EastFIRE Conference

Wildland Fire Research in the Eastern United States

George Mason University

May 11-13, 2005

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Theme and Objectives

For the last century, North American forest communities have been vitally concerned with wildland fires. They have tried to eliminate wildland fires entirely, to reduce fire intensity, to thin and burn, and even to return to a more naturally occurring wildland fire regime. Urban and suburban growth through the 20th century has dramatically increased the association of housing and people with wildlands, increasing the complexity of fuel management and fire fighting activities. Since topography, climate, ecosystems, and development patterns are all so different in east and west, it is time for a focused look at these issues from an eastern perspective.

The EastFIRE Conference brings together researchers, subject matter experts, technicians, vendors, and decision makers to share information on using remote sensing (RS), decision support systems and simulation to better manage wildland fire in the eastern United States. Planned products of this conference will capture the significant outcomes for determining future plans of action.

The primary objectives of the Workshop are:

- Develop bridging approaches that link ecology and the physical sciences at local, landscape, state, and regional scales for wildland fire in the east.
- Suggest decision support views of integrated data for policy makers and front-line decision-makers.
- Share information on new technologies and techniques which address eastern states fire management issues.
- Create new understanding of the challenges ahead for eastern states wildland fire management and how remote sensing might better address them.
- Create appreciation for geographic scale issues in wildland fire management and rehabilitation in the east, and descriptions of experiences in applying remote sensing and simulation modeling to these issues.

Organizing Committee

Executive Committee

- **Ronald Birk**, Program Director, Applied Sciences Program Sun-Earth Systems Division, Science Mission Directorate, NASA
- **George Foster**, Director of Wildlife, Fish, Water, and Air Research, USDA Forest Service
- **Menas Kafatos**, Dean, School of Computational Sciences, (SCS), George Mason University (GMU)
- **Robert Szaro**, Chief Scientist, USGS, Biological Resources Discipline

General Chair

- **John Qu**, GMU, SCS

Technical Committee

- **Stan Coloff**, USGS, BRD
- **Al Riebau**, USDA Forest Service, Research and Development
- **Ruixin Yang**, GMU, SCS

Editorial Board

- **Doug Fox**, Colorado State University (CSU), Cooperative Institute for Research in the Atmosphere (CIRA)
- **John Qu**, GMU, SCS
- **Al Riebau**, USDA Forest Service, Research and Development
- **Ruixin Yang**, GMU, SCS

Logistics Committee

- **Beth Grohnke**, GMU, Office of Events Management
- **Hank Wolf**, GMU, SCS
- **Manny Smith**, GMU, SCS
- **Lingli Wang**, GMU, SCS

Conference Schedule

Day	Time	Program
May 11 Wed	8:00-9:00	**Registration Desk Opens**
	9:00-9:05	**Welcome to EastFIRE**
	9:05-9:10	**GMU President's Address**
	9:10-9:15	**Opening of Conference**
	9:15-10:40	**Plenary Session One**
	10:40-11:00	***Break***
	11:00-12:30	**Concurrent Sessions: 1A-1, 2A, 2B**
	12:30-13:30	***Lunch Break***
	13:30-15:00	**Concurrent Sessions: 1A-2, 3B-1**
	15:00-15:30	***Break***
	15:30-17:00	**Concurrent Sessions: 3A, 3B-2**
	17:00-19:00	**Poster Session (*Reception*)**
May 12 Thu	09:00-10:40	**Plenary Session Two**
	10:40-11:00	***Break***
	11:00-12:30	**Concurrent Sessions: 1B-1, 1C, 3C-1**
	12:30-13:30	***Lunch Break***
	13:30-15:00	**Concurrent Sessions: 1B-2, 2C, 3C-2**
	15:00-15:30	***Break***
	15:30-17:00	**EastFIRE Conference Town Meeting**
	17:30-20:00	***Posters, food, and drinks (EastFIRE Conference Hosted Social**)***
May 13 Fri	09:00-10:40	**Plenary Session Three**
	10:40-11:00	***Break***
	11:00-12:30	**EastFIRE Experts Panel Meeting**
	12:30	**EastFIRE Adjourns**

Social Event sponsored by ***Environmental Systems Research Institute (ESRI)*

Plenary Sessions Plan

Room: Cinema (G30)

May 11, 2005

Plenary Session 1: Session Chair -- Menas Kafatos (GMU/SCS)

Time	Program
9:00-9:05	Welcome to EastFIRE **Menas Kafatos (GMU)**
9:05-9:10	Introduction **Alan Merten (President, GMU)**
9:10-9:15	Opening of Conference **William Sommers (GMU)**
9:15-9:35	Wildland Fire in the Eastern States: Issues and Challenges **John Carroll (VA Associate Forester)**
9:35-9:55	LandFIRE **Kevin Ryan (USDA/FS/RMRS)**
9:55-10:20	Fire Weather, Climate and Air Quality for Eastern States Wildland Fire **Leroy Spayd (NOAA)**
10:20-10:40	Synopsis **William Sommers (GMU)**

May 12, 2005

Plenary Session 2: Session Chair -- Sam Foster (USDA/FS)

Time	Program
9:00-9:05	Introduction **Sam Foster (USDA/FS)**
9:05-9:30	Climate Change and Variability in the Eastern States **Jim Kinter III(GMU/COLA)**
9:30-9:55	Wildland Fire and Eastern States Diversity **William Sommers (GMU)**
9:55-10:20	GoFC/GOLD and Fuels Management **Chris Justice (UMD)**
10:20-10:40	Synopsis **Sam Foster (USDA/FS)**

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Plenary Session 3: Session Chair -- Bob Szaro (USGS)

Time	Program
9:00-9:05	Introduction **Bob Szaro (USGS)**
9:05-9:30	Meso-scale to Fine Scale Weather Modeling in Fire Applications **Zafer Boybeyi (GMU)**
9:30-9:55	Eastern States Demographics and the WUI **John Stanturf (USDA/FS/SRS)**
9:55-10:20	Decision Support Systems and Wildland Fire **Ron Birk (NASA/HQ)**
10:20-10:40	Synopsis **Bob Szaro (USGS)**

Town Meeting

Room: Cinema (G30)

May 12 3:30-5:00PM

The main goals of the EastFIRE Town Meeting are to provide reports from each session to all the attendees and to solicit responses to challenges issued by the keynote speakers, as well as gain attendee reactions to issues raised, trends detected, research issues identified, and possible future directions. A chair from each session will brief attendees on their session's significant results, followed by open discussion from the floor.

Moderator -- Doug Fox, CSU
Session Chairs' summary (5min each**)**

Session	Chair	Program
1A	Hao/Serafino	RS & Modeling regarding Fire Occurrence & Behavior
2A	Peterlin/Kinter	Climate Variability
3A	Berg/Wong	RS & Modeling Burned Areas, Fuel; Mapping, Social Impacts
1B	Pierce/Aneja	RS & Modeling regarding Air Quality
2B	Coloff/Taylor	Biodiversity & RS Applications
3B	Cunningham/Rehm	RS & Modeling at Urban Interface
1C	Crow/Conard	RS & Modeling in Landscapes and Watersheds
2C	Greenfield/Liu	RS & Modeling regarding Fuel Treatments
3C	Falke/Ambrose	DSS for Wildland Fire Management

EastFIRE Experts Panel

Room: Cinema (G30)

May 13 11:00-12:30

The EastFIRE Experts panel will provide an opportunity for senior managers from various organizations to assess the research issues, trends, and potential impacts identified over the course of the conference. It will be an excellent chance for the experts to put the issues into perspective as they pertain to their individual organizations and to decide where to go after the close of the conference.

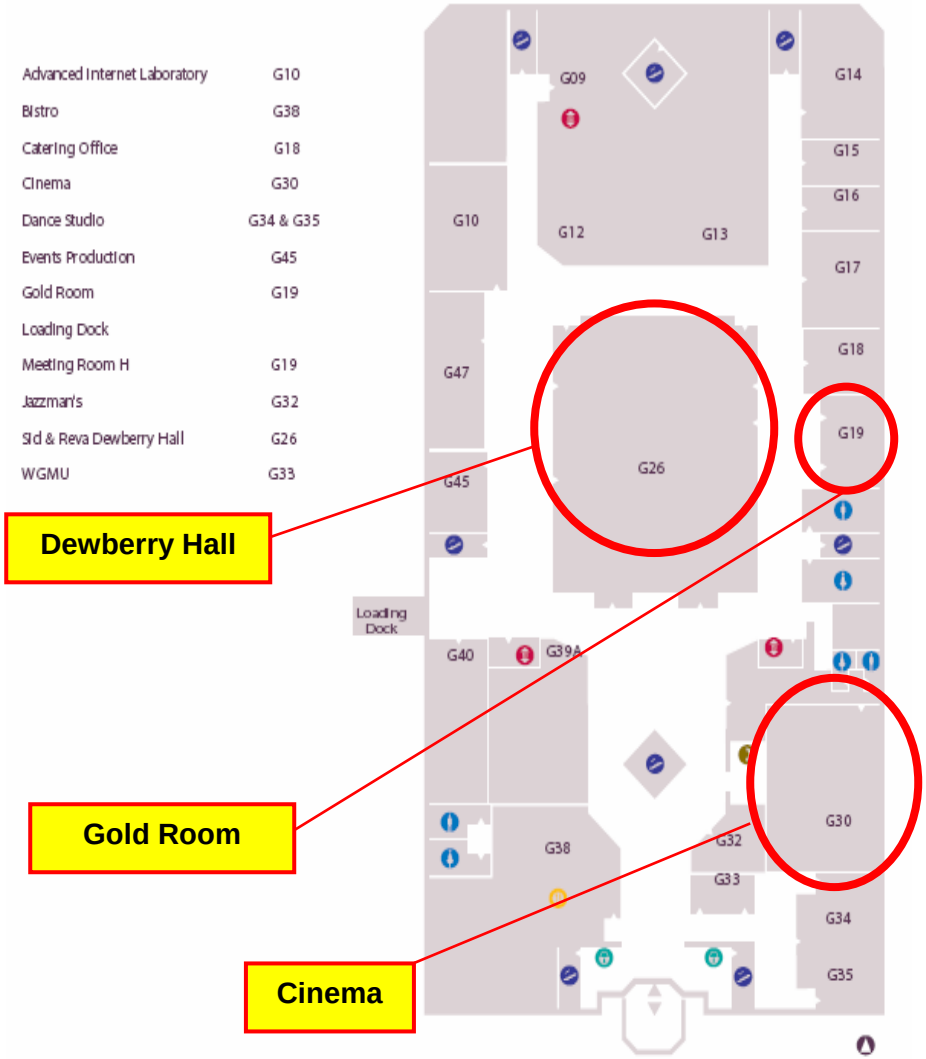
Moderator -- Al Riebau (*USDA/FS/HQ*)

Panel:
Ron Birk (*NASA/HQ*)
Sue Conard (*USDA/FS*)
Phil Cunningham (*FSU*)
Doug Fox (*CSU*)
Bill Sommers (*GMU)*
John Stanturf (*USDA/FS/SRS*)
Bob Szaro (*USGS*)

Johnson Center Floor Maps

GROUND FLOOR

Advanced Internet Laboratory	G10
Bistro	G38
Catering Office	G18
Cinema	G30
Dance Studio	G34 & G35
Events Production	G45
Gold Room	G19
Loading Dock	
Meeting Room H	G19
Jazzman's	G32
Sid & Reva Dewberry Hall	G26
WGMU	G33



Dewberry Hall

Gold Room

Cinema

Johnson Center Floor Maps

THIRD FLOOR

Academic Computer Laboratories	340-343
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Group Study Rooms	320
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Room C

Session 1A-1

Remote Sensing and Modeling of Fire Occurrence, and Behavior for Eastern States Wildland Fire

Room: Cinema (G30) May 11 11:00~12:30

***Session Chair*: Wei Min Hao,** *Project Leader, Fire Chemistry Project - FSL*
George N. Serafino, *Branch Chief, Satellite Analysis Branch, NOAA/NESDIS Satellite Services Division*

Time	Program
11:00-11:15	"Aerial Sketchmapping–A new tool for fire managers" -- **Everett Hinkley, Thomas Zajkowski, and Charlie Schrader-Patton** – ***USDA Forest Service Remote Sensing Applications Center***
11:15-11:30	"Extraction of Active Fire Line and Active Fire map Using AVIRIS Imagery" -- **Ambrose E. Ononye, Anthony Vodacek, and Eli Saber** – ***Digital Imaging and Remote Sensing, Rochester Institute of Technology***
11:30-11:45	"Mapping heat production from wildland fires using time-sequenced airborne imaging" -- **Robert L. Kremens and Jason Faulring** – ***Center for Imaging Science, Rochester Institute of Technology,* A. Bova and M.B. Dickinson** – ***USDA Forest Service, Northeast Research Station,* S. McNamara** – ***Electronics Engineering Department, Rochester Institute of Technology***
11:45-12:00	"Active fire observations from MODIS within the GOFC/ GOLD-Fire Program" -- **I. Csiszar and C.O. Justice,** ***Department of Geography, University of Maryland***
12:00-12:15	"The GOES Wildfire Automated Biomass Burning Algorithm and its Applications" -- **Christopher C. Schmidt and Elaine M. Prins,** ***Cooperative Institute for Meteorological Satellite Studies, UW-Madison/SSEC/CIMSS***
12:15-12:30	"A System for Monitoring Fire Characteristics and Fire Danger Potential in the Eastern States Using Remote Sensing Techniques" -- **John Qu, Xianjun Hao, Ruixin Yang, Swarvanu Dasgupta, Sanjeeb Bhoi, Wanting Wang, Yong Xie, Lingli Wang, Zuotao Li, Zafer Boybeyi, Hank Wolf, and Menas Kafatos,** ***Center for Earth Observing and Space Research, School of Computational Sciences, George Mason University***

Session 2A

Climate Variability and Wildland Fire in the Eastern United States

Room：Gold Room (G19) May 11 11:00~12:30

***Session Chair*: Al Peterlin,** *Senior Scientist, ERRex, Inc.*
James L. Kinter III, *Director, Center for Ocean-Land Atmosphere Studies (COLA)*

Time	Program
11:00-11:15	"Utilization of climate information in prescribed fire" -- **Timothy Brown and Crystal A. Kolden,** ***Desert Research Institute***
11:15-11:30	"A mechanistic, weather-driven greenness model for the US National Fire Danger Rating System (NFDRS)" -- **William M. Jolly,** ***USDA Forest Service, RMRS, Fire Sciences Laboratory***
11:30-11:45	"Climate change and fire impacts on ecosystem level critical pollutant load limits" -- **Steven G. McNulty, Jennifer Moore Myers,** ***USDA Forest Service, Southern Global Change Program***
11:45-12:00	"On the accuracy of Haines Index predicted by real-time MM5 forecasts over the eastern half of the US" -- **Hee-Jin In, Sharon Zhong, Daewon W. Byun,** ***Institute for Multidimensional Air Quality Studies, University of Houston,* Xindi Bian, Joseph Charney, Warren Heilman, and Brian Potter,** ***USDA Forest Service, North Central Research Station***
12:00-12:15	"Preliminary Assessment of the Impact of Climate Change and Variability on Biomass and Forest Fires, the Impact of Forest Fires on Ozone and PM Air Quality, and the Regional Climate Response to these changes in the Southern U.S." -- **Uma Shankar, Jeffrey Vukovich, Aijun Xiu, Adel Hanna, Doug Fox, and Steve McNulty,** ***Carolina Environment Program, UNC-Chapel Hill***
12:15–12:30	"Comparing new and old scenarios of future climate change impacts on fire, carbon and vegetation dynamics in Eastern U.S. Forests" -- **Ron Neilson, James M. Lenihan, Ray Drapek,** ***USDA Forest Service, PNW Research Station,* Dominique Bachelet,** ***Oregon State University***

Session 2B

Wildland Fire, Biodiversity, Landscapes and Remote Sensing Applications in the Eastern United States

Room：C (327)　May 11 11:00~12:30

***Session Chair*: George Taylor,** *Professor and Assistant Dean, School of Computational Sciences, George Mason University*
Stanley Coloff, *Director of Ecosystems Science, Biological Resource Division, USGS*

Time	Program
11:00-11:15	"Altered Disturbance Regimes: The Demise of Fire in the Eastern United States" -- **Gregory J. Nowacki, Robert Carr,** ***USDA Forest Service, Eastern Region***
11:15-11:30	"Effects of fire on forest soils and potential remote sensing applications" -- **John Stanturf (*Research Ecologist*), Yongqiang Liu (*Research Meteorologist*), Ralph DiCosty (*Research Soil Scientist*), Mac Callahan (*Research Forester*), *USDA Forest Service, Southern Research Station***
11:30-11:45	"Landscape fragmentation and forest fuel accumulation in Puerto Rico" -- **William Gould, Grizelle Gonzalez,** ***USDA Forest Service, International Institute of Tropical Forestry,*** **Andrew Hudak,** ***USDA Forest Service, Rocky Mountain Research Station***
11:45-12:00	"Effects of Fire Intensity on Invasives, Stand Structure and Fuel Loading in Shenandoah National Park" -- **Jeff M. Matthews, Shepard M. Zedaker,** ***Forestry, Virginia Tech***
12:00-12:15	"Long-term fire research at Blackwater National Wildlife Refuge" -- **D.L. Birch, C. Leonard, C. Flores,** ***Fish and Wildlife Service, Chesapeake Marshlands NWR Complex***
12:15-12:30	"Predicting tree species composition at pixel-scale with k-NN imputation" -- **Raymond L. Czaplewski, Michael Hoppus, Andrew Lister,** ***USDA Forest Service, Rocky Mountain Research Station***

Session 1A-2

Remote Sensing and Modeling of Fire Occurrence, and Behavior for Eastern States Wildland Fire

Room ： Cinema (G30)　May 11 13:30-15:00

***Session Chair*: Wei Min Hao,** *Project Leader, Fire Chemistry Project - FSL*
George N. Serafino, *Branch Chief, Satellite Analysis Branch, NOAA/NESDIS Satellite Services Division*

Time	Program
13:30-13:45	"Towards an automatic match of fuel model with fire behavior model" -- **Bryce Nordgren,** ***Physical Scientist, USDA Forest Service Fire Science Lab,*** **Danielle Forsyth,** ***Co-Founder, Thetus Corporation***
13:45-14:00	"TRMM Fire Algorithm, Product and Applications" -- **Yimin Ji,** ***School of Computational Sciences, George Mason University,*** **Erich Stocker,** ***NASA/GSFC, Code 902, TRMM/TSDIS***
14:00-14:15	"Automated Wildfire Detection and Prediction through Artificial Neural Networks" -- **Kirk Borne, Yuechen Chi,** ***George Mason University,*** **Jerry Miller,** ***NASA,*** **Brian Thomas, Zhenping Huang,** ***UMD***
14:15-14:30	"Design of a Fire Susceptibility Index for fire risk monitoring" --**Swarvanu Dasgupta, John J. Qu, Xianjun Hao,** ***Center for Earth Observing and Space Research, George Mason University***
14:30-14:45	"Numerical simulations of grassland fire behavior from the LANL-FIRETEC and NIST-FDS models" -- **Ruddy Mell, Joseph Charney,** ***USDA Forest Service, North Central Research Station***
14:45-15:00	"Evaluation of EAMC high-resolution fire weather predictions (using surface meteorology, forest energy balance, and SODAR measurements) in the New Jersey Pinelands" -- **Joseph J. Charney, Kenneth Clark, Xindi Bian, Warren E. Heilman, and Brian Potter,** ***USDA Forest Service, North Central Research Station***

Session 3B-1

Remote Sensing and Modeling Applications for Wildland Fire in the Eastern Wildland Urban Interface

Room：Gold Room (G19)　May 11 13:30~15:00

***Session Chair*: Phillip Cunningham,** *Professor, Department of Meteorology, Florida State University*

Ronald Rehm, *National Institute of Technology*

Time	Program
13:30-13:45	"Pattern of Change of the Wildland-Urban Interface in the Eastern United States" -- **Volker C. Radeloff, Todd J. Hawbaker,** ***Department of Forest Ecology & Management, University of Wisconsin,*** **Roger B. Hammer,** ***Department of Rural Sociology, University of Wisconsin,*** **Susan I. Stewart,** ***USDA Forest Service, North Central Research Station***
13:45-14:00	"Mapping the Built Environment – Fire Interface across the Mid-Atlantic Region, USA" -- **Claire A. Jantz, Scott J. Goetz, Andrew J. Smith, Maria Mazzacato, Robb K. Wright,** ***The Woods Hole Research Center***
14:00-14:15	"Mapping Wildland-Urban Interface Structures Using LIDAR and High-Resolution Digital Orthophotos" -- **Richard M. Warnick, Mark Finco, Beau Jarvis, Ken Brewer,** ***USDA Forest Service Remote Sensing Applications Center***
14:15-14:30	"Using High-Resolution Imagery for Fuels Mapping and CWPP Development" -- **Rod Moraga, Marc McDonald,** ***Anchor Point Group,*** **David Buckley, Jim Muckenhoupt,** ***GIS Solutions, Space Imaging Solutions***
14:30-14:45	"Enhancing the NED Decision Support System with Wildfire Risk Assessments in the WUI" -- **Alan J. Long, H. Michael Rauscher,** ***School of Forest Resources & Conservation, University of Florida***
14:45-15:00	"Simulating fire risk within a mixed-ownership, fire-prone landscape of northeastern Wisconsin: Interactions between human ignitions and forest dynamics" -- **Brian R. Sturtevant, Brian R. Miranda, Eric J. Gustafson, Hong S. He,** ***USDA Forest Service, North Central Research Station***

Session 3A

Remote Sensing and Modeling of Burned Areas, Fuel Mapping and social impacts of fires in Eastern States

Room: C (327)　May 11 15:30-17:00

***Session Chair*: Erik Berg,** *JFSP Manager, National Interagency Fire Center*

David Wong, *Professor and Program Chair, Earth Systems and GeoInformation Sciences, SCS, George Mason University*

Time	Program
15:30-15:45	"Data and Models to support Fire and Fuels Management Decisions" **-- Kevin C. Ryan, Matthew G. Rollins,** *USDA Forest Service, RMRS, Fire Sciences Laboratory,* **John L. Hom**, *USDA Forest Service, Northeastern Research Station,* **Ayn Shlisky,** *The Nature Conservancy,* **Zhi-Liang Zhu,** *USGS, EROS Data Center*
15:45-16:00	"An adaptive clustering algorithm for burning region extraction" -- **Ying Li, Anthony Vodacek, Robert L. Kremens, Ambrose Ononye,** ***Center for Imaging Science, Rochester Institute of Technology***
16:00-16:15	"A Real-Time Burn Scar Mapping Technique Utilizing MODIS Direct-Broadcast Data: A Validation Across United States Fuel Types" -- **J. Meghan Salmon, Wei Min Hao, Bryce Nordgren,** ***USDA Forest Service, RMRS Fire Sciences Laboratory***
16:15-16:30	"Estimating Forest Floor Fuels in Eastern U.S. Forests" -- **David C. Chojnacky,** ***USDA Forest Service ,Forest Inventory Research, Enterprise Unit,*** **Steve McNulty,** ***USDA Forest Service, Southern Research Station,*** **Jennifer Moore Myers, Michael J. Gavazzi**
16:30-16:45	"Comparing measured and fuel model estimates of down deadwood biomass in the Piedmont and Coastal Plain of North Carolina" -- **Michael Gavazzi, Steve McNulty,** ***USDA Forest Service, Southern Global Change Program***
16:45-17:00	"An Integrated Approach to Modeling and Assessing the Impacts of Wildland Fire on Eastern Landscapes" -- **Christine Stalling,** ***Biologist,*** **Jimmie Chew,** ***Forester, Rocky Mountain Research Station, Forestry Sciences Lab***

Session 3B-2

Remote Sensing and Modeling Applications for Wildland Fire in the Eastern Wildland Urban Interface

Room: Gold Room (G19) May 11 15:30~17:00

***Session Chair*: Phillip Cunningham,** *Professor, Department of Meteorology, Florida State University*
Ronald Rehm, *National Institute of Technology*

Time	Program
15:30-15:45	"Assessing fire risk of wildland-urban communities across multiple scales" -- **Wayne C. Zipperer,** ***USDA Forest Service, Southern Research Station,*** **Alan A. Long,** ***University of Florida,*** **Ronald Rehm, Alexander Maranghides, William Mell,** ***Building and Fire Research Laboratory, National Institute of Standards and Technology***
15:45-16:00	"Urban-Wildland Fires: On the Ignition of Surfaces by Embers" -- **Samuel L. Manzello, Thomas G. Cleary, John R. Shields, Jiann C. Yang,** ***BFRL-NIST***
16:00-16:15	"Smoke Plume Detecting Using MODIS Measurements in Eastern United States" -- **Yong Xie, Xianjun Hao,** ***SCS, George Mason University,*** **John J. Qu, Jack Xiong,** ***Biospheres Sciences Branch,*** **Nianzeng Che,** ***Science Systems and Applications, Inc.***
16:15-16:30	"Interaction between a Wildfire and Sea Breeze Front" -- **Deborah Hanley, Phillip Cunningham, Scott Goodrick,** ***Florida Division of Forestry***
16:30-16:45	"Smoke Plume Behavior – What the Data Say" -- **Gary L. Achtemeier, Luke Naeher,** ***USDA Forest Service, Forestry Sciences Lab***
16:45-17:00	"Numerical modeling of horizontal vortices forced by wildland fires" -- **Scott Goodrick, Phillip Cunningham,** ***USDA Forest Service, Southern Research Station***

Session 1B-1

Remote Sensing and Modeling of Fire and Air Quality in the Eastern United States

Room: C (327) May 12 11:00-12:30

***Session Chair*: Tom Pierce,** *Senior Scientist, United States EPA, Office of Research and Development (NERL)*
Viney P. Aneja, *Professor Air Quality, Environmental Technology, Department of Marine, Earth, and Atmosphere Sciences*

Time	Program
11:00-11:15	"A Review of Wildland Fire and Air Quality" -- **Douglas G. Fox,** ***CIRA, Colorado State University,*** **Al Riebau,** ***USDA Forest Service, Research and Development,*** **N. Ye. Chubarova,** ***Faculty of Geography, Moscow State University***
11:15-11:30	"A Comprehensive Approach for Detecting Active Fire over the Southeastern United States" -- **Wanting Wang, Xianjun Hao,** ***School of Computational Science, George Mason University,*** **John J. Qu,** ***NASA/GSFC/614.4,*** **Yongqiang Liu,** ***USDA Forest Service, Forestry Sciences Laboratory***
11:30-11:45	"Biomass smoke emission estimation over the Eastern US using satellite and surface data along with a diagnostic Monte Carlo model" -- **R.B. Husar, E. Robinson, S. Raffuse,** ***CAPITA, Washington University***
11:45-12:00	"Impact assessment of forest fire in eastern United States on the air quality" -- **Sanjeeb Bhoi, John J. Qu,** ***George Mason University***
12:00-12:15	"Interaction between smoke aerosols with clouds and precipitation" -- **Ritesh Gautaum, Bochkwa Kim, Menas Kafatos,** ***Center for Earth Observing and Space Research, George Mason University***
12:15-12:30	"The Observation of Long-Range Transport of Two Large Forest Fire Plumes into the Northeastern U.S." -- **Kevin McCann, Raymond Hoff, Jill Engel-Cox, Nick Krotkov, Steve Palm, Ray Rogers, Lynn Sparling, Nikisa Jordan, Omar Torres, James Spinhirne,** ***Physics, UMBC***

Session 1C

Remote Sensing and Modeling for Wildland Fire in Eastern States Landscapes and Watersheds

Room: Gold Room (G19) May 12 11:00~12:31

***Session Chair*: Tom Crow,** *National Program Leader for Landscape Research, USDA Forest Service Research and Development*
Susan G. Conard, *National Program Leader, Fire Ecology Research, Vegetation Management and Protection Research*

Time	Program
11:00-11:13	"Modeling the effects of prescribed fire on sediment and nutrient loads in the southeastern U.S." -- **Stephanie Laseter, James Vose,** ***USDA Forest Service, Southern Research Station, Coweeta Hydrologic Lab,*** **Ge Sun, Steve McNulty,** ***USDA Forest Service, Southern Research Station, Global Change Program***
11:13-11:26	"Characterizing Moisture Regimes for Assessing Fuel Availability in Pocosin, Longleaf Pine and Appalachian Shrub Communities" -- **Roberta Bartlette, James J. Reardon,** ***USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory,*** **Gary M. Curcio,** ***North Carolina Division of Forest Resources***
11:26-11:39	"The Affect of Patch Edges on the Direction and Rate of Fire Spread in Wisconsin with comparisons to a New Jersey Landscape" -- **Jacob LaCroix, Daolan Zheng, Soung-Ryoul Ryu, Qinglin Li, Jiquan Chen,** ***Landscape Ecology Lab, University of Toledo***
11:39-11:52	"Comparison of fire spread related to weather, landscape structure, management alternatives, and fuel loading in two landscapes: Northern Wisconsin and New Jersey Pinelands, USA" -- **Daolan Zheng, J.J. LaCroix, S-R Ryu, J. Chen, J. Hom, K. Clark,** ***Department of Earth, Ecological, and Environmental Sciences, University of Toledo***
11:52-12:05	"Fire Research in the New Jersey Pine Barrens" -- **John Hom, K. Clark, Yude Pan, Steve Van Tuyl, Nick Skowronski, Warren Heilman,** ***USDA Forest Service, Northeastern Research Station***
12:05-12:18	"Using Satellite Imagery to Map Fire Severity and Forest Community Change in the Southern Appalachians" -- **Michael Wimberly, Matthew J. Reilly,** ***Warnell School of Forest Resources***
12:18-12:31	"Ecological effect of Cedar Forest fire on the watershed: A case study" -- **Sanjeeb Bhoi, John Qu,** ***George Mason University***

Session 3C-1

Decision Support Systems for Wildland Fire Management in the Eastern States

Room：Cinema (G30) May 12 11:00~12:30

***Session Chair*: Stefan R. Falke,** *Environmental Engineering Science Program, School of Engineering and Applied Science, Washington University*
Stephen D. Ambrose, *Program Manager, Disaster Management Applications, Headquarters Office of Earth Science, NASA*

Time	Program
11:00-11:15	"Bridging EOS Remote Sensing Measurements and Fire Emissions, Smoke Dispersion, and Air Quality DSS in the Eastern U.S." -- **John J. Qu, Xianjun Hao, Ruixin Yang, Swarvanu Dasgupta, Sanjeeb Bhoi, Menas Kafatos,** ***CEOSR, SCS, George Mason University,*** **Yongqiang Liu, Gary Achtemeier,** ***USDA Forest Service, Southern Research Station,*** **Allen Riebau,** ***USDA Forest Service, Research and Development,*** **Patrick Coronado,** ***Code 606, NASA/GSFC***
11:15-11:30	"GIS Applications in Interagency Fire Management Planning" -- **Jeff Baranyi, Mike da Luz,** ***Environmental Systems Research Institute(ESRI)***
11:30-11:45	"Florida's Fire Management Information System" -- **Jim Brenner, Scott Goodrick,** ***Dept. of Agriculture, Florida Division of Forestry***
11:45-12:00	"Using a DSS to Deploy a Scaleable Wildland Fire Risk Model" -- **David Buckley,** ***GIS Solutions, Space Imaging Solutions,*** **Rick Jones,** ***Director, Western Region,*** **Don Carlton,** ***Fire Program Solutions, LLC***
12:00-12:15	"Developing Sustainable Partnerships between Fire Scientists and Decision-Makers" -- **Timothy J. Brown, Barbara J. Morehouse,** ***Desert Research Institute***
12:15-12:30	"Significant Fire Potential Outlook 2005" -- **Timothy J. Brown, Gregg M. Garfin, Heath Hockenberry, Rick Ochoa, Melanie Lenart,** ***Desert Research Institute***

Session 1B-2

Remote Sensing and Modeling of Fire and Air Quality in the Eastern United States

Room: C (327) May 12 13:30-15:00

***Session Chair*: Tom Pierce,** *Senior Scientist, United States EPA, Office of Research and Development (NERL)*
Viney P. Aneja, *Professor Air Quality, Environmental Technology, Department of Marine, Earth, and Atmosphere Sciences*

Time	Program
13:30-13:45	"Estimating fire emissions and the impacts for air quality in the eastern U.S." -- **Christine Wiedinmyer, Angie Belote, Alex Guenther,** ***National Center for Atmospheric Research,*** **Brad Quayle,** ***U.S. Forest Service,*** **Chris Geron, Carol Shay,** ***U.S. EPA***
13:45-14:00	"Application of BlueSky and CMAQ to investigate the impact of wildland fire on regional air quality"-- **Hee-Jin In, Daewon W. Byun, Soontae Kim, Sharon Zhong,** ***Institute for Multidimensional Air Quality Studies,*** **Xindi Bian, Joseph Charney, Warren Heilman, Brian E. Potter,** ***USDA Forest Service***
14:00-14:15	"Simulation and experiment of air quality effects of wildland fires in the Southeast" -- **Yongqiang Liu, Gary Achtemeier, Scott Goodrick,** ***USDA Forest Service, Forest Sciences Laboratory***
14:15-14:30	"A coupled modeling system for connecting prescribed fire activity data through CMAQ for simulating regional scale air quality" -- **Gary L. Achtemeier, Scott Goodrick, Yongqiang Liu,** ***USDA Forest Service, Forestry Sciences Laboratory***
14:30-14:45	"Integrating emission estimates of biomass burning from the HMS-HYSPLIT procedure into the air quality forecast version of CMAQ" -- **Thomas Pierce, George Pouliot, Rohit Mathur,** ***Atmospheric Sciences Modeling Division/NOAA,*** **Jeffrey Vukovich,** ***Carolina Environmental Programs, UNC Chapel Hill***
14:45-15:00	"Air quality forecast verification using satellite data" -- **S. Kondragunta, A. Prados,** ***NOAA/NESDIS Office of Research and Applications,*** **R. Mathur, D. Roy, K. Schere,** ***NOAA Atmospheric Sciences Modeling Division, EPA,*** **J. McQueen, P. Lee,** ***NOAA/NWS National Center for Environmental Prediction,*** **J. Szykman,** ***EPA Office of Research and Development,*** **B. Pierce, C. Kittaka,** ***NASA Langley Research Center,*** **R. Hoff, K. McCann,** ***University of Maryland at Baltimore,*** **R. Dickerson,** ***University of Maryland at College Park***

Session 2C

Remote Sensing and Modeling Applications for Fuel Treatments in the Eastern United States

Room：Gold Room (G19) May 12 13:30-15:00

***Session Chair:* Paul Greenfield,** *National Program Leader for Remote Sensing, USDA Forest Service National Forest Systems (Engineering)*
Yongqiang Liu, *Meteorologist, USDA Forest Service, Southern Research Station*

Time	Program
13:30-13:45	"Fire Behavior and Carbon Cycle in Siberian Boreal Forests" -- **Susan G. Conard**, *National Program Leader for Fire Ecology Research, USDA Forest Service Research and Development*
13:45-14:00	"Real-Time Live Fuel Moisture Retrieval with MODIS Measurements" -- **Xianjun Hao,** ***CEOSR, SCS, George Mason University,*** **John J. Qu,** ***NASA/GSFC/614.4***
14:00-14:15	"Remotely Sensed Measurements of Forest Structure and Fuel Loads in the Pinelands of New Jersey" -- **Nick Skowronski, Ross Nelson, John Hom, Ken Clark, Todd Wyckoff,** ***USDA FS Northeastern Research Station***
14:15-14:30	"Modeling reference conditions to restore altered fire regimes in oak-hickory-pine forests: Validating coarse models with local fire history data." -- **Ayn J. Shlisky,** ***The Nature Conservancy Global Fire Initiative,*** **Richard P. Guyette,** ***University of Missouri,*** **Kevin C. Ryan,** ***USDA Forest Service***
14:30-14:45	"Dynamic Landscape Mapping of fuels using the FCCS system and remote sensing" -- **Donald McKenzie, Alynne R. Bayard, Robert A. Norheim, Karen E. Kopper, Anne G. Andreu, Lara-Karena B. Kellogg, Crystal L. Raymond,** ***US Forest Service, Pacific Wildland Fire Sciences Laboratory***
14:45-15:00	"The Use of Remote Sensing to Update Fuel Load and Vegetation Datasets After a Natural Disaster" -- **Justin M. Shedd,** ***North Carolina State University,*** **Hugh A. Devine,** ***Department of Parks, Recreation and Tourism Management, NC State***

Session 3C-2

Decision Support Systems for Wildland Fire Management in the Eastern States

Room：Cinema (G30)　May 12 13:30~15:00

***Session Chair*: Stefan R. Falke,** *Environmental Engineering Science Program, School of Engineering and Applied Science, Washington University*

Stephen D. Ambrose, *Program Manager, Disaster Management Applications, Headquarters Office of Earth Science, NASA*

Time	Program
13:30-13:45	"The MODIS Rapid Response System: a near real-time processing system to support Decision Support Systems for Wildland Fire Management" --**Jacques Descloitres, Jeff Schmaltz, Louis Giglio, John Seaton, Jackie Kendall**, ***Code 922, NASA/GSFC/SSAI***
13:45-14:00	"Operational Fire and Smoke Monitoring in NESDIS' Satellite Services Division" -- **George Stephens, Donna McNamara, Mark Ruminski,** ***NOAA/NESDIS,*** **Tim Kasheta,** ***RS Information Systems, Inc.***
14:00-14:15	"Satellite-Based Fire Detection And Mapping For The Eastern United States" -- **Brad Quayle,** ***USDA Forest Service, Remote Sensing Applications Center***
14:15-14:30	"EastFireWatch : A remote sensing based fire weather monitoring platform for eastern USA" -- **Swarvanu Dasgupta, John J. Qu, Xianjun Hao, Sanjeeb Bhoi, Patrick Coronado,** ***CEOSR, George Mason University***
14:30-14:45	"Knowledge Management for Semantic Grid Enabled Integrated Wildfire Risk Assessment" -- **Zuotao Li, Ruixin Yang, John Qu,** ***CEOSR, George Mason University***
14:45-15:00	"Exploring Fire Related Data through the Web" -- **Stefan Falke, Rudolf Husar,** ***Environmental Engineering Science Program and the Center for Air Pollution Impact and Trend Analysis, Washington University***

Poster Sessions

Room：Dewberry Hall (G26)
May 11 17:00-18:30 and May 12 17:30-19:30

Session 1A: Remote Sensing and Modeling of Fire Occurrence, Behavior, and Burned Areas for Eastern States Wildland Fire

No.	Program
1	"Monitoring Vegetation fires using satellite data in and around China" -- **Jiahua Zhang, Cheng Liu,** ***Lab of Remote Sensing and Climate Information Sciences, Chinese Academy of Meteorological Sciences***
2	"A new algorithm to analyze the superficial components in satellite images" -- **Roberto Luevano Escobedo,** ***Madera Institute of Silviculture & Industry***
3	"Fire Atlas of the Okefenokee National Wildlife Refuge From Early 70's to Present" -- **Zhiliang Zhu, Stephen Howard, David Brownlie,** ***USGS***
4	"Multitemporal Assessment of fires in South Florida using MODIS data" -- **Douglas O. Fuller,** ***Geography, University of Miami***
5	"Role of fuel moisture in fire spread behavior – A sensitivity analysis" -- **Swarvanu Dasgupta, John Qu, Xianjun Hao,** ***George Mason University***
6	"Assessing the potential for atmospheric conditions aloft to contribute to extreme fire behavior" -- **Joseph J. Charney, Brian Potter, Warren Heilman, Xindi Bian,** ***USDA Forest Service, North Central Research Station***
7	"Areal and Seasonal Distribution of Fires Detected in the Eastern U.S. with the Hazard Mapping System" -- **Mark Ruminski, Jamie Kibler, Davida Streett,** ***OSDPD/Satellite Services Division, NOAA/NESDIS***
8	"Down deadwood biomass in different forest management compartments within the Coastal Plain and Piedmont of North Carolina" -- **Michael Gavazzi, Steve McNulty, David Chojnacky, Johnny Boggs, Sara Strickland,** ***USDA Forest Service, Southern Global Change Program***
9	"Fire Fuel Mapping for Ten Northeast Region National Parks" -- **Bill Millinor, Hugh Devine,** ***Center for Earth Observation, College of Natural Resources, North Carolina State University***
10	"Satellites and Fires – Perspectives of a Joint NASA, NOAA EPA Meeting" -- **Thompson G. Pace David Williams,** ***EPA***

Session 2A: Climate Variability and Wildland Fire in the Eastern United States

No.	Program
1	"New York State Fire Climatology" -- **Timothy J. Brown and Joseph Kennedy,** ***Desert Research Institute***

Session 1B: Remote Sensing and Modeling of Fire and Air Quality in the Eastern United States

No.	Program
1	"Fire-weather and air-quality research and product development in the eastern area modeling consortium" -- **Warren E. Heilman, Brian Potter, Joseph Charney, Xindi Bian,** ***USDA Forest Service, North Central Research Station***
2	"Plume dispersion from the MVP field experiment: analysis of surface concentration and its fluctuations" -- **Yimin Ma, Zafer Boybeyi, Steven Hanna, Kittisak Chayantrakom,** ***CEOSR, George Mason University***
3	"Toward a New Paradigm for Southern Smoke Management" -- **Gary L. Achtemeier,** ***USDA Forest Service, Forestry Sciences Laboratory***

Session 3B: Remote Sensing and Modeling Applications for Wildland Fire in the Eastern Wildland Urban Interface

No.	Program
1	"Physics-based modeling for WUI fire spread–Simplified model algorithm for ignition of structures by burning vegetation" -- **D.D. Evans, Ronald Rehm, Elisa Baker,** ***Building and Fire Research Laboratory, National Institute of Standards and Technology***
2	"High-resolution numerical models for smoke transport in plumes from wildland fires" -- **P. Cunningham, Scott Goodrick,** ***Dept. of Meteorology, Florida State University***

Session 2C: Remote Sensing and Modeling Applications for Fuel Treatments in the Eastern United States

No.	Program
1	"Simulating the Effects of Disturbances and Age Structure on Fuel Loading in Forest Ecosystems of Northern Wisconsin, USA" -- **Soung-Ryoul Ryu, Jiquan Chen, Daolan Zheng, Mary K. Bresee,** ***Department of Earth, Ecological, and Environmental Sciences, University of Toledo,*** **Thomas R. Crow,** ***USDA Forest Service, WFWAR***
2	"The Fire and Fuels Extension to the Forest Vegetation Simulator" -- **Stephanie Rebain,** ***USDA Forest Service***
3	"Mapping and Monitoring Prescribed Burn Effects on a Major Blowdown Event Using Satellite Imagery and Aerial Photography" -- **Tom McCann,** ***USDA Forest Service,*** **Jess Clark,** ***USDA Forest Service, Remote Sensing Applications Center***
4	"Improving Fire Emission Estimates in the Eastern United States Using Satellite-based Fuel loading Factors" -- **Yongqiang Liu,** ***USDA Forest Service, Forestry Sciences Laboratory,*** **John Qu, Xianjun Hao, Wanting Wang,** ***Center for Earth Observing and Space Research, George Mason University***
5	"Object-Oriented Estimation of Fuel Loading from Coarse Woody Debris using Small Footprint Lidar Data" -- **Randy Wynne,** ***Virginia Tech,*** **John A. Scrivani,** ***Virginia Department of Forestry,*** **Jan A.N. Van Aardt,** ***Katholieke Universiteit Leuven***

Session 3C: Decision Support Systems for Wildland Fire Management in the Eastern States

No.	Program
1	"Eastern States Airborne Thermal Infrared Resources" -- **Thomas Zajkowski,** ***USDA Forest Service, Remote Sensing Applications Center***
2	"A Scalable Grid-Enabled Data Framework for EastFIRE Decision Support" -- **Ruixin Yang, John Qu, Yuechen Chi, Menas Kafatos,** ***Center for Earth Observing and Space Research, George Mason University***
3	"Spatial Modeling of Weather Parameters for Fire Danger Rating Using Artificial Neural Networks" -- **Scott Goodrick,** ***USDA Forest Service, Southern Research Station***
4	"The Wildland Fire Assessment System (WFAS): A web-based resource for decision support" -- **William M. Jolly, Patricia L. Andrews, Larry S. Bradshaw,** ***USDA Forest Service, RMRS, Fire Sciences Laboratory***

5	"Development and Application of a Stand Level Fuel Moisture Index Based on Forest Energy Balance Measurements" -- **Kenneth L. Clark, John Hom, Nick Skowronski, Todd Wyckoff, Greg Starr, Gabriel Katul, Rosvel Bracho, Jiquan Chen,** ***USDA Forest Service, Northern Research Station***
6	"Verifying Mesoscale Fire Weather Forecasts in Near Real Time." -- **Karl Zeller, Ned Nikolov, John Snook, Mike Fajardo,** ***USDA Forest Service, RMRS***
7	"The Joint Fire Science Program's Role in Eastern Wildland Fire and Fuels Science" -- **Erik Berg, Becky Jenison,** ***Joint Fire Science Program, National Interagency Fire Center***
8	"The use of computational fluid dynamics to provide high resolution wind information for use in fire growth modeling" -- **B. Butler, M. Finney, L. Bradshaw, J. Forthofer, R. Stratton,** ***USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory***
9	"A Model for Predicting Fire-Induced Tree Stem Mortality" -- **B.W. Butler,** ***USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory,*** **B.W. Webb,** ***Department of Mechanical Engineering, Brigham Young University,*** **M.B. Dickinson,** ***USDA Forest Service, Northeastern Research Station, Fire Sciences Laboratory***
10	"Burned Area mapping in eastern United States Using MODIS measurements" -- **Xianjun Hao, John Qu,** ***Center for Earth Observing and Space Research, George Mason University,*** **Yongqiang Liu,** ***USDA Forest Service, Forestry Sciences Laboratory***
11	"LANDIS 4.0, a new generation computer simulation model for assessing fuel management effects on fire risk in eastern U.S. forest landscapes" --**Hong He, Bo Z. Shang,** ***University of Missouri,*** **Stephen R. Shifley,** ***USDA Forest Service, North Central Research Station,Columbia, MO,*** **David S. Lytle,** ***USDA Forest Service, North Central Research Station, Grand Rapids, MN,*** **Eric R. Gustafson, Brian R. Sturtevant,** ***USDA Forest Service, North Central Research Station, Rhinelander,WI***
12	"Development of a Wildland Fire Component for the NED Decision Support System" -- **Brian T. Hemel, David S. Buckley,** ***University of Tennessee,*** **Cy K. Routh, William G. Hubbard, Donald E. Nute,** ***University of Georgia,*** **Alan J. Long,** ***University of Florida,*** **Michael Rauscher,** ***USDA Forest Service, Southern Research Station***

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Dr. Yongqiang Liu yliu@fs.fed.us

Session 3C –Dr. Stefan R. Falke Stefan@me.wustl.edu
Dr. Stephen D. Ambrose sambrose@hq.nasa.gov

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EastFIRE Conference 2005
C/O Dr. John Qu
School of Computational Sciences
MS 5C3
George Mason University
4400 University Drive
Fairfax, Virginia 22030

Conference Products

Conference Products include:

- Conference proceedings are documented on CD-ROM and include all abstracts and presented papers in PDF format. Additionally, all abstracts for session posters will be included on the CD-ROM. Papers and session poster abstracts will be required to follow conference publication guidelines and those included on the CD-ROM will be reviewed by session chairs before the conference to ensure their quality.

- The EastFIRE conference will develop a special edition journal publication which will include selected papers from the conference, chosen by the session chairs and the Technical Committee.

- EastFIRE will publish a book consisting of selected papers from the conference. The book will be peer-reviewed by reviewers chosen by the book publisher and editors.

- All EastFIRE Conference presentations will be published electronically on the George Mason University School of Computational Sciences EastFIRE website at http://eastfire.gmu.edu/workshop/.

Maps and Directions

Conference venue

Johnson Center,
Fairfax Campus,
George Mason University.
4400 University Dr.
Fairfax, VA 22030
Tel: 703-993-9000

Hotel Shuttle Schedule: There will be one shuttle bus between the hotel and George Mason that will run once in the morning and once in the evening for each full day of the conference.

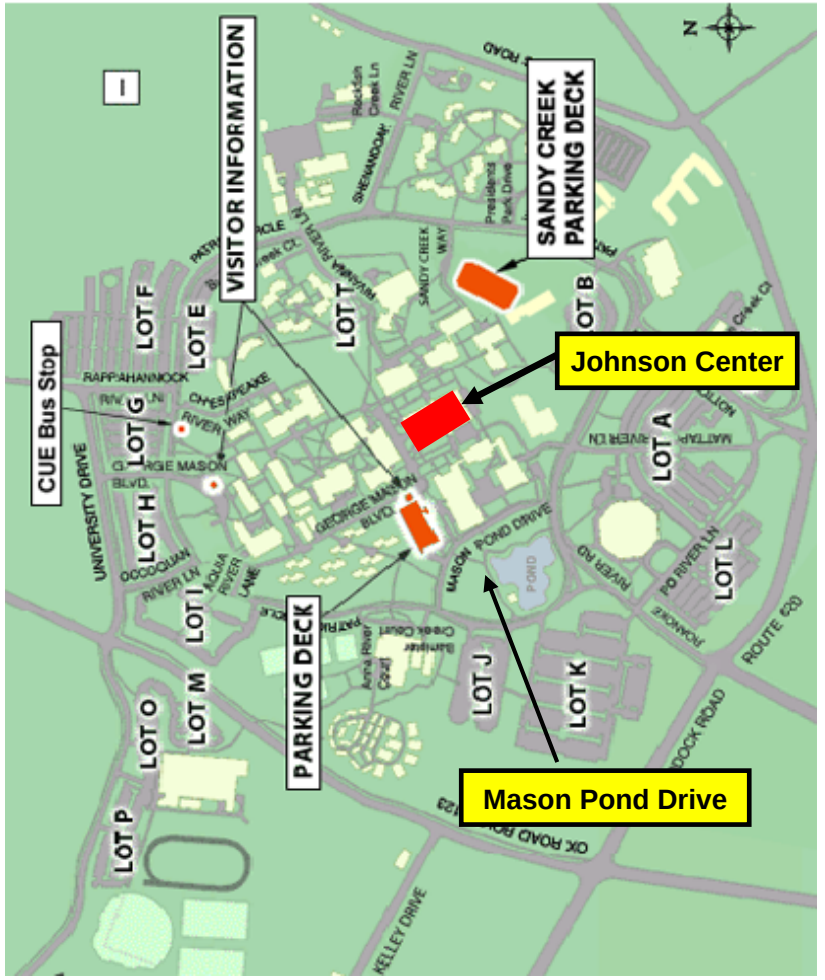
--8:00am 11 May, 2005 – Shuttle Departs for GMU

--8:15am 12 & 13 May, 2005 – Shuttle Departs for GMU

--8:00pm 11-12 May, 2005 – Shuttle returns to Marriot

Parking Information

Visitors parking on the Fairfax Campus are advised to park in the parking deck/garage located on Mason Pond Drive next to the Concert Hall. Visitors may also use short-term metered parking at prevailing rates. Handicapped visitors may park in the parking deck at the prevailing rate or in a metered space for up to four hours free of charge.



Conference Hotel

Fairview Park Marriott
3111 Fairview Park Drive
Falls Church, VA 22042
Tel: 703-849-9400

Directions to the Hotel:

- **From Richmond**: I-95 North Exit to I-495 (Capital Beltway). Take Capital Beltway to Exit 50 B (Arlington Blvd – Route 50 E), and follow signs for Fairview Park South exit. Exit and follow signs for Fairview Park South. The hotel is located on the left and proceed to parking garage which is the second entrance on the right.
- **From Baltimore**: I-95 South towards Washington. Exit I-495 West towards Northern Virginia. Continue on I-495 to Exit 50 B, (Arlington Blvd – Route 50 East). Follow signs for Fairview Park South. The hotel is located on the left and proceed to parking garage which is the second entrance on the right.
- **From Washington D.C.:** Route 66 West I-495 South towards Richmond. Exit I-495 at Exit 50 B, (Arlington Blvd – Route 50 East). Follow signs for Fairview Park South and the Hotel is located on the left and proceed to parking garage which is the second entrance on the right.

Directions to George Mason from Marriot at Fairview Park:
Start by going Northeast on Fairview Park Dr. towards Rt. 50.
Merge onto US-50 W via ramp on LEFT. Continue on Rt. 50 for about 5.1 miles. Turn LEFT onto Chain Bridge Rd/VA-123 S. Continue on Chain Bridge Rd for about 1.7 miles. Turn LEFT onto University Dr.

Directions to Fairfax Campus

From the Capital Beltway (I-495) Take exit 54, Braddock Road (Route 620), and take the westbound fork. Follow Braddock Road West for approximately six miles. Pass the first entrance to the university and turn right at the stop light at Roanoke River Road. Bear right at the fork in the road. Take your first left onto Mason Pond Drive; parking is available in the Parking Deck, the last building on the right. An information kiosk is located outside the third level of the deck to help you navigate the campus.

Via I-66E From Front Royal & Fairfax County Pkwy Exit at the Fairfax County Parkway South (Route 7100). Exit the Parkway at Braddock Road, and turn left onto Braddock Road. Take the first left past Route 123 (Ox Road) onto Roanoke River Road. Bear right at the fork in the road. Take the first left on Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

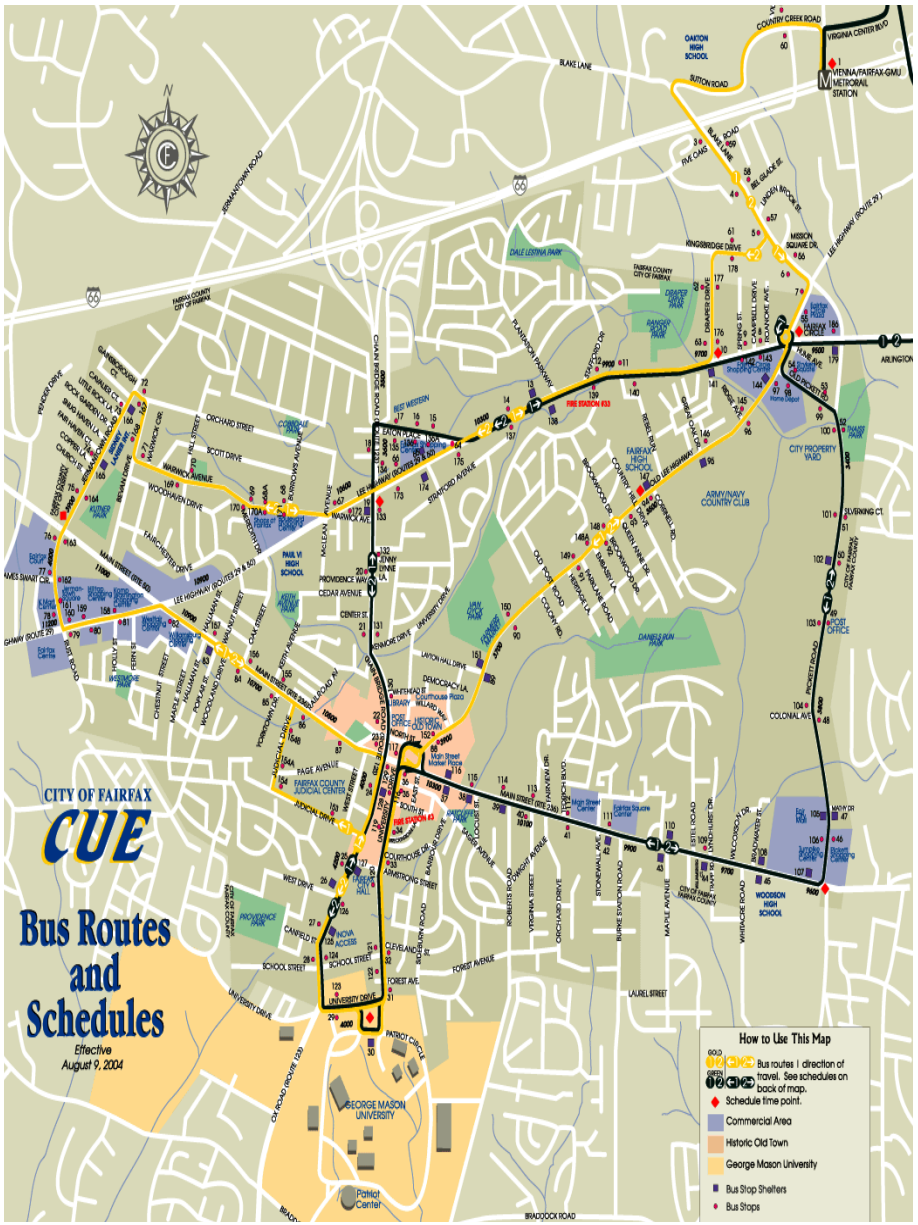
Via I-66W from D.C. or Arlington Take exit 60 at Route 123 South, Chain Bridge Road. Follow Route 123 through the City of Fairfax, and turn left at University Drive. Take your first right at Occoquan River Lane. Turn right at the stop sign onto Patriot Circle. At the pond, bear left to stay on Patriot Circle. Take your first left on Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM I-95 (NORTH OR SOUTH) From points north on I-95, take exit 27 (I-495 West), then follow the directions "from the Capital Beltway (I-495)." From points south on I-95, take exit 160B (Route 123 North) at Lake Ridge/Occoquan. Follow Route 123 north for approximately 15 miles to Braddock Road. Turn right on Braddock Road. At first signal, turn left on Roanoke River Road. Bear right at the fork in the road. Take your first left onto Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM WASHINGTON DULLES INTERNATIONAL AIRPORT Exit the airport onto the Dulles Access Road, which leads to the Dulles Toll Road at Route 267, Reston Parkway. Exit the Dulles Toll Road (no toll required) at exit 11, Fairfax County Parkway South. Follow the Parkway, and exit at Braddock Road. At the signal turn left on Braddock Road. Take the first left past Route 123 onto Roanoke River Road, and go right at the fork in the road. Take your first left onto Mason Pond Drive to the Parking Deck, the last building on your right. An information kiosk is located outside the third level of the deck to help navigate the campus.

FROM RONALD REAGAN WASHINGTON NATIONAL AIRPORT When exiting the airport, follow the signs to Washington, DC North and to the George Washington Parkway north, to I-395. Once on G.W. Parkway, stay in the middle lane to enter I-395 south to Richmond. Immediately move left 3 lanes to remain on I-395 south. Exit I-395 at I-495 North (exit 1C) to Rockville. Exit I-495 at exit 54, Braddock Road West, and take the westbound fork. Follow Braddock Road West for approximately 6 miles. Turn right at Roanoke River Road. Bear right at the fork in the road. Turn left on Mason Pond Drive; parking is available in the Parking Deck.

CUE Bus Schedule



CUE Bus Schedule

GREEN 1 Weekdays

Vienna/ Fairfax-GMU (Departs) · Fairfax Circle · Main Street & Pickett Road · GMU Campus · Lee Highway & Chain Bridge Rd · Fairfax Circle · Vienna/ Fairfax-GMU (Arrives)

			5:30A	5:38A	5:46A	6:00A
			6:05A	6:13A	6:21A	6:35A
6:05A	6:19A	6:26A	6:39A	6:47A	6:55A	7:09A
6:40A	6:54A	7:01A	7:14A	7:22A	7:30A	7:44A
7:14A	7:28A	7:35A	7:48A	7:56A	8:04A	8:18A
7:49A	8:03A	8:10A	8:23A	8:31A	8:39A	8:53A
8:23A	8:37A	8:44A	8:57A	9:05A	9:13A	9:27A
8:58A	9:12A	9:19A	9:32A	9:40A	9:48A	10:02A
9:32A	9:46A	9:53A	10:06A	10:14A	10:22A	10:36A
10:07A	10:21A	10:28A	10:41A	10:49A	10:57A	11:11A
10:41A	10:55A	11:02A	11:15A	11:23A	11:31A	11:45A
11:16A	11:30A	11:37A	11:50A	11:58A	12:06P	12:20P
11:50A	12:04P	12:11P	12:24P	12:32P	12:40P	12:54P
12:25P	12:39P	12:46P	12:59P	1:07P	1:15P	1:29P
12:59P	1:13P	1:20P	1:33P	1:41P	1:49P	2:03P
1:34P	1:48P	1:55P	2:08P	2:16P	2:24P	2:38P
2:08P	2:22P	2:29P	2:42P	2:50P	2:58P	3:12P
2:43P	2:57P	3:04P	3:17P	3:25P	3:33P	3:47P
3:17P	3:31P	3:38P	3:51P	3:59P	4:07P	4:21P
3:52P	4:06P	4:13P	4:26P	4:34P	4:42P	4:56P
4:26P	4:40P	4:47P	5:00P	5:08P	5:16P	5:30P
5:01P	5:15P	5:22P	5:35P	5:43P	5:51P	6:05P
5:35P	5:49P	5:56P	6:09P	6:17P	6:25P	6:39P
6:10P	6:24P	6:31P	6:44P	6:52P	7:00P	7:14P
6:44P	6:58P	7:05P	7:18P	7:26P	7:34P	7:48P
7:53P	8:05P	8:12P	8:25P	8:32P	8:40P	8:54P
8:59P	9:11P	9:18P	9:29P	9:36P	9:44P	9:54P
9:59P	10:09P	10:16P	10:26P	10:33P	10:41P	10:51P
10:55P	11:05P	11:12P	11:22P	11:29P	11:36P	11:46P

GREEN 2 Weekdays

Vienna/ Fairfax-GMU (Departs) · Fairfax Circle · Lee Highway & Chain Bridge Rd · GMU Campus · Main Street & Pickett Road · Fairfax Circle · Vienna/ Fairfax-GMU (Arrives)

			5:15A	5:28A	5:35A	5:49A
			5:50A	6:03A	6:10A	6:24A
5:54A	6:08A	6:16A	6:26A	6:37A	6:44A	6:58A
6:29A	6:43A	6:51A	7:01A	7:12A	7:19A	7:33A
7:03A	7:17A	7:25A	7:35A	7:45A	7:53A	8:07A
7:38A	7:52A	8:00A	8:10A	8:21A	8:28A	8:42A
8:12A	8:26A	8:34A	8:44A	8:55A	9:02A	9:16A
8:47A	9:01A	9:09A	9:19A	9:30A	9:37A	9:51A
9:21A	9:35A	9:43A	9:53A	10:04A	10:11A	10:25A
9:56A	10:10A	10:18A	10:28A	10:39A	10:46A	11:00A
10:30A	10:44A	10:52A	11:02A	11:13A	11:20A	11:34A
11:05A	11:19A	11:27A	11:37A	11:48A	11:55A	12:09P
11:39A	11:53A	12:01P	12:11P	12:22P	12:29P	12:43P
12:14P	12:28P	12:36P	12:46P	12:57P	1:04P	1:18P
12:48P	1:02P	1:10P	1:20P	1:31P	1:38P	1:52P
1:23P	1:37P	1:45P	1:55P	2:06P	2:13P	2:27P
1:57P	2:11P	2:19P	2:29P	2:40P	2:47P	3:01P
2:32P	2:46P	2:54P	3:04P	3:15P	3:22P	3:36P
3:06P	3:20P	3:28P	3:38P	3:49P	3:56P	4:10P
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4:15P	4:29P	4:37P	4:47P	4:58P	5:05P	5:19P
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5:59P	6:13P	6:21P	6:31P	6:42P	6:49P	7:03P
6:33P	6:47P	6:55P	7:05P	7:16P	7:23P	7:37P
7:42P	7:56P	8:04P	8:14P	8:25P	8:32P	8:46P

GOLD 1 Weekdays

Vienna/ Fairfax-GMU (Departs) · Fairfax High School · GMU Campus · Main Street & Jermantown Rd · Lee Highway & Chain Bridge Rd · Lee Highway & Draper Drive · Vienna/ Fairfax-GMU (Arrives)

			5:40A	5:46A	5:52A	5:59A
			6:10A	6:16A	6:22A	6:29A
6:04A	6:12A	6:25A	6:38A	6:47A	6:56A	7:03A
6:34A	6:42A	6:55A	7:08A	7:17A	7:26A	7:33A
7:07A	7:15A	7:28A	7:41A	7:50A	7:59A	8:06A
7:38A	7:46A	7:59A	8:12A	8:21A	8:30A	8:37A
8:11A	8:19A	8:32A	8:45A	8:54A	9:03A	9:10A
8:42A	8:50A	9:03A	9:16A	9:25A	9:32A	9:39A
9:15A	9:23A	9:36A	9:49A	9:58A	10:05A	10:12A
9:44A	9:52A	10:05A	10:18A	10:27A	10:34A	10:41A
10:17A	10:25A	10:38A	10:51A	11:00A	11:07A	11:14A
10:46A	10:54A	11:07A	11:20A	11:29A	11:36A	11:43A
11:19A	11:27A	11:40A	11:53A	12:02P	12:09P	12:16P
11:48A	11:56A	12:09P	12:22P	12:31P	12:38P	12:45P
12:21P	12:29P	12:42P	12:55P	1:04P	1:11P	1:18P
12:50P	12:58P	1:11P	1:24P	1:33P	1:40P	1:47P
1:23P	1:31P	1:44P	1:57P	2:06P	2:13P	2:20P
1:52P	2:00P	2:13P	2:26P	2:35P	2:42P	2:49P
2:25P	2:33P	2:46P	2:59P	3:08P	3:15P	3:22P
2:54P	3:02P	3:15P	3:28P	3:37P	3:44P	3:51P
3:27P	3:35P	3:48P	4:01P	4:10P	4:17P	4:24P
3:56P	4:04P	4:17P	4:32P	4:41P	4:48P	4:55P
4:29P	4:37P	4:50P	5:05P	5:14P	5:21P	5:28P
5:00P	5:08P	5:21P	5:36P	5:45P	5:52P	5:59P
5:33P	5:41P	5:54P	6:09P	6:18P	6:25P	6:32P
6:04P	6:12P	6:25P	6:40P	6:49P	6:56P	7:03P
6:37P	6:45P	6:58P	7:13P	7:22P	7:29P	7:36P
7:41P	7:49P	8:02P	8:15P	8:24P	8:31P	8:38P
8:43P	8:51P	9:04P	9:17P	9:26P	9:33P	9:40P
9:45P	9:53P	10:06P	10:19P	10:28P	10:35P	10:42P
10:47P	10:55P	11:08P	11:21P	11:30P	11:37P	11:44P

GOLD 2 Weekdays

Vienna/ Fairfax-GMU (Departs) · Lee Highway & Draper Drive · Lee Highway & Chain Bridge Rd · Main Street & Jermantown Rd · GMU Campus · Fairfax High School · Vienna/ Fairfax-GMU (Arrives)

			5:25A	5:37A	5:49A	5:57A
			5:55A	6:07A	6:19A	6:27A
6:02A	6:09A	6:16A	6:24A	6:36A	6:48A	6:56A
6:32A	6:39A	6:46A	6:54A	7:06A	7:18A	7:26A
7:01A	7:08A	7:15A	7:23A	7:35A	7:47A	7:55A
7:31A	7:38A	7:45A	7:53A	8:05A	8:17A	8:25A
8:00A	8:07A	8:14A	8:22A	8:34A	8:46A	8:54A
8:30A	8:37A	8:44A	8:52A	9:04A	9:16A	9:24A
8:59A	9:06A	9:13A	9:21A	9:33A	9:45A	9:53A
9:29A	9:36A	9:43A	9:51A	10:03A	10:15A	10:23A
9:58A	10:05A	10:12A	10:20A	10:32A	10:44A	10:52A
10:28A	10:35A	10:42A	10:50A	11:02A	11:14A	11:22A
10:57A	11:04A	11:11A	11:19A	11:31A	11:43A	11:51A
11:27A	11:34A	11:41A	11:49A	12:01P	12:13P	12:21P
11:56A	12:03P	12:10P	12:18P	12:30P	12:42P	12:50P
12:26P	12:33P	12:40P	12:48P	1:00P	1:12P	1:20P
12:55P	1:02P	1:09P	1:17P	1:29P	1:41P	1:49P
1:25P	1:32P	1:39P	1:47P	1:59P	2:11P	2:19P
1:54P	2:01P	2:08P	2:16P	2:28P	2:40P	2:48P
2:24P	2:31P	2:38P	2:46P	2:58P	3:10P	3:18P
2:53P	3:00P	3:07P	3:15P	3:27P	3:39P	3:47P
3:23P	3:30P	3:37P	3:45P	3:57P	4:09P	4:17P
3:52P	3:59P	4:06P	4:14P	4:28P	4:40P	4:48P
4:22P	4:29P	4:36P	4:46P	5:00P	5:12P	5:20P
4:53P	5:00P	5:09P	5:17P	5:31P	5:43P	5:51P
5:25P	5:32P	5:41P	5:49P	6:03P	6:15P	6:23P
5:56P	6:03P	6:12P	6:20P	6:34P	6:46P	6:54P
6:28P	6:35P	6:42P	6:50P	7:02P	7:14P	7:22P
6:59P	7:06P	7:13P	7:21P	7:33P	7:45P	7:53P
7:58P	8:05P	8:12P	8:20P	8:32P	8:44P	8:52P
8:57P	9:04P	9:11P	9:19P	9:31P	9:43P	9:51P

Local Restaurants

Red Hot & Blue
4150 Chain Bridge Rd, Fairfax
703-218-6989 (0.53 mi away)

Fat Tuesday's
10673 Braddock Road, Fairfax
703-385-5717 (0.61 mi away)

Tong Thai Restaurant
10621 Braddock Rd #H, Fairfax
703-691-0700 (0.63 mi away)

Il Lupo
4069 Chain Bridge Rd, Fairfax
703-934-1655 (0.68 mi away)

Asian Express
4008 University Dr. Fairfax
703-385-1909 (0.78 mi away)

Hunan Eatery
4008 University Dr #A, Fairfax
703-352-2888 (0.78 mi away)

Le Tire Bouchon Restaurant
4009 Chain Bridge Rd, Fairfax
703-691-4747 (0.78 mi away)

Best of Thai Restaurant
4004 University Dr., Fairfax
703-267-9619 (0.80 mi away)

Chiengmai Thai Restaurant
4004 University Dr, Fairfax
703-273-1021 (0.80 mi away)

Florentine Restaurant
4004 University Dr, Fairfax
703-691-9835 (0.80 mi away)

Havabite Eatery
10416 Main St, Fairfax
703-591-2244 (0.81 mi away)

Mehfil Indian Cuisine
10418 Main St, Fairfax
703-385-5786 (0.81 mi away)

Bellissimo
10403 Main St, Fairfax
703-293-2367 (0.81 mi away)

T.T. Reynolds
10414 Main St., Fairfax
703-591-9292 (0.81 mi away)

Café Italia II
10515 Main St., Fairfax
703-385-6767 (0.83 mi away)

Japanese Restaurant
4942 Carragepark Rd, Fairfax
703-750-6846 (0.83 mi away)

Firehouse Grille
3988 University Dr, Fairfax
703-383-1030 (0.83 mi away)

Ned Devine's Irish Aussie Pub
3971 Chain Bridge Rd, Fairfax
703-293-9600 (0.84 mi away)

Acknowledgements

Since 1989, the **Cooperative Program for Operational Meteorology, Education and Training (COMET)** Program's mission is to serve as a premier resource that supports, enhances, and stimulates the communication and application of scientific knowledge of the atmospheric and related sciences for the operational and educational communities.

ESRI was founded as **Environmental Systems Research Institute** in 1969 as a privately held consulting firm that specialized in land use analysis projects. Its early mission focused on the principles of organizing and analyzing geographic information. Today, the company's focus remains on producing excellent software and delivering exceptional GIS services to users around the globe.

Established in 1905, the **U.S.D.A Forest Service** is an agency of the **U.S. Department of Agriculture**. The Forest Service manages public lands in national forests and grasslands.

George Mason University's 30th year as an independent institution was celebrated in 2002. In these thirty years, the university has gained a national reputation for its quality faculty, innovation, diversity, and strong community and corporate alliances.

The Joint Fire Science Program (JFSP), a partnership of six Federal wildland and fire and research organizations, was established in 1998 to provide scientific information and support for fuel and fire management programs.

Acknowledgements

Since its inception in 1958, **NASA** has accomplished many great scientific and technological feats in air and space. NASA technology also has been adapted for many non-aerospace uses by the private sector.

Established in August 2000 **National Fire Plan** was developed with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The NFP addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability.

The **National Oceanic and Atmospheric Administration (NOAA)** is established in 1970. NOAA's mission is to describe and predict changes in the Earth's environment, and conserve and manage wisely the Nation's coastal and marine resources to ensure sustainable economic opportunities.

U.S. Geological Survey (USGS) is a federal source for science about the Earth, its natural and living resources, natural hazards, and the environment.

The University Corporation for Atmospheric Research (UCAR) is a non-profit consortium of over 100 university members and affiliates founded in 1960 to enhance the capabilities of the universities and to focus on scientific problems that are beyond the scale of a single university.

EastFIRE Mission

EastFIRE is an advanced research project focusing on providing timely, accurate, cost effective, and technically appropriate fire related information to the broad and diverse fire communities of the eastern United States. ***EastFIRE*** recognizes the dynamic nature of challenges facing fire interests in the east, including demographic and land use changes, and the importance of managers at the federal, state, and local levels. Additional concerns over climate change, air pollution, and invasive species are acknowledged components of a growing mix of concerns. ***EastFIRE*** begins its problem solving approach with available NASA and NOAA satellite remote sensing measurements and synergistically applies advanced mathematical methodologies based on state of the art fire science, decision support science and remote sensing data processing technologies. Our knowledge engineered outputs provide useful, timely and geographically specific information to federal, state and local fire managers and other users. ***EastFIRE*** uses continuous satellite measurements to: (1) generate near real time fire related products; (2) deliver the data products appropriately tuned to specific users; (3) post fire related information for interested public; and (4) provide support to federal, state and local decision makers. As an integral part of an internationally renowned university, ***EastFIRE*** also educates an outstanding cadre of students to address future problems while providing training for today's wildland fire professionals in the eastern states.