

Welcome to a New Forum for Directed Energy Research and Technology

Many are aware that Archimedes is said to have invented burning mirrors, turning them on ships to set them afire and helping defend his hometown of Syracuse when the Romans invaded in 214 BC. The modern quest for effectively using electromagnetic energy for defense applications probably began in 1935, when the British Admiralty is said to have petitioned Sir Robert Watson-Watt to investigate the possibility of using a radar-like device to boil a pilot's blood. Now, more than 60 years since the British Admiralty made that initial request, the possibility of electromagnetically based weapons systems is becoming a reality. These directed energy weapons are entering the war fighter's arsenal and are being recognized as an increasingly practical means of precisely and effectively disabling or destroying an opponent's defenses. The further development and use of directed energy (DE) systems depends in large part on the ease and availability of basic technical information pertinent to the field. This is the mission of DEPS, the Directed Energy Professional Society, and it is with great pleasure on behalf of DEPS that we welcome the readers of this the founding issue of the *Journal of Directed Energy (JDE)*. Though other forums for publishing archival-quality material related to DE exist, they are broadly scattered and generally do not focus on the issues that are a direct concern of the DE community. The *JDE* concerns itself with all aspects of directed energy ranging from generation to propagation, control, effects, and all system-level issues. The interest and support of the DEPS Board of Directors made the appearance of this new journal possible, underscoring their commitment to encouraging development of the growing field of directed energy systems.

The papers appearing here cover both high-power microwave (HPM) and high-energy laser (HEL) applications and were chosen to cover a broad range of interests and technical levels of sophistication; the authors represent a cross section of government, academia, and industry. Included in this issue are papers dealing with system-level HEL concerns for Naval applications, the prototyping of RF weapons, tactical HEL design, pulsed power HPM systems, as well as papers dealing with the propagation and control of HEL beams.

Along with DEPS, the editors expect that this journal will fill a niche for the directed energy professional, both researcher and end-user alike, and will be the first of a continuing series providing a forum for quality research in this field.

P.M. Sforza and H. Zmuda, Editors