Dr. Eric W. Davis

Dr. Eric W. Davis is the Chief Science Officer of EarthTech Int'l, Inc. and the Institute for Advanced Studies at Austin in Austin, Texas; and he is the Owner/Chief Executive/Chief Scientist of Warp Drive Metrics which does consulting and contracting for the Department of Defense. He is also an Adjunct Professor in the Early Universe, Cosmology and Strings Group at the Center for Astrophysics, Space Physics & Engineering Research at Baylor University in Waco, TX. His research specializations and interests include breakthrough propulsion physics for interstellar flight, interstellar flight science, beamed energy propulsion, advanced space nuclear power and propulsion, directed energy weapons, future and transformational technology, general relativity theory, quantum field theory and elementary particle physics, condensed matter physics, quantum gravity theories, experimental quantum optics, and SETI contact and xenoarchaeology. Since 1984, Dr. Davis has worked in academia and industry and has also been a contractor/consultant to the U.S. Air Force, Air Force Research Laboratory (AFRL), Department of Defense (DoD) agencies, Department of Energy, NASA, and federal law enforcement agencies. His past and present research activities include developing megawatt-class laser propulsion physics, systems design and performance metrics, and mission applications for the U.S. Air Force laser Lightcraft vehicle flight test program; design studies for ultrahigh-power laser experiments to explore the structure/properties of the quantum vacuum and spacetime, and the corresponding production of antimatter from the quantum vacuum; design and perform quantum optics tomography experiments to produce and measure negative quantum vacuum energy and experimentally test its predicted constraints; theoretical studies on the multilayered quantum vacuum structure and its applications, general relativistic time machines and causality, superluminal photons in curved spacetime, gravastars and black holes, and quantum entanglement/teleportation and nonlocality; theoretical studies on traversable wormhole and warp drive spacetimes for faster-than-light space propulsion; and perform feasibility studies on laser inertial confinement fusion, inertial electrostatic confinement fusion, Z-pinch fusion, and dense plasma focus fusion for space propulsion. Dr. Davis's 7-years of experience as an educator includes teaching at Phoenix College (Phoenix, AZ); the Amphitheater School District, Prescott College, and Pima College (Tucson, AZ); the National Science Foundation-Summer Science Program at The Thacher School (Ojai, CA); the University of Maryland University College and USAF Pacific Air Force Command (Republic of Korea); and the University and Community College of Southern Nevada (Las Vegas, NV). Dr. Davis is the co-editor/author of the peer-reviewed academic research monograph *Frontiers of Propulsion Science* (American Institute of Aeronautics and Astronautics Press, 2009, 2012). He also authored/co-authored many AFRL and DoD technical reports, peer-reviewed symposium and technical journal papers, chapters in books, contributions to books, conference papers, award-winning STAIF and AIAA conference papers, and popular articles. He was recognized with awards in 1993-1994 and 1996 by the American Institute of Aeronautics and Astronautics for outstanding contributions to national defense and space public policy. He earned an A.A. in Liberal Arts (1981) from Phoenix College in Phoenix, AZ, a B.Sc. in Physics (1983) and a Ph.D. in Astrophysics (1991) from the University of Arizona in Tucson, AZ. His graduate

research included quantum gravity studies [working with Prof. Michael Scadron and Prof. Willis Lamb, Dr. Robert L. Forward (Hughes Research Labs, Malibu, CA), and Prof. Richard Feynman (CalTech)] and a proton-antiproton annihilation rocket propulsion study [supervised by Prof. Theodore Bowen, Dr. John Callas (NASA JPL-CalTech), and Dr. Robert L. Forward (Hughes Research Labs, Malibu, CA)] in the Department of Physics in 1984-1990; infrared and radio extragalactic astronomical research and space mission work on the ESA-NASA Infrared Astronomical Satellite mission at the Steward Observatory in 1984-1985; and planetary astrophysics research and space mission work on the NASA-JPL Voyager 1 & 2 missions to the outer planets at the Voyager Ultraviolet Spectrometer Lab in the Lunar and Planetary Laboratory in 1985-1991. Dr. Davis is a Fellow of the British Interplanetary Society, lifetime Associate Fellow of the American Institute of Aeronautics and Astronautics, member of the New York Academy of Sciences, member of the Directed Energy Professional Society, lifetime member of SPIE, member of the American Astronomical Society, and member of the Association of Former Intelligence Officers. He is a practitioner and advisor at the Tau Zero Foundation, past member of the 100-Year Starship Study science advisory board, and past member of the Icarus Interstellar technical advisory board. He is also a member of the international editorial board of the Journal of the British Interplanetary Society and has peer-reviewed numerous papers for a dozen technical physics, astronomy, and astronautical engineering journals. He has also served on, chaired, co-chaired, or organized numerous technical committees, technical paper sessions, workshops, conferences, symposia, and congresses on the topic of deep space and interstellar flight, breakthrough propulsion physics, and gravitational wave physics. Dr. Davis has appeared in, consulted and contributed to many American and BBC television science programs, documentary film projects, motion picture industry science fiction films in pre-production, and many online/print news and magazine articles on faster-than-light interstellar flight and breakthrough propulsion physics.

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