

*INVITATION
TO ATTEND THE
THIRD JOINT MILITARY/CIVILIAN SEMINAR
ON
INTELLIGENT VEHICLE TECHNOLOGY TRANSFER*

As the program sponsor, the **Department Of Defense** Space and Naval Warfare Systems Command (SPAWAR) cordially invites you to attend the Third Joint Military/Civilian Seminar on Intelligent Vehicle Technology Transfer (IVTT), which is also supported by: the **Department of Transportation** (DOT) Intelligent Transportation Systems Joint Program Office (DOT ITS JPO); the Association for Unmanned Vehicles International (AUVSI); and the Intelligent Transportation Society of America (ITS America); and which is hosted by the **Department of Commerce** (DOC) Intelligent Systems Division of the National Institute of Standards and Technology (ISD NIST).

Dates: Wednesday and Thursday, **13-14 February 2008**

Time: 8 A.M. (Please See Agenda Below)

Location: The National Institute of Standards and Technology, Gaithersburg, Maryland, and the Holiday Inn, Gaithersburg, Maryland (please see Directions below)

Conference Fee: \$250 (Includes Proceedings, Two Breakfasts, Two Lunches, One Dinner, Four Refreshment Breaks, and a tour of the NIST Autonomous Intelligent Vehicle Laboratory).

Accommodations: Are the responsibility of the participant – (**Discounted Room Rates** are available at the Holiday Inn Gaithersburg. Please See Information Below)

Enclosed: Announcement with information on Conference Purpose, Background, Agenda, Registration Form, Directions and Accommodations

Please RSVP with your Registration by 5 February 08. Either use the Registration Form below or register directly at our website: www.ivtt.org. Please register early to ensure admittance.

Dr. Robert Finkelstein
Robotic Technology Inc
301-983-4194 Voice
301-983-3921 Fax
301-980-8402 Cell
RobertFinkelstein@compuserve.com

We look forward to your participation in this important Seminar.

ANNOUNCEMENT OF THE THIRD JOINT MILITARY/CIVILIAN SEMINAR ON INTELLIGENT VEHICLE TECHNOLOGY TRANSFER

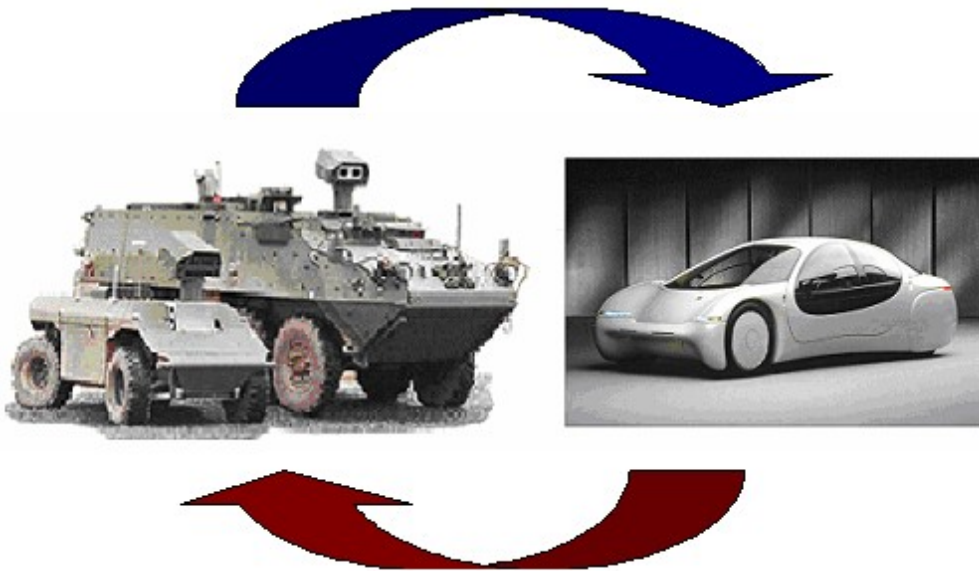
Wednesday and Thursday, 13-14 February 2008

At The

Red Auditorium

Administration Building 101

National Institute of Standards and Technology,
Gaithersburg, Maryland 20899



The **Space and Naval Warfare Systems Command (SPAWAR)** is sponsoring the **Third Joint Military/Civilian Seminar on Intelligent Vehicle Technology Transfer (IVTT)**. The conference is also supported by the **Department of Transportation** Intelligent Transportation Systems Joint Program Office (DOT ITS JPO); the **Army Tank Automotive Research, Development and Engineering Center (TARDEC)**; the **Association for Unmanned Vehicle Systems International (AUVSI)**; the **Intelligent Transportation Society of America (ITS America)**; and it is hosted by the Intelligent Systems Division of the **National Institute of Standards and Technology (ISD NIST)**.

The Seminar is **unclassified** and open to all interested participants from **government, industry, academia, and media**, whether associated with the **defense or automotive industries**. Because of security constraints, all attendees **must register in advance** of the Seminar (there is no provision for on-site registration). The **fee** is a modest \$250, which includes proceedings, two breakfasts, two lunches, one dinner, four refreshment breaks, and a tour of the NIST Autonomous Intelligent Vehicle Laboratory. **(Please see the enclosed registration form or register at our website, www.ivtt.org).**

Robotic Technology Inc. was tasked to support **SPAWAR** with this conference and facilitate the Intelligent Vehicle Technology Transfer Process. **Please distribute this Announcement to anyone who might be interested in attending.**

PURPOSE OF THE SEMINAR

The **objective** of this Seminar is to continue developing the foundation and framework for establishing a **technology transfer process** that will be useful for the development of intelligent vehicles for **military and civilian applications and markets**.

The Department of Defense (DOD) and the Department of Transportation (DOT) are both supporting the development of what are known as **intelligent vehicles**. The **DOD** intends to deploy a variety of autonomous intelligent vehicles (robots) to **reduce human casualties** on the battlefield and **increase the global combat efficiency and effectiveness** of the U.S. military against conventional and unconventional forces. The **DOT** supports intelligent vehicle technology to **reduce human casualties** on the nation's highways and increase the **efficiency and effectiveness of the U.S. transportation system**. The military's rapid progress in intelligent vehicle technology can directly benefit the commercial development of intelligent cars, trucks, and buses, reducing time and expense for the automotive industry. Conversely, technology transferred from the commercial sector to DOD, and its industry contractors, will reduce the cost and increase the availability of commercial-off-the-shelf (COTS) intelligent vehicle systems and components for military services. Society as a whole will benefit from the **mutual technology transfer** between the military and commercial sectors.

A **formal process** for sharing – and leveraging – intelligent vehicle technology among various government agencies and their industry and academic stakeholders will facilitate the advent of intelligent vehicles, a **quickly emerging and transformational technology**, which offers enormous potential benefits for the military and civil sectors alike in the 21st century. U.S. government agencies which will benefit from intelligent vehicle technology transfer include: the Department of Defense (DOD), Department of Transportation (DOT), Department of Energy (DOE), and the National Aeronautics and Space Administration (NASA). This Seminar follows the previous successful IVTT Conferences and Workshops and which were held during 2005, 2006, and 2007. An **IVTT Website** (www.ivtt.org) is currently being developed as a central mechanism for effecting intelligent vehicle technology transfer.

DOD INTELLIGENT VEHICLE TECHNOLOGY AND PROGRAMS

Advanced intelligent vehicle technology which the DOD can transfer to DOT includes:

- **Control Systems**
- **Sensor Systems**
- **Mobility Systems**
- **Interface Systems**

The DOD is supporting the development of a number of intelligent ground vehicles through several **intelligent vehicle programs**, including the **Joint Robotics Program (JRP)**, the **Future Combat System (FCS)** Program, and programs supported by the

Defense Advanced Research Projects Agency (DARPA) and other agencies. The DOD programs are developing and fielding first-generation unmanned ground vehicles with current technologies while pursuing advanced technologies critical to autonomous vehicles that can be inserted into first generation vehicles in an evolutionary manner, to be followed by second generation intelligent, autonomous vehicles. The JRP, for example, is currently developing **22 distinct intelligent vehicle systems** across a variety of weight classes, from less than 8 pounds (micro) to more than 30,000 pounds (large). DOD expects **vehicle intelligence** to be sufficient for **complete autonomy** to be achieved by 2020, whereupon human intervention required for the vehicles to perform their missions will approach zero. Well before 2020 – perhaps as soon as 2010 – DOD expects vehicles to possess an appreciable level of **intelligent autonomy**.

Intelligent vehicle systems are under development by **DOD agencies** including:

- **Robotic Systems Joint Project Office**
- **Air Force Research Laboratory (Robotics Group)**
- **Program Management Office for EOD (Navy)**
- **US Army Tank Automotive Research, Development and Engineering Center (TARDEC)**
- **Space and Naval Warfare Systems Center (SPAWAR)**
- **Air Armament Center Agile Combat Support (AAC/YBC) Program Office**
- **Product Manager, Force Protection Systems**
- **Aviation and Missile Research, Development & Engineering Center (AMRDEC)**
- **Defense Advanced Research Projects Agency (DARPA)**
- **Product Manager, Robotic and Unmanned Sensors**
- **Army Research Laboratory (ARL)**

DOT INTELLIGENT VEHICLE TECHNOLOGIES

The **DOT's vision for intelligent vehicles** is a system involving roads, vehicles, and drivers, where drivers:

- Operate in a significantly **safer** environment
- Enjoy **greater mobility and efficiency** as a result of the widespread use of vehicle-based autonomous and infrastructure-cooperative **driving assistance** features

DOT predicts that the widespread deployment of advanced **driver assistance** systems can significantly reduce motor vehicle crashes. Each year more than **41,000 Americans die** as a result of about **6 million crashes** – the equivalent of 115 each day, or one every 13 minutes. (According to the Association for Safe International Road Travel, **internationally** there are more than **1 million deaths** and **50 million injuries** from crashes each year.) While the magnitude of the highway death toll is shocking, the impact of highway injuries is even greater. Traffic crashes injure more than 3.2 million Americans per year, with crash survivors often sustaining multiple injuries and requiring long hospitalizations. Crashes cost the U.S. economy more than **\$230 billion a year**

and consume a greater share of national health care costs than any other cause of illness or injury. While new technology offers potential safety solutions, it also poses new problems - some in-vehicle technology may become a dangerous distraction to drivers. The National Highway Traffic Safety Administration (NHTSA) estimates that **driver inattention**, from all sources, causes 20 to 30 percent of the 6.3 million accidents per year.

Because **driver error** remains the leading cause of crashes, cited in more than 90 percent of police crash reports, the intelligent vehicle mission is to reduce the number and severity of crashes through driver assistance systems. These safety systems, now in various stages of development, assume *partial control* of vehicles to avoid collisions. The focus on **preventing** crashes, by helping drivers avoid hazardous mistakes, is a significant new direction for DOT safety programs; in the past the primary focus was on crash **mitigation** (i.e., alleviating the severity of crash-related injury to persons and property).

The current DOT intelligent vehicle vision is focused on **driver assistance systems**. Driver assistance systems warn drivers of danger or, in more advanced versions, intervene to prevent or mitigate accidents (e.g., intermittent automated braking or steering). They can save lives. But the technology transfer between DOD and DOT should include consideration of the technical, economical, and social issues concerning ultimate **autonomy for cars, trucks, and buses**, just as the military intends for combat vehicles. In a future **civil version** of the military's autonomous vehicles, the owners or passengers will be able to enter the car at home, order it the destination, have it proceed to the destination (while the passengers read, talk on the phone, work on the computer, sleep, or watch videos), get dropped off at their destinations, and then have the car park itself. The "built-in chauffeur" will be **safer** and **more efficient** than a human driver. Also, the increasing millions of baby boomers who will soon transform into infirm elderly and lose their driving privileges will gain the freedom to travel in their own cars without the debilitating dependence on others. New kinds of enterprises will arise to support, and service this transformative technology, while old ones disappear.

A **technology transfer** between DOD and DOT will cover the spectrum of interim technology for driver assistance and semi-autonomy, as well as advanced technology for full autonomy. **Autonomous ground vehicles** have been successfully demonstrated many times – but in constrained circumstances. They can travel at high speed on roads with light traffic. They can stay in a lane, or safely change lanes to pass slower vehicles (checking traffic in the adjacent lane before doing so). They can travel off-road, over rough terrain and through vegetation, day or night. As part of the Future Combat System (FCS), the DOD intends to field autonomous ground vehicles within the decade. However, autonomous vehicles cannot yet deal with the complexity of intersections, traffic, and pedestrians, whether of Times Square or downtown Rome. The Defense Advanced Research Projects Agency (DARPA) sponsored the 150-mile cross-country Grand Challenge, which was successfully completed by several autonomous vehicles in only the second year of competition. In 2007 it sponsored the first **Urban Challenge**, where autonomous vehicles had to negotiate the course in an

environment designed to replicate the complexities of intersections, traffic signals, traffic, and pedestrians. Remarkably, it was successfully completed in the first year by first, second, and third place winners. A General Motors vice president, a member of the winning team, stated that **autonomous cars** could be **commercially available by 2015**.

Since the 1990 initiation of the DOT's Intelligent Transportation System Program, there has been remarkable progress in commercializing advanced technology in the nation's vehicles and transportation system. Some of the technology, like the Global Positioning System (GPS) and infrared sensors, originated with the DOD. **Current and near-term commercially-feasible intelligent vehicle technology** (which largely did not exist at the birth of ITS in 1990) includes: GPS navigation and automated crash notification; adaptive cruise control; road-departure warning; crash warning and automated crash avoidance; near object detection system (back-up object detection); automated parking; automated lane tracking and lane change warning; and rollover prevention.

The technology for enabling **autonomous intelligent cars and trucks** will have a **transformational** – or disruptive – effect on the **automotive industry** and society in general. It is critical that vehicle manufacturers and their vendors enhance the intended beneficial consequences and mitigate the unintended adverse consequences of this inevitable technology.

STEERING COMMITTEE

A **Steering Committee** of volunteers was formed at the initial Workshop held at NIST on 26 July 05, further expanded at the Conference held 2-3 November 05 and with subsequent Workshops. The **purpose** of the Steering Committee is to provide valuable guidance and assistance for the initiation and subsequent operation of the IVTT. The Steering Committee will convene for a meeting once or twice a year, and participate in IVTT on-going decision-making through the proposed IVTT website, email, and voice communications. Anyone interested in participating is encouraged to join by contacting: RobertFinkelstein@compuserve.com.

The current members of the Steering Committee are:

Richard Abraham, Staff Specialist, Autonomous Systems, Army TARDEC and OUSD
703-588-7419; richard.abraham@osd.mil

Bilal Ayyub, Professor & Director, Center for Technology & Systems Mgt., U. of MD
301-405-1956; ayyub@umd.edu

Dick Bishop, President, Bishop Consulting
410-461-8067; RichardBishop@mindspring.com

Roger Bostelman, Manager, Intelligent Control of Mobility Systems (ICMS), NIST
301-975-3426; bostel@cme.nist.gov

Nina Buck, VP, Strategy Analytics
617-614-0724; nbuck@strategyanalytics.com

Wendell Chun, Manager, Robotics, Lockheed-Martin Corp.
303-971-7945; wendell.h.chun@lmco.com

Beth Cryderman-Moss, Program manager, PTAC
989-635-3561; mossb@thumbworks.org

Darwin Dahlgren, President, Dahlgren LLC.
260-407-1750; ddahlgren@zoominfosystems.com

Andy Dallas, VP, Soar Technology, Inc.
734-327-8000 x214; adallas@soartech.com

Jim Daniels, Manager, Marketing and Sales, Northrop Grumman Remotec
865-621-0391; Jim.Daniels@ngc.com

Jason Dean, President, Dean Technologies Inc.
516-537-2101; bethesolution@aol.com

Conal Deedy, Manager, Volvo Technology of America
336-393-2647; conal.deedy@volvo.com

Jeff Donne, Manager, Bosch Research and Development USA
412-323-9405; Jeffrey.Donne@RTC.Bosch.com

Robert Finkelstein, President Robotic Technology Inc.
301-983-4194; RobertFinkelstein@compuserve.com

Francis X. Govers III, Sr. Robotics Systems Engineer, SAIC, FCS UGV Program
512-366-7830; francis.x.govers.III@saic.com

Mark Huber, Manager, Active Safety, Daimler Chrysler
248-576-5569; MAH@DCX.com

Cliff Hudson, Deputy for Business, SPAWAR
614-524-3581; cliff.hudson@navy.mil

Edison Hudson, Deputy Director Research, iRobot Corp.
781-418-3409; ehudson@irobot.com

Jessica Jordan-Pedersen, COO, RE2
412-681-1697; jessica@resquared.com

Dmitri Khijniak, Product Manager, Mobility Solutions, Technocom Corp.
760-438-5115x145; dkhijniak@technocom-wireless.com

Tomasz Konofalski, President/CEO, CAD Helper
586-286-0355; tomasz_konofalski@hotmail.com

Syed M Mahmud, Associate Professor, Wayne State University
313-577-3855; smahmud@eng.wayne.edu

Scott McCormick, President, Connected Vehicle Association
734-354-0546; sjm@connectedvehicle.org

Tim Mellon, Director, Government Affairs, SAE International
202-463-7318; Tim@sae.org

Thomas Milkie, Director, Scientific Applications and Research Associates, Inc.
714-224-4410 x208; tmilkie@sara.com

Umit Ozguner, Professor, Ohio State University
614 292 5940; ozguner.1@osu.edu

David Porreca, Director, Strategic Partnerships & Business Development, SAE
724-772-7186; DPorreca@sae.org

Dale Puette, Manager, Artillery and Mortar Section, Marine Corps Program
760-822-8831; dale.puett@navy.mil

Frederic Ramiouille, VP & General Manager, Honeywell Aerospace
602-436-4146; frederic.ramiouille@honeywell.com

James Rosbe, President, Soar Technology
734-327-8000 x206; rosbe@soartech.com

Jay Rosenblum, Director, Business Development, General Dynamics Robotic Systems
410-876-9200; jrosenblum@gdrs.com

Glenn Rossi, Chief Engineer, Boeing, Future Combat Systems Program
610-745-7440; glenn.t.rossi@boeing.com

John Schab, Program Manager, Aberdeen Test Center
410-278-9415; john.schab@atc.army.mil

Ehsan Sheybani, Assistant Professor, School of Engineering, Virginia State University
(804) 524-5722; esheyban@vsu.edu

Edzko Smid, President, JADI, Inc.
(248) 828-0594 edzko.smid@jadi.us

Charles Stuart, President, Competitive Enterprise Solutions
985-290-9261; cstuart@cesllc.com

Ehsan Taqbeem, Portfolio Manager, Daimler Chrysler
248-576-0890; Et12@DaimlerChrysler.com

David Thomas, Associate Director, Intelligent Systems, TARDEC
586-574-5008; thomadav@tacom.army.mil

Bill Uhl, Account Manager, dSPACE, Inc.
303-388-9664; buhl@dspaceinc.com

Alan J. Vayda, Senior Scientist, Soar Technology, Inc.
734-327-8000 x355; alan.vayda@soartech.com

Ljubo Vlacic, Prof. and Director, Intelligent Control Systems Laboratory, Griffith Univ.
+61-7-3735-5024; l.vlacic@griffith.edu.au

Walter Weisel, Chairman/CEO, Innova Holdings, Inc.
239-466-0488; walt@innovaholdings.com

Jim Ziegler, CEO, MechFoundry
517-783-1166; jim.ziegler@mechfoundry.com

AGENDA: Wednesday, 13 February 08

- 0800-0900** Continental Breakfast and Networking
- 0900-0915** Welcome to the Third Seminar
Presenter: Dr. Elena Messina, Acting Chief, Intelligent Systems Division, NIST
- 0915-1000** Overviews of Intelligent Vehicle Technology and the Technology Transfer Process
Presenter: Dr. Robert Finkelstein, President, Robotic Technology Inc.
- 1000-1045** Intelligent Vehicle Technology and Programs in the DOD
Presenter: Mr. Cliff Hudson, Deputy for Business, SPAWAR
- 1045-1115** Break and Refreshments
- 1115-1145** The DARPA Urban Challenge: Racing With Autonomous Intelligent Vehicles
Presenter: Dr. Norm Whitaker, Special Assistant to the Director, DARPA
- 1145-1215** Developing Autonomous Vehicles to Standards
Presenter: Mrs. Ellen Purdy, Director, Joint Ground Robotics Enterprise, OSD
- 1215-1315** Lunch and Networking
- 1315- 1345** Intelligent Vehicles: Evolution Toward Autonomy
Presenter: Col. Tom Braden, PM, Unmanned Ground Vehicle Joint Program Office
- 1345-1415** Autonomous Intelligent Vehicle Research and Development at General Dynamics
Presenter: Mr. Charles Shoemaker, Director of Research and Development, GD Robotic Systems
- 1415-1445** Update on Autonomous Intelligent Vehicles in the Future Combat System (FCS)
Presenter: Mr. Glenn Rossi, Manager, Future Combat Systems Program, Boeing
- 1445-1515** Advanced Autonomous Intelligent Vehicle Technology at NIST
Presenter: Mr. Roger Bostelman, Manager, Intelligent Control of Mobility Systems, NIST
- 1515-1545** The Future of Intelligent Control and Cognition for Intelligent Vehicles
Presenter: Dr. James Albus, Senior NIST Fellow, NIST
- 1545-1600** Break and Refreshments
- 1600-1630** DOT Support for the Development of Intelligent Cars, Trucks, and Buses
Presenter: Mr. Yehuda Gross, Manager, DOT Intelligent Transportation Systems JPO
- 1630-1700** Intelligent Autonomous Trucks: Present and Future
Presenter: Mr. John Beck, Chief Engineer for Unmanned Vehicles, Oshkosh Truck Corp.
- 1700- 1730** Intelligent Vehicle Technology: A General Motors Perspective
Presenter: Dr. Nady Boules, Director, General Motors E&CI Lab (TBC)
- 1730-1800** Intelligent Vehicle Technology: A Ford Perspective
Presenter: Mr. James McBride, Technical Expert, Ford Motor Co.
- 1830-2030** Networking Dinner (Delicious Buffet at the Holiday Inn)

AGENDA: Thursday, 14 February 08

- 0800-0900** Continental Breakfast and Networking
- 0900-0930** Intelligent Cars, Trucks, and Buses: A Global Perspective
Presenter: Mr. Tom Kern, VP, Intelligent Transportation Society of America
- 0930-1000** Intelligent Autonomous Combat Vehicles: An Industry Perspective
Presenter: Mr. Dennis Majkowski, President, AUVSI
- 1000-1030** Intelligent Vehicles: A Life-Saving Imperative
Presenter: Ms. Rochelle Sobel, President, Assoc. for Safe Int'l Road Travel
- 1030-1100** Connected Vehicle Proving Center for Intelligent Vehicles
Presenter: Mr. Scott J. McCormick, President, Connected Vehicle Association
- 1100-1130** Intelligent Vehicles: A Congressional Perspective
Presenter: Congressional Staff Member, TBD
- 11:30-1200** Intelligent Vehicle Technology Transfer: Roadmap Update
Presenter: Dr. Robert Finkelstein, President, Robotic Technology Inc.
- 1200-1300** Lunch and Networking
- 1300-1430** **Plenary Discussion** with Panel of Presenters and Steering Committee Members
Topics: The Technology Transfer Process; OEM and Vendor Technology Needs and Wants; State of Intelligent Vehicle Technology; Impact of Autonomous Vehicles on the Military, Automotive Industry, and Society; A Transformative Technology: Strength, Weaknesses, Opportunities, and Threats; IVTT Website Development: Needs and Wants
- 1430-1600** Tour of the Autonomous Intelligent Vehicle Laboratory at NIST
- 1600** Adjourn

DIRECTIONS AND ACCOMMODATIONS

Note to all NIST Visitors:

The NIST campus is closed to the general public. **Official visitors** must be on an admittance list and present photo **identification** upon arrival. Visitors can access the Gaithersburg campus from the **main gate at West Diamond Ave. and Bureau Drive only**. Visitors must wear a visitor badge at all times while on the NIST campus. **The security facility at the gate (Gate A, as shown on map below) will direct you to the specific (high-rise) building (Administration Building 101)**. The Seminar will be held in the **Red Auditorium** on the main floor. Ample free parking is available in the parking lot in front of the building.

How to get to the NIST facilities in Gaithersburg, Maryland

The headquarters site of the National Institute of Standards & Technology is located near Gaithersburg, Maryland, just off **Interstate Route 270**, about 25 miles (40 kilometers) from the center of Washington, D.C. NIST provides shuttle service from the **Shady Grove Metro** (subway) station.

Directions to Main Campus:

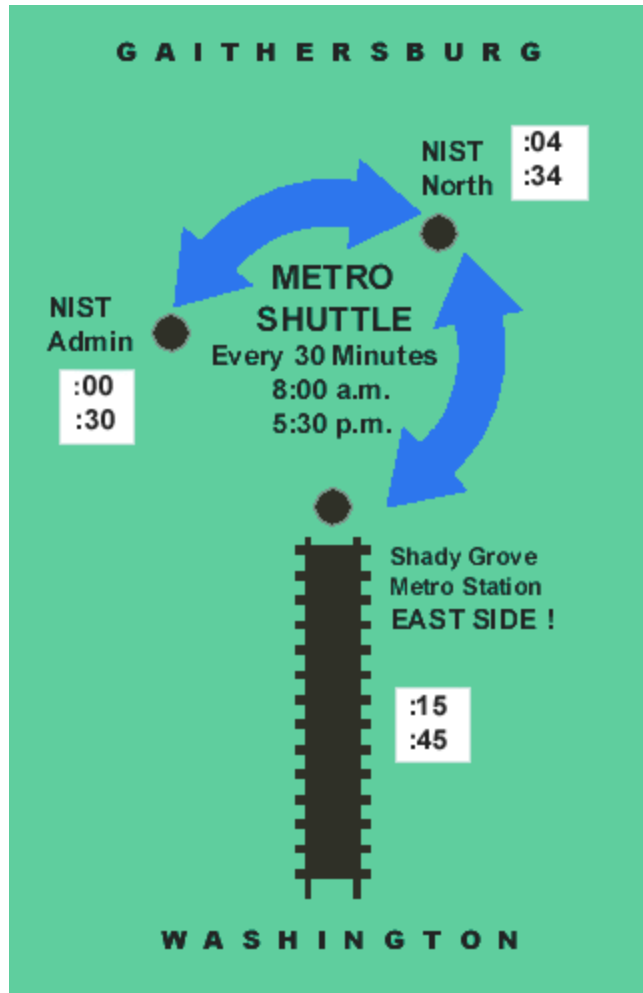
From northbound I-270: take Exit 10, Route 117 West, West Diamond Ave. (toward Clopper Road). Turn right from the exit ramp. At the first light on West Diamond Ave., turn left onto the NIST grounds (Bureau Drive).

From southbound I-270: take Exit 11, Route 124, Montgomery Village Avenue/Quince Orchard Road. Bear right at the first light onto Route 124 West, Quince Orchard Road. At the third light on Quince Orchard Road, turn left onto Route 117, West Diamond Avenue. Turn right at the first light onto NIST grounds.

NIST Metro Shuttle

NIST provides shuttle service for official visitors and staff to and from the Shady Grove Metro Station. Visitors using Metro can meet the NIST shuttle at the **east** side "Kiss & Ride" area of the Shady Grove Metro Station at 15 and 45 minutes past the hour from 8:00 am to 5:30 pm. The shuttle departs from the front of the NIST Administration Building on the hour and half hour, and stops at NIST North four minutes later on the way to the Metro station.

The shuttle operates Monday through Friday except on federal holidays.



Directions from local airports

Driving Directions from **Washington Dulles International Airport (IAD)**

- Follow the Dulles Access Road to Bethesda/Baltimore entrance ramp to 495
Take 495 (left lane exit) to 270 North
- Take Exit #10, West Diamond Ave. toward Clopper Road (MD 117) and Quince Orchard Rd (MD 124)
- Turn right from the exit ramp
- At the first light on West Diamond Ave., turn left onto the NIST grounds (Bureau Drive)

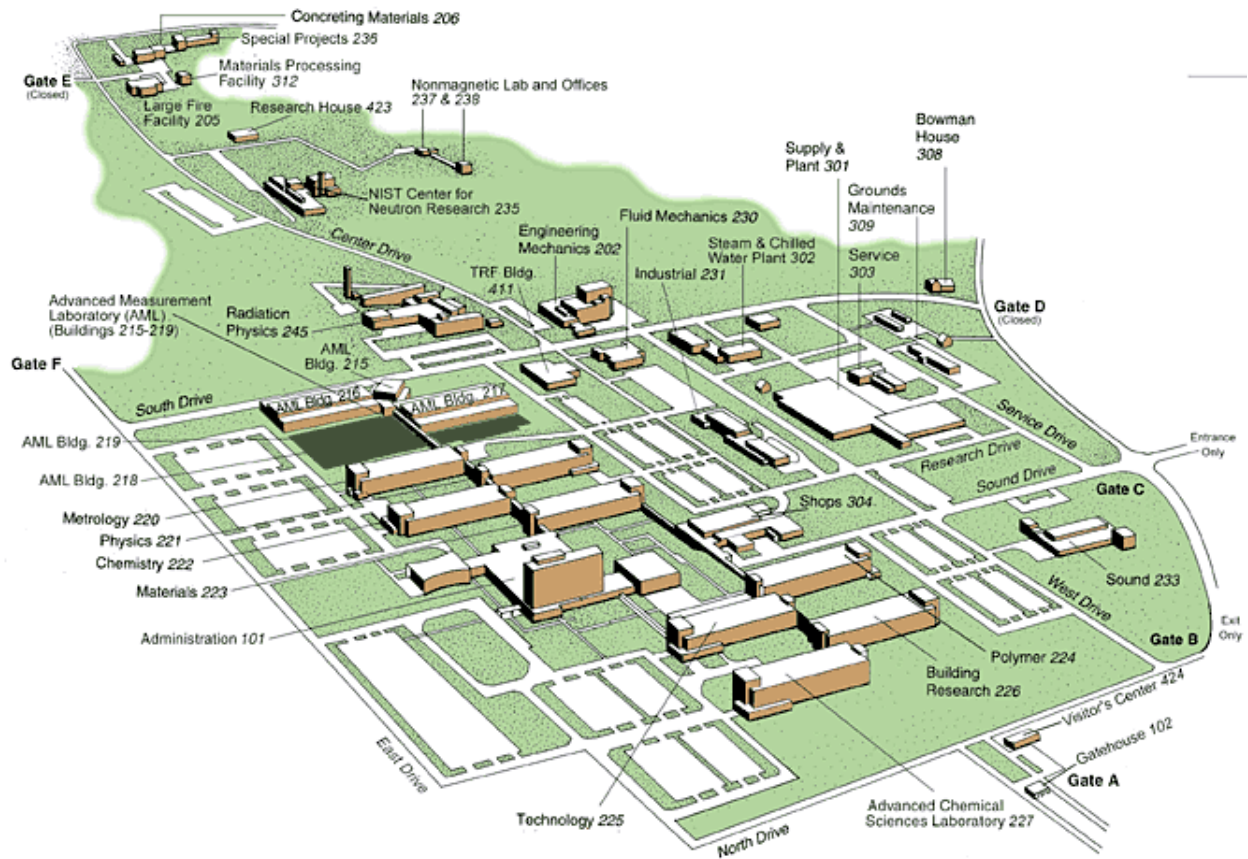
Driving Directions from **Baltimore Washington International Airport (BWI)**

- Take 195 West
- Take 95 South Exit #4B toward Washington
- Take 495 West Exit #27-25 toward College Park/Silver Spring
- Take 270 North Exit #35 toward Frederick

- Take Exit #10, West Diamond Ave. toward Clopper Road (MD 117) and Quince Orchard Rd (MD 124)
- Turn right from the exit ramp
- At the first light on West Diamond Ave., turn left onto the NIST grounds (Bureau Drive)

Driving Directions from **Ronald Reagan Washington National Airport**

- Exit National Airport heading north on the George Washington (GW) Parkway toward Maryland
- Take the GW Parkway to 495 North toward Maryland
- Take 495 (left lane exit) to 270 North
- Take Exit #10, West Diamond Ave. toward Clopper Road (MD 117) and Quince Orchard Rd (MD 124)
- Turn right from the exit ramp
- At the first light on West Diamond Ave., turn left onto the NIST grounds (Bureau Drive)



INFORMATION AND DIRECTIONS TO HOTEL

Holiday Inn Gaithersburg

Two Montgomery Village Avenue • Gaithersburg, Maryland 20879

Phone: (301) 948-8900 • Fax: (301) 258-1940

Toll Free: 1-800-HOLIDAY



Note: The Holiday Inn provides complimentary shuttle service to NIST, Metro, and anywhere within a 5 mile radius of the hotel.

For this seminar, you can enjoy a **discounted room rate** at the Holiday Inn Gaithersburg at \$109/night if you reserve your room not later than **29 January 08**; please call 301-948-8900 for reservations and use the Room Discount Code: BOT.

Directions:

The hotel is conveniently located at the intersection of Rt. 355 (Rockville Pike) and Montgomery Village Avenue (Rt. 124), just off I-270 in the heart of the I-270 Tech Corridor.

From the South:

Take I-95 North to I-495 West to I-270 North to Exit 11-Rt 124 East, Montgomery Village Ave. Hotel is ¼ mile on the left.

From the North & East:

Take I-95 South through Baltimore to I-495 West towards Silver Spring to I-270 North. Take Exit 11-Rt 124 East Montgomery Village Ave. Hotel is ¼ mile on the left.

From the West:

Take I-81 North or South or I-68 East to I-70 East to I-270 South-Washington. Take Exit 11_Rt 124 East Montgomery Village Ave. At the bottom of exit ramp, turn left at light and proceed ¼ mile to hotel on left.

Directions From the Airports:

Thurgood Marshall BWI:

Exiting BWI Airport, take 195 West to 95 South to I-495 West towards Silver Spring. Take I-495 to 270 North. Get off at Exit 11, East Rt. 124, Montgomery Village Ave. We are ¼ mile from the exit on the left side.

Reagan National:

Exit the airport towards Washington D.C. Take George Washington Memorial Parkway to I-495 North towards Maryland. Follow to I-270 North towards Frederick. Take I-270 North and exit 11, East Rt. 124, Montgomery Village Ave. Hotel is ¼ mile on the left.

Dulles:

Take the Dulles Access Rd to I-495 North. Take I-495 North to I-270 North towards Frederick. Take exit 11, East Rt. 124, Montgomery Village Ave. The hotel is ¼ mile from the exit on the left.

Directions from the Hotel to Shady Grove Metro (5 miles)

Take I-270 South towards Washington DC. Take exit #9B-A to I-370 East toward Metro Station. Take the Shady Grove Road exit towards Rockville. Turn left on Shady Grove Road, right on Frederick Road, left on Redland Road, left on Somerville Drive. The Metro is on the right.