

ESEP Profiles

The DoD Engineer and Scientists Exchange Program, or ESEP, supports science and technology through international cooperation in military research, development, and acquisition through the exchange of defense scientists and engineers. ESEP provides on-site assignments for U.S. military and civilian scientists and engineers in foreign government organizations and reciprocal assignments of foreign scientists and engineers in U.S. government organizations. ESEP supports current USAF science and technology requirements by seeking specific foreign technologies. It provides insight into the technology and project management techniques of foreign laboratories and centers and opens areas of possible technical cooperation.

John D. Corley

Air Force Research Laboratory
Munitions Directorate

Education:

MS in Civil Engineering,
University of South Florida
BS in Chemical Engineering,
University of Missouri

Current Assignment:

Fraunhofer Institut Kurzzeitdynamik, Ernst-Mach-Institut (EMI),
Freiburg, Germany

Description of Work:

Mr. Corley's research assignment at EMI involves the performance and survivability of high explosives in penetrating munitions. Mr. Corley has evaluated the blast performance of two AFRL/MN developed explosive formulations in EMI's 3-chamber system, including AFX-757 which was recently selected as the explosive fill for the Joint Air-to-Surface Standoff Missile (JASSM). Regarding warhead survivability, Mr. Corley is studying the mechanical properties of high explosives to better understand why high explosives in penetrator munitions sometimes explode prior to reaching their intended targets and how such undesirable reactions can be prevented. This work forms the basis of Mr. Corley's doctoral dissertation at the German University of the Armed Forces which he is preparing during his exchange assignment. During his USAF career, Mr. Corley has managed a variety of projects in technology areas ranging from Insensitive Munitions to Demilitarization to Enhanced Weapons Effects. He has been active in numerous national and international cooperation panels including The Technical Cooperation Program (TTCP) WAG-11 on Energetic Materials and AF Data Exchange Agreement (DEA)-7304-Physics of Explosives. He has served as Chairperson of the Joint Army, Navy, NASA, Air Force (JANNAF) Propulsion Systems Hazards Subcommittee and Chairman of the Four Power Air Senior National Representatives Long Term Technology Project on Insensitive High Explosives for Penetrators.



John D. Corley

Research Highlights

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