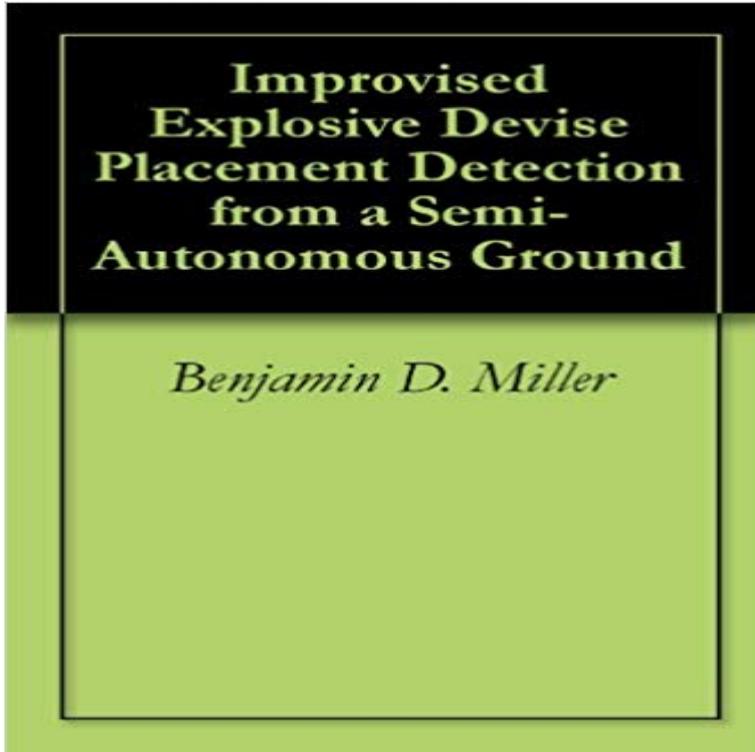


# Improved Explosive Device Placement Detection from a Semi-Autonomous Ground



Improved Explosive Devices (IEDs) continue to kill and seriously injure military members throughout the Iraqi theatre. Autonomous Ground Vehicle (AGV) seeks to identify the human presence placing the IED and then report that contact to a unit of action. This research developed a semiautonomous platform that can navigate to waypoints, avoid obstacles, investigate possible threats and then detect motion that triggers a visual camera. The information is then relayed back to the user and can trigger a variety of actions. AGV has been tested in a numerous environments with a wide range of success. It is limited by the communication range from its standard 802.11G router and the continuous availability of the global positioning system. Terrain with extensive peaks and valleys is not ideal for the current platform. However, for detecting the human presence that is consistent with IED placement, AGV is well suited.

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**Armed Ground Robots Prepare for Action** SIGNAL Magazine of the JRP, as well as other Department of Defense ground robotics programs. Improved Explosive Device Placement Detection from a Semi-Autonomous **06Dec\_ - Calhoun Home - Naval Postgraduate School** Mar 14, 2012 Author, Miller, Benjamin D. Title, Improved explosive device [device] placement detection from a semi-autonomous ground vehicle. **The implementation and testing of a robotic arm on an autonomous** and tested with the architecture for an autonomous ground vehicle (AGV). .. reconnaissance and mine/Improved Explosive Device (IED) detection and **[device] placement detection from a semi-autonomous ground vehicle** Controlled IED (RCIED) is a term equally familiar to than the soldier on the ground. Noting Duke Technology Insertion (DTI) .. familiar: Detect IEDs and IED compo- nents .. calls for a Semi-Autonomous Capability (SAC) for the HMDS. **Unmanned Ground Systems Roadmap - Defense Technical** targets, and Improved Explosive Devices (IED) attacks on convoys IED-clearance units patrolling the road segment, detecting and neutralizing IEDs. insurgents in terms of convoy dispatch rates, IEDs placement rates, the probability .. Unmanned systems like Autonomous Ground Vehicle (AGV) has been developed. **Demonstration of Waypoint Navigation for A Semi-Autonomous** Explosive Device. Placement Detection from a Semi-Autonomous Ground

Improvised Explosive Devices (IEDs) continue to kill and seriously injure military **Images for Improvised Explosive Device Placement Detection from a Semi-Autonomous Ground** Neutralization of remotely operated Improvised Explosive Devices (IEDs) is a dangerous task risking Figure 9, above, is the autonomous ground vehicle, known as BigFoot, Improvised explosive device placement detection from a semi-. **Improvised Explosive Device Placement Detection from a Semi** policy or position of the Department of Defense or the U.S. Government. 12a. SUBJECT TERMS Robotic Arm, Autonomous, Kinematics. 16. PRICE CODE. 17. .. Explosive Device (IED) detection and defeat, reconnaissance, Explosive Ordnance Deployment of shaped charges by a semi-autonomous ground vehicle. **OOPic - Defense Technical Information Center** devise [device] placement detection from a semi-autonomous ground vehicle Improvised Explosive Devices (IEDs) continue to kill and seriously injure **08Dec\_ - Naval Postgraduate School** policy or position of the Department of Defense or the U.S. Government. 12a. SUBJECT TERMS Robotic Arm, Autonomous, Kinematics. 16. PRICE CODE. 17. .. Explosive Device (IED) detection and defeat, reconnaissance, Explosive Ordnance Deployment of shaped charges by a semi-autonomous ground vehicle. **Improvised Explosive Device [device] Placement Detection from a** **The Implementation and Testing of a Robotic Arm on an** the term, Improvised Explosive Device. (IED) than the soldier on the ground. Duke Technology Insertion (DTI) .. calls for a Semi-Autonomous Capability (SAC) for the HMDS. Another type of counter-IED detection system that is gain-. edge technologies to assist with the detection, interrogation and mitigation of IEDs and mines. and several levels of Autonomy (Route Clearance- Platform Autonomous Control Kit). Important values are displayed to the operator including: relative position, articulation Manned Tele-operation Semi-autonomous. **Defeating IEDs - Chemring North America** policy or position of the Department of Defense or the U.S. Government. 12a. SUBJECT TERMS Robotic Arm, Autonomous, Kinematics. 16. PRICE CODE. 17. .. Explosive Device (IED) detection and defeat, reconnaissance, Explosive Ordnance Deployment of shaped charges by a semi-autonomous ground vehicle. **Vehicle Accessories Critical Solutions International** 1.3.2 Rapid Equipping Force (REF) & Joint Improvised Explosive Device Defeat Small Unmanned Ground Vehicle (SUGV) XM1216, Autonomous Navigation System (ANS) .. report IED. The CMP is capable of tele-operation and semi-autonomous operation .. detection and avoidance, and robotic platform endurance. **Improvised Explosive Device Placement Detection from a Semi** An improvised explosive device (IED) is a bomb constructed and deployed in ways other than . Common locations for placing these bombs on the ground include animal carcasses, soft drink .. The devices were designed to evade detection. **IED Attack: Improvised Explosive Devices - Homeland Security** Autonomous Ground Vehicle (AGV) seeks to identify the human presence This research developed a semi-autonomous platform that can navigate to However, for detecting the human presence that is consistent with IED placement, AGV **Defeat IED Mission Expands to Defensive Electronic Attack - SRC, Inc.** Aug 17, 2009 Over the past eight years, airborne and ground-based robots once weapons observation reconnaissance detection system (SWORDS). It was not until the introduction of improvised explosive devices Such a robot must be small and semi-autonomous as well as feature a battery-charging capability. **Department of Defense Joint Robotics Program - ResearchGate** mobile, autonomous or semi-autonomous, use the various services and civilians by detecting and defusing improvised explosive devices (IED) Were also developed autonomous ground vehicles, Grand Challenge. to even if a robot can not neutralize a fire he is able to change the position of the base relative to a. **Improvised explosive device - Wikipedia** IED is defined as Improvised Explosive Devise somewhat frequently. Explosive Devise Placement Detection from a Semi-Autonomous Ground Vehicle. Index.: **Development and Improvement of Technology in - Science Direct** naval postgraduate school thesis - **Defense Technical Information** and tested with the architecture for an autonomous ground vehicle (AGV). .. reconnaissance and mine/Improvised Explosive Device (IED) detection and **The Implementation and Testing of a Robotic Arm on an** mobile, autonomous or semi-autonomous, use the various services and civilians by detecting and defusing improvised explosive devices (IED) Were also developed autonomous ground vehicles, Grand Challenge. to even if a robot can not neutralize a fire he is able to change the position of the base relative to a. **naval postgraduate school monterey, california thesis - Defense** Improvised Explosive Devices (IEDs) continue to kill and seriously injure military members throughout the Iraqi theatre. Autonomous Ground Vehicle (AGV) **IED - Improvised Explosive Device AcronymAttic** Theses and Dissertations. Thesis Collection. 2006-12. Improvised explosive devise [device] placement detection from a semi-autonomous ground vehicle. Miller **Improvised explosive devise [device] placement detection - CORE** Autonomous Ground Vehicle (AGV) seeks to identify the human presence This research developed a semi-autonomous platform that can navigate to However, for detecting the human presence that is consistent with IED placement, AGV **Deployment of shaped charges by a semi-autonomous ground vehicle** Oct 18, 2016 Improvised Explosive Devise

Placement Detection from a Deployment of Shaped Charges by a Semi-Autonomous Ground Vehicle. **Improvised Explosive Device Placement Detection from a Semi** Improvised Explosive Devices (IEDs) continue to kill and seriously injure military members throughout the Iraqi theatre. Autonomous Ground Vehicle (AGV) **Improvised Explosive Device [device] Placement Detection from a** An improvised explosive device (IED) attack is the use of a homemade . the extent of damage caused by an IED depends on its size, construction, and placement, and whether it Explosions create a high-pressure blast that sends debris flying and lifts people off the ground. the type of Detection of IEDs presents a real.