Table 1: List of SLAM / VO algorithms

Name	Refs	Code	Sensors	Notes
AprilSLAM	[1] (2016) [2] (2011)	Link	Monocular	Uses 2D planar markers
ARM SLAM	[3] (2016)	-	RGB-D	Estimation of robot joint angles
BatSLAM	[4] (2015) [5] (2013)	-	Sonar	Uses RatSLAM as back-end
BundleFusion	[6] (2011)	Link	RGB-D	Focus on 3D-scanning
CD SLAM	[7] (2011) [8] (2010)	-	Monocular	Focus on dynamic environments Custom descriptor
C-KLAM	[9] (2014)	-	Monocular, IMU	Usage of inter-keyframe information
CNN SLAM	[10] (2017)	-	Monocular	Depth prediction via CNN
COP SLAM	[11] (2015) [12] (2013) [13] (2010)	-	- (back-end)	Sparse pose-graph Scale drift aware (Lie groups)
CoSLAM	[14] (2013)	Link	Multiple cameras	Dynamic environments
DolphinSLAM	[15] (2016) [16] (2015)	Link	Monocular, IMU Sonar, DVL	Underwater (RatSLAM back-end) ROS implementation
DP SLAM	[17] (2004) [18] (2003)	Link	LIDAR	Particle filter back-end
DPPTAM	[19] (2015)	Link	Monocular	Dense, estimates planar areas
DSO	[20] (2016)	Link	Monocular	Semi-dense odometry Estimates camera parameters
DT SLAM	[21] (2014)	Link	Monocular	Tracks 2D and 3D features (indirect) Creates combinable submaps Can track pure rotation
DTAM	[22] (2011)	Link	Monocular	Dense, GPU reliant Robust to rapid motion
DVO	[23] (2013)	Link	RGB-D	Entropy based method for loops
EIF SLAM	[24] (2015) [25] (2014) [26] (2012) [27] (2011) [28] (2011)	-	- (back-end)	

	[29] (2008)			
EKF SLAM	[30] (2008) [31] (2006) [32] (2006) [33] (2004) [34] (2002)	-	- (back-end)	
ElasticFusion	[35] (2015)	Link	RGB-D	Windowed surfel-based fusion
FAB-MAP	[36] (2012) [37] (2010) [38] (2010) [39] (2009) [40] (2008)	Link	- (back-end)	Appearance-based loop closure detection
FastSLAM	[41] (2014) [42] (2013) [26] (2012) [43] (2004) [44] (2003) [45] (2002)	Link	- (back-end)	
FrameSLAM	[46] (2008)	-	Stereo	CenSure features
GPSLAM	[47] (2011)	-	RGB-D	Sparse map, dense occupancy grid
GP-SLAM	[48] (2017) [49] (2017)	Link		Sparse gaussian process regression for Lie groups
Graph SLAM	[50] (2010) [51] (2006) [52] (2006)	-	- (back-end)	
Hector SLAM	[53] (2011)	Link	LIDAR, IMU	ROS implementation No loop detection
KinectFusion	[54] (2012) [55] (2011) [56] (2011)	Link	RGB-D	Object segmentation Uses only depth sensor GPU reliant
Kintinious	[57] (2013) [58] (2013) [59] (2012)	Link	RGB-D	Extension of KinectFusion
LSD SLAM	[60] (2015) [61] (2014) [62] (2013)	Link	Monocular, Stereo	Semi-dense Runs on CPU
MonoSLAM	[63] (2014) [64] (2007)	Link	Monocular	Particle filter back-end

MR SLAM	[65] (2016) [66] (2013) [67] (2006) [68] (2006) [69] (2003)	-	Multiple robots/ sensors	
NID SLAM	[70] (2017)	-	Monocular	Robust to lighting and weather GPU reliant
OKVIS	[71] (2015) [72] (2014) [73] (2013)	Link	Stereo IMU	Focus on IMU integration
ORB SLAM	[74] (2017) [75] (2016) [76] (2015) [77] (2014)	Link	Monocular, Stereo (v2), RGB-D (v2)	ORB descriptor Runs on CPU Extension of PTAM
Pop-up SLAM	[78] (2016)	Link	Monocular	CNN predicts planar surfaces
PTAM	[79] (2007)	Link	Monocular	Parallel tracking and mapping
RatSLAM	[80] (2013) [81] (2009) [82] (2008) [83] (2006) [84] (2005) [85] (2004)	Link	- (back-end)	Map and pose estimation based on a competitive attractor network, inspired by rat's brains
RD SLAM	[86] (2013)	-	Monocular	Focus on dynamic environments
REBVO	[87] (2016)	Link	Monocular, IMU	Odometry on edges
REMODE	[88] (2014)	Link	Monocular	Dense GPU reliant
RFM SLAM	[89] (2016)	Link	- (back-end)	Relative feature measurements Reduced complexity
RGB-D SLAM	[90] (2012) [91] (2012)	Link	RGB-D	
RKSLAM	[92] (2016)	Link	Monocular, IMU	Robust to fast motion and rotation
ROVIO	[93] (2014)	Link	Monocular, IMU	Focus on IMU integration Relative representation
RSLAM	[94] (2011)	-	Stereo	Relative representation No global optimization

ScaViSLAM	[95] (2011)	Link	Stereo	Scale drift aware through using Lie groups
SEIF SLAM	[96] (2014) [97] (2007)	-	- (back-end)	
SeqSLAM	[98] (2017) [99] (2017) [100] (2013) [101] (2012)	Link Link	- (back-end)	Loop detection through image sequences Robust to extreme changes
SLAM++	[102] (2013)	-	RGB-D	Uses KinectFusion Real-time object recognition
SlamDunk	[103] (2015)	Link	RGB-D	Runs on CPU
SVO	[104] (2017) [105] (2014)	Link	Monocular	Focus on runtime (embedded devices) Needs a high framerate
UKF SLAM	[106] (2015) [107] (2014) [108] (2009)	-	- (back-end)	
V-LOAM	[109] (2015)	-	Monocular, LIDAR	Combination of camera and LIDAR
vSLAM	[110] (2005)	Link	LRF	Robustness to changes Combination of particle and Kalman filter in back-end

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