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Dimitri A. Grivas, PhD

ARMA International, LLC –President
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Institute for Infrastructure Asset Management (IIAM)- Executive Director
Grivas@infrastructureinstitute.org

Education

Ph.D. in Civil Engineering

Purdue University, 1976

M.S in Civil Engineering

Purdue University, 1973

B.S. in Civil Engineering

National Technical University of Athens, 1972

Academic Experience

1975-2004	Professor of Civil Engineering Rensselaer Polytechnic Institute (RPI)
1982-1986	Visiting Professor University of Stellenbosch, South Africa
1988-2004	Affiliated Professor Dept. of Decision Sciences and Engineering (RPI)
1989-1990	Visiting Professor EPFL, Lausanne, Switzerland

Major Management and Business Experience

2004-Present	President ARMA International, LLC.
1998-Present	Executive Director Institute for Infrastructure Asset Management (IIAM)
2003-Present	Exec. Dir. and Founder GPR Institute (GPRI)
2010-Present	Founder global Institute for Infrastructure Asset Management (gIIAM)
1994-1997	Director Center for Infrastructure and Transportation Studies (RPI)
1993-2005	President and Founding Partner Arista International, Inc.

Dr. Dimitri Grivas has extensive experience in creating and managing organizations involving individuals and corporations having diverse backgrounds, interests, and functions. Dr. Grivas was also a Professor of Civil Engineering at Rensselaer Polytechnic Institute for 29 years, where he created and directed the Center for Infrastructure and Transportation Studies. Dr. Grivas has since shared his passion and expertise on infrastructure asset management through lecturing and consulting at academic and industrial organizations worldwide. He is also the author of over 150 articles and published studies spanning the spectrum of infrastructure topics.

Recent Government Grants and Projects

- **(2013-Present) NYSEDA Project #30526—Heavy Truck Traffic Congestion Prevention and Real-Time Mitigation:** Created a navigation and distribution system called MuniRoute™ that determines the most efficient, safe, and cost-effective route for commercial vehicles while maintaining the minimal level of energy use and emissions.
- **(2014-Present) FHWA Task Order #13_003—Highway Grade Characterization and Operating Efficiency Methods, Tools, and Data Development:** Developed a method for collecting and compiling Interstate data and extracting elevation data to build a 3D street centerline database for the continental United States Interstate system.

Major Funded Projects, Initiatives and Clients

Lead researcher and developer of major US and International projects and clients, including:

- "Benchmarking Highway and Bridge Performance in New York State," sponsored by the NYS Roadway Improvement Coalition, 2000 - which formed the basis for the Rebuilt New York Bond
- "Life-Cycle Cost Analysis (LCCA) Procedure for Pavements" project for NYS Energy Research and Development Authority—Methodology and Software development
- Landslide Hazard Analysis for Pipelines (Nova Gas Transmission, Canada)
- Expert System for Pavement Management (Swiss Federal Government)
- Municipality Street Management System –Methodology, Survey, Software
- Reliability Analysis of Soil Structures during Earthquakes

Successful projects have been developed for such clients as:

- American Association of State Highway and Transportation Officials
- American Standard Testing Materials, Inc.
- Australian Research Grants Committee
- Brookhaven National Laboratory
- Bruinette Kruger Stoffberg, Inc.
- Swiss Federal Office of Roads and Canton of Neuchatel
- U.S. Federal Highway Administration
- National Energy Board of Canada
- New York State Energy Research and Development Authority
- SNAM Italian Gas Transmission Companies
- South African Council for Scientific and Industrial Research (CSIR)
- US Army Corps of Engineers
- USDOT Research and Special Projects Administration



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Publications, Short Courses, Lectures and Specialized Workshops

Author and co-author of numerous technical publications, courses, articles and publications, including:

- Over 120 articles published in technical journals and conference proceedings
- Over 100 technical reports, manuals, and guides
- Microsoft Encarta Multimedia Encyclopedia: planning, construction, etc. of bridges
- Custom courseware, technology transfer materials, workshops, training programs for hundreds of events and courses
- Development of proprietary software, methodologies and technical guides

NYSERDA Project #30526—Heavy Truck Traffic Congestion Prevention and Real-Time Mitigation:

- **MuniRoute™ - A Commercial Vehicle Navigation and Distribution System**
- **With support from NYSERDA, this software was developed to combat the issues of livability, safety, and environmental impact caused by the increasing volume of commercial vehicle traffic.**
- **Tasks for this project included:**
 - Data Layer Review, Collection, and Import
 - Routing Algorithm Design
 - Initial Coding, Testing, and Review
 - Code Adjustments
 - Final Testing and Code Adjustments
 - Documentation
 - Web Site Design, Review, and Implementation
 - Marketing Plan and Materials
- **Unique features of the MuniRoute™ system include:**
 - Uses three-dimensional GIS-based street network database
 - Generates routes that minimize distance, time, or both, and thereby minimizes energy use and CO₂ emissions.
 - Creates routes involving minimal time spent idling in traffic congestion by avoiding known, or developing, hotspots.
 - Ensures safety through knowledge of road geometric dimensions as well as bridge weight and height limit restrictions.
 - Prevents bridge strikes by trucks and buses as it accounts for vertical clearance restrictions in generating routes.
 - Can be customized, as MuniRoute™ staff can create versions tailored to applications pursued by clients.
 - Accommodates both point-to-point and multi-stop routes
 - Can use and display various basemaps, including cartographic and ortho-imagery.
 - Enables export of routes for downloading to mobile devices or display within Google Earth.
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MuniRoute™ Cooperative Elements:

- **Throughout the process of creating MuniRoute™, many other entities interacted with and participated in the development of the system. Such entities include:**
 - The City of Schenectady, NY
 - NYS ITS
 - Frito-Lay, Inc.
 - Price Chopper Supermarkets
 - Leonard's Express
 - NYS Motor Trucking Association
 - NYSDOT
 - Stewart's Shops
 - Vnomics Corp

FHWA Task Order #13_003—Highway Grade Characterization and Operating Efficiency Methods, Tools, and Data Development:

- **A collaborative effort between the teams at ARMA International and the STAR Lab at the University of Washington**
- **A complete, 3D centerline for the US Interstate system has a wide range of applications from governmental purposes to use by the public for recreational means, etc.**
- **Tasks for this project include:**
 - Methods to Acquire Public Roadway Elevation Data
 - Elevation Data for All Interstate Highways
 - Grade Effects on Fuel Efficiency
 - Grade Effects on Congestion
 - Literature Review Report on Grade Effect on Bicycle Routing