

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7 Conclusion

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8 Note

[1] https://github.com/MengwenHe-CMU/g2o