Quality Assessment

Detailed (/reviews/conducting/quality_assessment_detailed/) Summary (/reviews/conducting/quality_assessment_summary/)

Green means higher than cutoff score. Red means lower or equal to the cutoff score.

Title	Quality Score
Monitoring of Benthic Reference Sites: Using an Autonomous Underwater Vehicle	6.5
A Terrain-Aided Tracking Algorithm for Marine Systems	5.0
A New Landmark Detection Approach for Slam Algorithm Applied in Mobile Robot	7.0
SIFT based monocular SLAM with multi-clouds features for indoor navigation	3.5
Long-term mapping and localization using feature stability histograms	9.0
A Flexible and Efficient Loop Closure Detection Based on Motion Knowledge	9.0
Multi-layer VI-GNSS Global Positioning Framework with Numerical Solution aided MAP Initialization	6.5
Long-Term 3D Localization and Pose from Semantic Labellings	7.0
Fast place recognition with plane-based maps	6.0
Season-Invariant and Viewpoint-Tolerant LiDAR Place Recognition in GPS-Denied Environments	9.0
Robust Vision-Aided Navigation Using Sliding-Window Factor Graphs	7.0

Title	Quality Score
Visual Place Recognition in Long-term and Large-scale Environment based on CNN Feature	8.5
Mobile robot localization based on low-cost LTE and odometry in GPS-denied outdoor environment	5.0
Navigation Engine Design for Automated Driving Using INS/GNSS/3D LiDAR-SLAM and Integrity Assessment	7.0
Tightly-Coupled Multi-Sensor Fusion for Localization with LiDAR Feature Maps	7.0
Robust Outdoor Self-localization In Changing Environments	6.5
Learning Scene Geometry for Visual Localization in Challenging Conditions	8.0
Efficient and effective matching of image sequences under substantial appearance changes exploiting GPS priors	9.0
Performance evaluation of graph-reduction in SLAM through pose rejection	6.5
MRS-VPR: a multi-resolution sampling based global visual place recognition method	8.5
Structured feature enhanced deep visual relocalization	7.5
Self Help: Seeking Out Perplexing Images for Ever Improving Navigation	9.0
Scale-preserving long-term visual odometry for indoor navigation	7.0
Visual place recognition with CNNs: from global to partial	8.0
Reference Pose Generation for Long-term Visual Localization via Learned Features and View Synthesis	7.5
Building an Enhanced Vocabulary of the Robot Environment with a CeilingPointing Camera	7.5
Invariant Extended Kalman Filtering for Underwater Navigation	2.5
Multi-sensor three-dimensional Monte Carlo localization for long-termaerial robot navigation	6.0
Bio-Inspired Robotics: A Spatial Cognition Model integrating PlaceCells, Grid Cells and Head Direction Cells	4.5
Towards Semi-autonomous Robotic Inspection and Mapping in ConfinedSpaces with the EspeleoRobo	6.0
Merging of appearance-based place knowledge among multiple robots	8.0
1-Point RANSAC for Extended Kalman Filtering: Application to Real-TimeStructure from Motion and Visual Odometry	5.0
High-Level Visual Features for Underwater Place Recognition	8.5
Lifelong Information- Driven Exploration to Complete and Refine 4-DSpatio-Temporal Maps	9.0
Semi-Markov Process Based Localization using Radar in Dynamic Environments	8.0
Geographical Map Registration and Fusion of Lidar-Aerial Orthoimagery inGIS	3.0
VIRAL-Fusion: A Visual-Inertial-Ranging-Lidar Sensor Fusion Approach	8.5
Cooperative bathymetry-based localization using low-cost autonomousunderwater vehicles	6.0
RadarSLAM: A robust simultaneous localization and mapping system for allweather conditions	9.0
Contrastive Learning for Image Registration in Visual Teach and RepeatNavigation	7.5
Long-Term Inertial Navigation Aided by Dynamics of Flow Field Features	6.5
Edge-SLAM: Edge-assisted visual simultaneous localization and mapping	9.0
FAB-MAP + RatSLAM: Appearance-based SLAM for multiple times of day	9.0

Title	Quality Score
Online and incremental appearance-based slam in highly dynamic environments	10.0
PIRF-Nav 2.0: Fast and online incremental appearance-based loop-closure detection in an indoor environment	10.0
A speeded-up online incremental vision-based loop-closure detection for long-term SLAM	9.0
Improving visual SLAM in car-navigated urban environments with appearance maps	8.0
Loop closure detection by compressed sensing for exploration of mobile robots in outdoor environments	7.5
Long-term vehicle localization in urban environments based on pole landmarks extracted from 3-D lidar scans	8.5
ExMaps: Long-term localization in dynamic scenes using exponential decay	9.0
Robust and accurate monocular vision-based localization in outdoor environments of real-world robot challenge	7.0
Graph optimization methods for large-scale crowdsourced mapping	7.0
Appearance-based SLAM for mobile robots	3.5
Appearance-based mapping and localization for mobile robots using a feature stability histogram	8.0
DynaSLAM: Tracking, Mapping, and Inpainting in Dynamic Scenes	9.0
Predicting the long-term robustness of visual features	7.5
Information-based Active SLAM via topological feature graphs	4.0
Marker-based multi-sensor fusion indoor localization system for micro air vehicles	5.0
SolarSLAM: Battery-free loop closure for indoor localisation	7.0
Learning place-dependant features for long-term vision-based localisation	7.5
Work smart, not hard: Recalling relevant experiences for vast-scale but time-constrained localisation	7.5
A Geodetic Normal Distribution Map for Long-Term LiDAR Localization on Earth	8.5
Multi-session Lake-Shore Monitoring in Visually Challenging Conditions	7.0
Part-based SLAM for partially changing environments	7.0
A DenseNet feature-based loop closure method for visual SLAM system	9.0
What if there was no revisit? Large-scale graph-based SLAM with traffic sign detection in an HD map using LiDAR inertial odometry	7.0
SLAM for autonomous planetary rovers with global localization	6.0
kRadar++: Coarse-to-fine FMCW scanning radar localisation	9.0
Hierarchical loop detection for mobile outdoor robots	6.5
Optical flow localisation and appearance mapping (OFLAAM) for long-term navigation	3.5
Towards lifelong feature-based mapping in semi-static environments	7.0
Development of an Autonomous Robotic System Using the Graph-based SPLAM Algorithm	4.0
Efficient Map Compression for Collaborative Visual SLAM	9.5
Approximating Marginalization with Sparse Global Priors for Sliding Window SLAM-Graphs	8.0
Dynamic scene models for incremental, long-term, appearance-based localisation	7.0

Title	Quality Score
Generic NDT mapping in dynamic environments and its application for lifelong SLAM	8.0
Map updating in dynamic environments	8.0
Multi-robot map updating in dynamic environments	7.5
Long-Term Visual Localization Using Semantically Segmented Images	7.5
Long-term experiments with an adaptive spherical view representation for navigation in changing environments	9.0
Long-term ground robot localization architecture for mixed indoor-outdoor scenarios	4.5
Robust Place Recognition and Loop Closing in Laser-Based SLAM for UGVs in Urban Environments	9.0
SRAL: Shared Representative Appearance Learning for Long-Term Visual Place Recognition	9.0
Learning integrated holism-landmark representations for long-term loop closure detection	8.5
Sequence-based sparse optimization methods for long-term loop closure detection in visual SLAM	10.0
Rotation invariant features from omnidirectional camera images using a polar higher-order local autocorrelation feature extractor	5.0
LCPF: A Particle Filter Lidar SLAM System with Loop Detection and Correction	6.0
Panoramic Visual-Inertial SLAM Tightly Coupled with a Wheel Encoder	8.5
Long-term 3D map maintenance in dynamic environments	8.5
Online probabilistic change detection in feature-based maps	8.0
Hough2Map-Iterative Event-Based Hough Transform for High-Speed Railway Mapping	5.5
Relaxing the planar assumption: 3D state estimation for an autonomous surface vessel	8.0
Affine-Invariant Geometric Constraints-Based High Accuracy Simultaneous Localization and Mapping	7.5
Geometry-based Graph Pruning for Lifelong SLAM	9.5
Towards life-long mapping of dynamic environments using temporal persistence modeling	7.5
Hierarchical Loop Closure Detection for Long-term Visual SLAM with Semantic-Geometric Descriptors	10.0
Visual topometric localization	8.0
Incorporating environmental measurements in navigation	5.0
Domain-Invariant Similarity Activation Map Contrastive Learning for Retrieval-Based Long-Term Visual Localization	9.5
Efficient information-theoretic graph pruning for graph-based SLAM with laser range finders	10.0
Information-theoretic compression of pose graphs for laser-based SLAM	9.0
Hierarchical Quadtree Feature Optical Flow Tracking Based Sparse Pose-Graph Visual-Inertial SLAM	7.5
Radar-to-Lidar: Heterogeneous Place Recognition via Joint Learning	8.0
Robust multimodal sequence-based loop closure detection via structured sparsity	8.5
Radar-on-Lidar: Metric radar localization on prior lidar maps	8.0
PERSES - a vision-based interactive mobile shopping assistant	2.5
Shopbot: Progress in developing an interactive mobile shopping assistant for everyday use	4.0

Title	Quality Score
Distributed and collaborative monocular simultaneous localization and mapping for multi-robot systems in large-scale environments	9.0
Use of classification and segmentation of sidescan sonar images for long term registration	5.5
Laser-only road-vehicle localization with dual 2D push-broom LIDARS and 3D priors	4.5
Towards elderly assistance identification for service robot using combination of mappings	5.5
Localization and navigation of the CoBots over long-term deployments	10.0
The quest for “always-on” autonomous mobile robots	3.5
Episodic non-Markov localization: Reasoning about short-term and long-term features	9.0
Exploration and Mapping Technique Suited for Visual-features Based Localization of MAVs	5.5
Visual memory update for life-long mobile robot navigation	8.0
Mapping and Localization using Semantic Road Marking with Centimeter-level Accuracy in Indoor Parking Lots	7.0
Underwater robot visual place recognition in the presence of dramatic appearance change	6.0
LiPMatch: LiDAR Point Cloud Plane Based Loop-Closure	9.0
Topographic SLAM Using a Single Terrain Altimeter in GNSS-Restricted Environment	5.5
SemanticFusion: Dense 3D semantic mapping with convolutional neural networks	7.0
Condition-invariant robot localization using global sequence alignment of deep features	7.5
Updating the visibility of a feature-based map for long-term maintenance	8.0
Identifying robust landmarks in feature-based maps	9.0
CREATING MULTI-TEMPORAL MAPS of URBAN ENVIRONMENTS for IMPROVED LOCALIZATION of AUTONOMOUS VEHICLES	6.0
Monocular localization in HD maps by combining semantic segmentation and distance transform	6.5
Modest-vocabulary loop-closure detection with incremental bag of tracked words	9.5
Sequence-based mapping for probabilistic visual loop-closure detection	8.5
Visual robot localization using compact binary landmarks	8.5
Towards lifelong visual maps	8.0
Exactly sparse delayed state filter on Lie groups for long-term pose graph SLAM	9.5
Selective memory: Recalling relevant experience for long-term visual localization	10.0
CD SLAM - Continuous localization and mapping in a dynamic world	8.5
Model-aided monocular visual-inertial state estimation and dense mapping	5.5
Deformable map matching to handle uncertain loop-less maps	7.0
Simultaneous localization and change detection for long-term map learning: A scalable scene retrieval approach	8.0
Seamless navigation and mapping using an INS/GNSS/grid-based SLAM semi-tightly coupled integration scheme	5.5
Learning Matchable Image Transformations for Long-Term Metric Visual Localization	9.0

Title	Quality Score
Appearance-Based Loop Closure Detection via Locality-Driven Accurate Motion Field Learning	9.0
Highly Robust Visual Place Recognition Through Spatial Matching of CNN Features	8.5
A robust RGB-D image-based SLAM system	7.5
Globally optimal fetoscopic mosaicking based on pose graph optimisation with affine constraints	4.5
Robust and Long-term Monocular Teach and Repeat Navigation using a Single-experience Map	9.5
Topological local-metric framework for mobile robots navigation: a long term perspective	9.0
Long-term localization with time series map prediction for mobile robots in dynamic environments	9.0
Explicit feature disentanglement for visual place recognition across appearance changes	8.5
Deep Supervised Hashing with Similar Hierarchy for Place Recognition	8.5
Active airborne localisation and exploration in unknown environments using inertial SLAM	5.5
Appearance-based landmark selection for visual localization	10.0
Appearance-based landmark selection for efficient long-term visual localization	9.0
Will it last? Learning stable features for long-term visual localization	8.0
Erasing bad memories: Agent-side summarization for long-term mapping	9.0
Checkout my map: Version control for fleetwide visual localisation	8.0
Distributed stereo vision-based 6D localization and mapping for multi-robot teams	7.5
Appearance-based loop closure detection for online large-scale and long-term operation	9.5
Obstacle persistent adaptive map maintenance for autonomous mobile robots using spatio-temporal reasoning	7.5
Long-term online multi-session graph-based SPLAM with memory management	8.5
RTAB-Map as an open-source lidar and visual simultaneous localization and mapping library for large-scale and long-term online operation	9.0
Featureless visual processing for SLAM in changing outdoor environments	7.0
Environment selection and hierarchical place recognition	9.0
R-LOAM: Improving LiDAR Odometry and Mapping with Point-to-Mesh Features of a Known 3D Reference Object	6.5
Efficient Long-term Mapping in Dynamic Environments	9.5
Efficient Multi-Drive Map Optimization towards Life-long Localization using Surround View	8.0
Development of autonomous wheelchair for indoor and outdoor traveling	4.5
SDF-Loc: Signed distance Field based 2D relocalization and map update in dynamic environments	8.0
Preventing and correcting mistakes in lifelong mapping	6.0
Generic node removal for factor-graph SLAM	9.5
Robust long-term registration of UAV images of crop fields for precision agriculture	8.0
Improving Image Description with Auxiliary Modality for Visual Localization in Challenging Conditions	9.0
Weighted triplet loss based on deep neural networks for loop closure detection in VSLAM	8.5

Title	Quality Score
A metric approach for environments mapping	3.5
Learning Place-and-Time-Dependent Binary Descriptors for Long-Term Visual Localization	8.0
Air-SSLAM: A Visual Stereo Indoor SLAM for Aerial Quadrotors	4.5
PoseMap: Lifelong, Multi-Environment 3D LiDAR Localization	9.0
Long-term Place Recognition through Worst-case Graph Matching to Integrate Landmark Appearances and Spatial Relationships	9.0
Long-term Mapping Techniques for Ship Hull Inspection and Surveillance using an Autonomous Underwater Vehicle	8.5
On the Redundancy Detection in Keyframe-Based SLAM	8.5
FusionVLAD: A Multi-View Deep Fusion Networks for Viewpoint-Free 3D Place Recognition	8.5
Stabilize an Unsupervised Feature Learning for LiDAR-based Place Recognition	8.5
Loop-Closure Detection with a Multiresolution Point Cloud Histogram Mode in Lidar Odometry and Mapping for Intelligent Vehicles	9.0
Towards life-long visual localization using an efficient matching of binary sequences from images	8.5
A Novel Global Relocalization Method Based on Hierarchical Registration of 3D Point Cloud Map for Mobile Robot	7.5
OpenABLE: An open-source toolbox for application in life-long visual localization of autonomous vehicles	9.0
Deep Samplable Observation Model for Global Localization and Kidnapping	7.5
Relocalization with Submaps: Multi-Session Mapping for Planetary Rovers Equipped with Stereo Cameras	5.5
Long-term place recognition using multi-level words of spatial densities	7.5
Pole-based localization for autonomous vehicles in urban scenarios	7.0
A B-Spline Mapping Framework for Long-Term Autonomous Operations	4.0
A framework for RF-Visual SLAM	7.0
Design of an unmanned underwater vehicle for reef surveying	3.5
MP3: A unified model to map, perceive, predict and plan	8.0
An Optimization Technique for Positioning Multiple Maps for Self-Driving Car's Autonomous Navigation	5.5
Landmark rating and selection according to localization coverage: Addressing the challenge of lifelong operation of SLAM in service robots	8.5
6 DoF SLAM using a ToF camera: The challenge of a continuously growing number of landmarks	8.0
Visual slam-based robotic mapping method for planetary construction	5.0
Curating long-term vector maps	7.5
Omnidirectional multisensory perception fusion for long-term place recognition	8.5
FLAME: Feature-Likelihood Based Mapping and Localization for Autonomous Vehicles	5.5
A lightweight localization strategy for lidar-guided autonomous robots with artificial landmarks	4.5
Concurrent filtering and smoothing: A parallel architecture for real-time navigation and full smoothing	9.5
Localizing backscatters by a single robot with zero start-up cost	4.5

Title	Quality Score
Lifelong Localization in Semi-Dynamic Environment	8.5
Range-Focused Fusion of Camera-IMU-UWB for Accurate and Drift-Reduced Localization	5.0
Persistent localization and life-long mapping in changing environments using the frequency map enhancement	8.0
AUV Bathymetric Simultaneous Localisation and Mapping Using Graph Method	6.0
Vision-based Markov localization across large perceptual changes	8.5
Texture-aware SLAM using stereo imagery and inertial information	5.5
Real-time dense map fusion for stereo SLAM	7.5
AVP-SLAM: Semantic visual mapping and localization for autonomous vehicles in the parking lot	8.0
A brain-inspired compact cognitive mapping system	8.5
A spatio-temporal Long-term Memory approach for visual place recognition in mobile robotic navigation	9.0
Bathymetric factor graph SLAM with sparse point cloud alignment	6.0
SLAM++1-A highly efficient and temporally scalable incremental SLAM framework	9.5
Voxgraph: Globally Consistent, Volumetric Mapping Using Signed Distance Function Submaps	4.0
Towards persistent localization and mapping with a continuous appearance-based topology	9.5
Robust relocalization based on active loop closure for real-time monocular SLAM	7.5
Communication constrained cloud-based long-term visual localization in real time	9.0
Long-term Localization of Mobile Robots in Dynamic Changing Environments	7.0
AEKF-SLAM: A new algorithm for robotic underwater navigation	6.0
DiSCO: Differentiable Scan Context with Orientation	9.0
Keyframes retrieval for robust long-term visual localization in changing conditions	8.0
Map management for robust long-term visual localization of an autonomous shuttle in changing conditions	9.5
Simultaneous Positioning and Map Construction of Mobile Robots Based on the Cartographer Algorithm	3.0
Robust loop closing over time for pose graph SLAM	9.0
Sparse optimization for robust and efficient loop closing	10.0
Vision-Aided Multi-UAV Autonomous Flocking in GPS-Denied Environment	5.0
Bio-inspired Relocalization for Indoor Robots in Visual Ambiguous Scenarios	6.0
Place recognition in semi-dense maps: Geometric and learning-based approaches	7.0
Real-Time, Environmentally-Robust 3D LiDAR Localization	8.0
Learning Context Flexible Attention Model for Long-Term Visual Place Recognition	8.5
Map-less long-term localization in complex industrial environments	7.5
Augmenting visual SLAM with Wi-Fi sensing for indoor applications	6.0
Pole-like Objects Mapping and Long-Term Robot Localization in Dynamic Urban Scenarios	9.0

Title	Quality Score
A real-time visual-inertial mapping and localization method by fusing unstable GPS	5.5
I am Not Afraid of the GPS Jammer: Resilient Navigation via Signals of Opportunity in GPS-Denied Environments	8.0
Improved-UWB/LiDAR-SLAM Tightly Coupled Positioning System with NLOS Identification Using a LiDAR Point Cloud in GNSS-Denied Environments	7.5
A Robust Localization Method in Indoor Dynamic Environment	5.5
Localization in unstructured environments: Towards autonomous robots in forests with Delaunay triangulation	4.0
Autonomous vehicle localization with prior visual point cloud map constraints in gnss-challenged environments	7.5
Distributed real-time cooperative localization and mapping using an uncertainty-aware expectation maximization approach	5.5
Enabling persistent autonomy for underwater gliders through terrain based navigation	4.0
Enabling Robust Localization for Automated Guided Carts in Dynamic Environments	5.5
Image Based Place Recognition and Lidar Validation for Vehicle Localization	7.0
Novel robust simultaneous localization and mapping for long-term autonomous robots	8.5
Simultaneous map building and localization for an autonomous mobile robot	3.0
Continuous localization in changing environments	6.5
Mobile robotics in the long term - Exploring the fourth dimension	7.5
A contribution to vision-based localization, tracking and navigation methods for an interactive mobile service-robot	2.5
Simultaneous localization and map-building using active vision	9.0
Towards exteroceptive based localisation	5.0
Simultaneous localisation and mapping on the great barrier reef	3.5
SLAM- Loop closing with visually salient features	6.0
Terrain aided localisation and mapping for marine environments	5.0
A visual bag of words method for interactive qualitative localization and mapping	8.5
BiCamSLAM: Two times mono is more than stereo	5.5
An adaptive appearance-based map for long-term topological localization of mobile robots	9.0
The Autonomous City Explorer (ACE) project-mobile robot navigation in highly populated Urban environments	4.0
Subjective local maps for hybrid metric-topological SLAM	6.0
Keypoint design and evaluation for place recognition in 2D lidar maps	9.0
Experimental analysis of sample-based maps for long-term SLAM	9.0
Towards a robust visual SLAM approach: Addressing the challenge of life-long operation	8.5
Uncalibrated monocular based simultaneous localization and mapping for indoor autonomous mobile robot navigation	5.0
Robust outdoor visual localization using a three-dimensional-edge map	9.0
Lifelong localization of a mobile service-robot in everyday indoor environments using omnidirectional vision	8.0

Title	Quality Score
Fast Odometry Integration in Local Bundle Adjustment-based Visual SLAM	4.0
Position-invariant robust features for long-term recognition of dynamic outdoor scenes	10.0
Mapping and localization for mobile robots through environment appearance update	8.0
Lifelong Map Learning for Graph-based SLAM in Static Environments	10.0
Robust mobile robot localization in highly non-static environments	8.5
Natural landmark-based monocular localization for MAVs	5.5
Global localization using multiple hypothesis tracking: A real-world approach	6.0
Memory management for real-time appearance-based loop closure detection	10.0
Dynamic pose graph SLAM: Long-term mapping in low dynamic environments	9.0
Minimalistic vision-based cognitive SLAM	3.5
Realizing, reversing, recovering: Incremental robust loop closing over time using the iRRR algorithm	9.0
Capping Computation Time and Storage Requirements for Appearance-based Localization with CAT-SLAM	10.0
Adaptive Visual Memory For Mobile Robot Navigation In Dynamic Environment	8.5
Appearance change prediction for long-term navigation across seasons	9.5
3D normal distributions transform occupancy maps: An efficient representation for mapping in dynamic environments	9.5
Generic 2D/3D SLAM with NDT maps for lifelong application	9.0
Robust Loop Closing Over Time	9.0
How to learn an illumination robust image feature for place recognition	5.0
Selective combination of visual and thermal imaging for resilient localization in adverse conditions: Day and night, smoke and fire	5.5
OpenRatSLAM: An open source brain-based SLAM system	10.0
Consistent sparsification for graph optimization	9.0
Lifelong localization in changing environments	9.0
Hierarchical SLAM using spectral submap matching with opportunities for long-term operation	8.0
Long-term simultaneous localization and mapping with generic linear constraint node removal	10.0
LaneLoc: Lane marking based localization using highly accurate maps	7.5
Self-help: Seeking out perplexing images for ever improving topological mapping	10.0
Experience-based navigation for long-term localisation	9.0
Temporally scalable visual SLAM using a reduced pose graph	9.5
Integration of Monte Carlo Localization and place recognition for reliable long-term robot localization	6.0
Incremental unsupervised topological place discovery	9.5
Online global loop closure detection for large-scale multi-session graph-based SLAM	7.5

Title	Quality Score
Toward long-term, automated ship hull inspection with visual SLAM, explicit surface optimization, and generic graph-sparsification	8.0
Long-term topological localisation for service robots in dynamic environments using spectral maps	8.5
A SLAM based on auxiliary marginalised particle filter and differential evolution	5.5
Mining visual phrases for long-term visual SLAM	6.5
Multiple map hypotheses for planning and navigating in non-stationary environments	8.0
An open-source bio-inspired solution to underwater SLAM	7.0
Towards background flow based AUV localization	3.0
Superpixel-based appearance change prediction for long-term navigation across seasons	10.0
Improved SeqSLAM for real-time place recognition and navigation error correction	8.5
An Adaptive Gaussian Particle Filter based Simultaneous Localization and Mapping with dynamic process model noise bias compensation	6.5
Automatic image scaling for place recognition in changing environments	7.5
Long-term RFID SLAM using short-range sparse tags	4.5
Enhanced Monte Carlo Localization with Visual Place Recognition for Robust Robot Localization	9.0
The gist of maps - Summarizing experience for lifelong localization	8.5
Multi-robot 6D graph SLAM connecting decoupled local reference filters	6.5
A Light Visual Mapping and Navigation Framework for Low-Cost Robots	7.5
ORB-SLAM: A Versatile and Accurate Monocular SLAM System	10.0
IMPROVEMENT OF 3D MONTE CARLO LOCALIZATION USING A DEPTH CAMERA and TERRESTRIAL LASER SCANNER	5.0
An integrated model of autonomous topological spatial cognition	9.0
Mining visual phrases for visual robot localization	9.0
Localizing Ground Penetrating RADAR: A Step Toward Robust Autonomous Ground Vehicle Localization	6.5
Bridging the appearance gap: Multi-experience localization for long-term visual teach and repeat	8.0
Nonlinear factor recovery for long-term SLAM	9.5
Summary Maps for Lifelong Visual Localization	9.0
Hybrid Metric-Topological 3D Occupancy Grid Maps for Large-scale Mapping	5.0
Towards autonomous lakeshore monitoring	7.0
Opportunistic sampling-based active visual SLAM for underwater inspection	7.0
Ceiling vision-based active SLAM framework for dynamic and wide-open environments	8.5
A spatially and temporally scalable approach for long-term lakeshore monitoring	8.0
Mining DCNN landmarks for long-term visual SLAM	8.0
Semantics-aware visual localization under challenging perceptual conditions	8.0

Title	Quality Score
Modelling scene change for large-scale long term laser localisation	7.5
Episodic non-Markov localization	8.5
A continuously learning feature-based map using a bernoulli filtering approach	7.0
Research of large-scale offline map management in visual SLAM	7.0
Dynamic Map Update of Non-static Facility Logistics Environment with a Multi-robot System	7.0
Survey Registration for Long-Term Natural Environment Monitoring	9.0
FreMEn: Frequency map enhancement for long-term mobile robot autonomy in changing environments	10.0
Migratory birds-inspired navigation system for unmanned aerial vehicles	7.0
Are you ABLE to perform a life-long visual topological localization?	9.5
Visual Odometry and Place Recognition Fusion for Vehicle PositionTracking in Urban Environments	8.5
Elastic LiDAR Fusion: Dense Map-Centric Continuous-Time SLAM	5.5
Learning of Holism-Landmark graph embedding for place recognition in Long-Term autonomy	9.0
Recurrent-OctoMap: Learning State-Based Map Refinement for Long-Term Semantic Mapping with 3-D-Lidar Data	9.5
Sparse Gaussian Process SLAM, Storage and Filtering for AUV Multibeam Bathymetry	6.0
Map Management for Efficient Long-Term Visual Localization in Outdoor Environments	8.5
LLama-SLAM: Learning High-Quality Visual Landmarks for Long-Term Mapping and Localization	8.0
Scalable Change Detection from 3D Point Cloud Maps: Invariant Map Coordinate for Joint Viewpoint-Change Localization	7.0
AUV robust bathymetric simultaneous localization and mapping	7.0
Geometric mapping for sustained indoor autonomy	7.0
Robust Visual Place Recognition Based on Context Information	7.0
A Linear-Complexity EKF for Visual-Inertial Navigation with Loop Closures	7.0
A Hybrid Map with Permanent 3D Wireframes and Temporal Line Segments toward Long-Term Visual Localization	5.0
Tightly-Coupled Magneto-Visual-Inertial Fusion for Long Term Localization in Indoor Environment	8.0
Keeping an Eye on Things: Deep Learned Features for Long-Term Visual Localization	8.5
HybVIO: Pushing the Limits of Real-time Visual-inertial Odometry	8.0
GVINS: Tightly Coupled GNSS–Visual–Inertial Fusion for Smooth and Consistent State Estimation	4.0
DE-SLAM: SLAM for highly dynamic environment	10.0
Learning Local Feature Descriptor with Motion Attribute For Vision-based Localization	8.5
Long-Term Visual Inertial SLAM based on Time Series Map Prediction	8.5
Long-term urban vehicle localization using pole landmarks extracted from 3-D lidar scans	7.5
Robust photogeometric localization over time for map-centric loop closure	6.0
A pose graph-based localization system for long-term navigation in CAD floor plans	9.0

Title	Quality Score
1-Day Learning, 1-Year Localization: Long-Term LiDAR Localization Using Scan Context Image	9.0
Weighted Grid Partitioning for Panel-Based Bathymetric SLAM	4.0
Visual place recognition via robust `2-norm distance based holism and landmark integration	8.0
Indoor Environment RGB-DT Mapping for Security Mobile Robots	4.0
A unified framework for mutual improvement of SLAM and semantic segmentation	9.0
View management for lifelong visual maps	7.0
Lifelong Mapping using Adaptive Local Maps	7.5
Tightly coupled semantic RGB-D inertial odometry for accurate long-term localization and mapping	5.0
Tightly-Coupled Monocular Visual-Odometric SLAM Using Wheels and a MEMS Gyroscope	9.0
Network uncertainty informed semantic feature selection for visual SLAM	8.0
How to Match Tracks of Visual Features for Automotive Long-Term SLAM	8.0
Robust loop-closure detection with a learned illumination invariant representation for robot vSLAM	8.5
Visual Localization Using Sparse Semantic 3D Map	7.0
Clustermap building and relocalization in urban environments for unmanned vehicles	8.5
Using Image Sequences for Long-Term Visual Localization	8.0
SLAM using LTE Multipath Component Delays	5.0
Localising Faster: Efficient and precise lidar-based robot localisation in large-scale environments	7.5
Day and Night Collaborative Dynamic Mapping in Unstructured Environment Based on Multimodal Sensors	8.0
Appearance-invariant place recognition by adversarially learning disentangled representation	8.5
Lightweight SLAM with automatic orientation correction using 2D LiDAR scans	2.5
3D LiDAR-Based Global Localization Using Siamese Neural Network	9.5
Visual SLAM with Drift-Free Rotation Estimation in Manhattan World	7.5
High-definition map update framework for intelligent autonomous transfer vehicles	7.5
Long-term loop closure detection through visual-spatial information preserving multi-order graph matching	8.0
UcoSLAM: Simultaneous localization and mapping by fusion of keypoints and squared planar markers	7.5
Persistent Stereo Visual Localization on Cross-Modal Invariant Map	10.0
Robot-Assisted Backscatter Localization for IoT Applications	4.5
SGC-VSLAM: A semantic and geometric constraints VSLAM for dynamic indoor environments	9.0
Voxel-based representation learning for place recognition based on 3D point clouds	8.0
Segmented matching method of multi-geophysics field SLAM data based on LSTM	4.0
Structure-SLAM: Low-Drift Monocular SLAM in Indoor Environments	8.0
Long-Term Visual Localization in Large Scale Urban Environments Exploiting Street Level Imagery	7.5

Title	Quality Score
Robust Method for Static 3D Point Cloud Map Building using Multi-View Images with Multi-Resolution	7.0
An EKF-Based Fusion of Visual-Inertial Odometry and GPS for Global Robot Pose Estimation	4.0
Semi-Direct Monocular SLAM With Three Levels of Parallel Optimizations	7.5
Using UHF-RFID Signals for Robot Localization Inside Pipelines	4.0
Change detection using weighted features for image-based localization	10.0
A multi-feature fusion slam system attaching semantic in-variant to points and lines	7.5
Self-Supervised Learning of Lidar Segmentation for Autonomous Indoor Navigation	8.0
Long-Term Map Maintenance Pipeline for Autonomous Vehicles	9.0
Long-Term Map Maintenance in Complex Environments	7.0
Variational Bayesian approach to condition-invariant feature extraction for visual place recognition	8.0
A Robust LiDAR State Estimation and Map Building Approach for Urban Road	6.5
High-precision and robust localization system for mobile robots in complex and large-scale indoor scenes	8.5
Driven by vision: Learning navigation by visual localization and trajectory prediction	7.5
Ground Enhanced RGB-D SLAM for Dynamic Environments	8.5
Real-Time Robot Localization Based on 2D Lidar Scan-to-Submap Matching	7.0
A Life-Long SLAM Approach Using Adaptable Local Maps Based on Rasterized LIDAR Images	10.0
Visual Semantic Mapping and Localization Using Parameterized Road Lanes	7.5
Research on Autonomous Underwater Vehicle Homing Method Based on Fuzzy-Q-FastSLAM	4.0
PLSAV: Parallel loop searching and verifying for loop closure detection	8.5
Accurate Dynamic SLAM Using CRF-Based Long-Term Consistency	9.5