International Conference on Environmental Science and Technology

Environmental disturbance and pollution are complex problems worldwide. Although considerable environmental protection work has been and is presently being conducted, the state of development among various technologies still varies widely, ranging from initial exploratory research all the way to actual commercial products and practical processes.

The objective of *The First International Conference on Environmental Science and Technology* will be to provide a major interdisciplinary forum for presenting new approaches from relevant areas of environmental science, to foster integration of the latest developments in scientific research into engineering applications, and to facilitate technology transfer from well-tested ideas into practical products and remedial processes. Researchers, engineers, site managers, regulatory agents, policy makers, consultants, and vendors will all benefit from the opportunity to exchange information on recent research trends, to examine ongoing research programs, and to investigate world-wide public and regulatory acceptance of environmental protection and remediation technologies.

The Conference chairs are Professor Ramesh K. Reddy of Florida University, and Dr. William G. Lyon of American Academy of Sciences. Co-Sponsors and the participating partners of the conference will include governmental, academic, and private organizations that are international leaders in environmental research and technology applications.

Proposed Presentation Topics

The Conference program will comprise several hundred platform and poster presentations, organized into sessions that will address a variety of disciplines and technologies as well as contaminants. The sessions will be chaired by internationally recognized leaders in environmental sciences and technologies. The following is a tentative list of sessions; the list will be revised as necessary or appropriate during the abstract review process. Abstracts addressing new applications of environmental science and technology are especially welcome.

1. Water pollution and water quality control

1.1. Rivers and estuary systems
1.2. Watershed management and restoration
1.3. Environmental aquatic chemical processes
1.4. Nitrate losses from watersheds
1.5. Biogeochemical processes in surface waters
1.6. Lake eutrophication
1.7. Non-point sources
1.8. In-situ measurement technology
1.9. Drinking water protection
1.10. Ultraviolet technologies
1.11. Biological wastewater treatment
1.12. Physical and chemical processes of wastewater treatment
1.13. Particle-fluid interactions
1.14. Contaminant transport in saturated and unsaturated porous media
1.15. Modeling oxygen-transport limited biodegradation in groundwater
1.16. Water quality simulation analysis
1.17. Environmentally benign ("green") chemical syntheses
1.18. Nanometer products for waste treatment
1.19. Waste water discharge management
1.20 Waste gas emission management
1.21. Oil spill models

2. Air pollution and air quality control

2.1. Aerosols in the atmosphere
2.2. Environmental fluid dynamics and energy exchange

2.3. Interactions between the atmosphere, the ocean and land surfaces
2.4. Acid rain
2.5. Indoor air quality
2.6. City and regional air quality control
2.7. Atmospheric chemical processes of pollutants
2.8. Source characterization
2.9. Anthropogenic and biogenic pollutant emissions
2.10. Transformation, transport, and fate of air pollutants
2.11. Air quality models
2.12. Air pollution control
2.13. Non-point sources
2.14. Reduction of mobile sources
2.15 Vehicle emission control technology
2.16 Catalysts for reducing emission

3. Land (soil, solid waste) pollution and remediation

3.1. Contaminant transport in the subsurface
3.2. Natural attenuation of contaminants
3.3. Remediation of contaminated sites
3.4. Impacts of source zone remediation
3.5. Geochemical processes in subsurface systems
3.6. Permeable reactive barriers
3.7. Abiotic reductive transformations
3.8. In-situ and on-site remediation
3.9. Effect of confined animal feeding operations
3.10. Microbial reductive transformations
3.11. Anaerobic transformation processes
3.12. Enzyme-mediated Transformations
3.13. Molecular characterization of subsurface ecosystems
3.14. Nutrient cycling
3.15. Iron oxide and iron sulfide mediated reductive transformations
3.16. Reduction kinetics of redox zonation
3.17. Contaminated media remediation
3.18. Separation and extraction techniques
3.19. Soil washing
3.20. Denitrification in aquifers
3.21. Drainage systems from contaminated sites
3.22. Field-scale nonaqueous phase transport processes
3.23. Heterogeneous poro-elastic media with fluid

and heat flow
3.24. Use of colloidal particles for targeted groundwater cleanup
3.25. Hazardous site remediation
3.26. Biohazard monitoring:
3.27. Hazardous and solid waste management
3.28. Landfill operations
3.29. Geochemical engineering
3.30. Composting

4. Ecosystem restoration

4.1. Restoration of ecosystems
4.2. Chemical cycling of ecosystems
4.3. Diagnostic indicators
4.4. Statistical techniques in bioassessment
4.5. Wildlife toxicology
4.6. Molecular characterization of ecosystems
4.7. Biomarkers of pollutants
4.8. Environmental quality indicators
4.9. Nutrient load relationships
4.10. Algal responses
4.11. Ecological risks of dioxins
4.12. Nutrients and food web modeling
4.13. Indicators of estuarine condition
4.14. Biogeochemical cycles in ecosystems
4.15. Maintenance of stable ecosystems
4.16. Landscape evolution
4.17. Large river ecosystems
4.18. Highly urbanized environments
4.19. Tropical conservation
4.20. Economic alternatives for environmental improvement
4.21. Riparian ecosystem management models

5. Bio-assessment and toxicology

5.1. Characterization of aggregate human exposure
5.2. Bio-markers for pollutants
5.3. Bio-signaling of toxic pollutants
5.4. Human exposure to air pollutants
5.5. Microbiological and chemical exposure assessments
5.6. Environmental exposure and source research
5.7. Measurement, characterization, and prediction of the exposure of humans to pollutants

5.8. Molecular, biological, and biochemical indicators of exposure
5.9. Exposure assessments of water, sediment, and fish tissue.
5.10. Exposure criteria
5.11. Risk assessment
5.12. Ecotoxicology
5.13. Field and laboratory biological methods
5.14. Molecular ecology
5.15. Cellular and genetic toxicology
5.16. Environmentally induced gene expression
5.17. Genetic and environmental toxicology
5.18. Chemical weapons risk assessment
5.19. Chemical exposure assessment
5.20. Bioaccumulation
5.21. Bioavailability
5.22. Physiologically based toxicokinetic modeling
5.23. Microbial bioavailability/toxicity
5.24. Environmental microbiology
5.25. Environmental gene expression profiling

6. Wetlands

6.1. Biogeochemistry of wetlands
6.2. Remediation of contaminated wetlands
6.3. Wetlands for wastewater treatment
6.4. Wetland construction
6.5. Contaminant fate in wetlands
6.6. Wetland restoration
6.7. Natural attenuation of pollutants in Wetlands
6.8. Wetland ecology
6.9. Artificial control of wetland evolution

7. Sediments

7.1. Redox characterization of sediments
7.2. Contaminated sediments
7.3. Sediment remediation
7.4. Exchanges of pollutants in sediment-water interface
7.5. Suspension and reoxidation of contaminated sediments
7.6. Sediment quality criteria for pollutants

8. Global change

8.1. Greenhouse observation
8.2. Large scale transfer of pollutants
8.3. Global climate change monitoring
8.4. Great rivers and great lakes assessment
8.5. Environmental impacts of ocean sequestration of CO_2
8.6. Impact of deforestation on regional climates
8.7. Role of vegetation in the biosphere
8.8. Land-atmosphere interaction
8.9. Cycling of chemicals in the atmosphere
8.10. Contaminant flow dynamics
8.11. Contaminant fate and transport
8.12. Particle transfer on large spatial scales
8.13. Risk assessment modeling.
8.14. Regional environmental monitoring and assessment

9. Metals

9.1. Metal distribution in the environment
9.2. Biovailability of metals
9.3. Complexation of metal ions by humic substances
9.4. Microbially mediated metal dissolution
9.5. Role of bacteria in mercury methylation
9.6. Metal reducing bacteria
9.7. Reactions of metal ions in aquatic systems
9.8. Selenium geographical distribution and disease
9.9. Speciation of Cr, As, Se, and Hg
9.10. Metal speciation remediation
9.11. Microbially mediated remediation of metals
9.12. Phyto-remediation
9.13. Nuclear or radioactive contamination

10. Chlorinated and other organic compounds

10.1. Pesticide degradation
10.2. Fate of organic contaminants in hazardous waste sites
10.3. Fate of semivolatile organic compounds discharged to surface
10.4. Remediation of MTBE and other fuel oxygenates
10.5. Sorption of organic pollutants
10.6. Decomposition of organic compounds

10.7. Organic contaminant transport and remediation
10.8. Photo-oxidation of chromophoric dissolved organic matter
10.9. Modeling fates of organic pollutants;
10.10. Phytoremediation of organic compounds

11. Modeling

11.1. Mathematical models of multi-phase transport
11.2. Mathematical modeling of vapor intrusion
11.3. Hydrology and constituent transport in subsurface waters
11.4. Wellhead analytic element models
11.5. Integrated multi-media modeling
11.6. Risk analysis in multimedia environmental systems
11.7. Multi-receptor, multi-pathway risk assessments
11.8. Ecological endpoint modeling
11.9. Modeling and evaluation of oil spill dispersants
11.10. Modeling and evaluation of Methyl tert-Butyl Ether (MTBE)
11.11. Coupling of hydrodynamic and water quality models
11.12. Coupled surface and atmospheric boundary layer models

12. GIS, database, statistics, and remote sensing

12.1. Integrating GIS for environmental assessment
12.2. Risk analysis and database management
12.3. Ecosystem databases and statistics
12.4. Toxicity databases
12.5. Environmental statistics
12.6. Environmental data assimilation
12.7. Environmental remote sensing applications

Abstract Preparation and Submission

Abstracts to be considered for the program are to be prepared and submitted electronically

according to the instructions given below. ***Abstracts must be received by May 31, 2004.***

Abstract Content. Because several hundred abstracts will be received for review, each abstract must clearly and concisely describe the material being proposed for presentation. Include in your abstract only the information the Program Committee will need to quickly comprehend the scope of the work, determine its relevance, and assign it to an appreciate platform or poster slot. The abstract should specify the contaminant(s) being addressed and the scale of the project (laboratory, pilot, field, regional or global). Identify the technology or combination of technologies being studied and the anticipated beginning and ending dates of the work. Modeling papers are expected to show significance for and success in field applications. Papers on risk-related issues should address or advance recent findings on human health, ecological impacts and regulatory implications. Case studies with novel approaches are especially desired. Preference will be given to those abstracts that provide a concise and thorough summary of the project objectives and results. Abstracts with only a strong commercial slant will be rejected.

Abstract Format. Abstracts are to be prepared using standard PC-based MS Word software. Abstracts must be in English and cannot exceed one page. Use a 12-point serif font (e.g. Times New Roman) and leave 1-inch (2.5-cm) margins left, right, top, and bottom. Center the title (maximum 12 words, all-caps, bold type) at the top of the page. Leave a blank line before beginning the author list, which also is to be centered. If several authors are from one organization, save space and make the list easier to read by grouping authors so that the organization need be typed only once. After each author or group of authors, use parentheses to enclose their affiliation - employer (first level only - omit division, department, etc.), city, state/province (if applicable) and country. Bold and italicize the name of the corresponding/ presenting author. Leave a blank line after the

authors and then begin the text, typing it single-spaced and justifying only the left margin. Leave one blank line between paragraphs; do not indent paragraphs.

Abstract Submission. Receipt of the abstract will be acknowledged by e-mail within five working days. Abstracts are to be submitted in electronic form via e-mail. Attach the abstract to an e-mail addressed to abstract@AASci.org. When submitting, please include the necessary submittal data in the cover note, organized under the following four headings:

Title of abstract. Should not exceed 12 words.

Corresponding/presenting author block. Name of the person expected to make the presentation at the Conference; this is the person to whom all correspondence will be addressed. Include all contact information - employer, street address, city, state/province and zip/postal code (as applicable), country, telephone, fax, and e-mail address.

Placement preference. Please indicate whether the author prefers a platform (oral) paper or a poster presentation. For subject area, refer to the suggested presentation topics in the session list and select one or two sessions (e.g., 3.3, 9.2) or, if the abstract is being submitted at the request of a prospective session chair, state that person's name. Note: the author's preference will be taken into account, but placement cannot be guaranteed.

Coauthor list. Full names of all coauthors and contact information - employer, street address, city, state/province and zip/postal code as applicable, country, telephone, fax, and e-mail address - for each.

Review. Abstract received by the May 31 deadline will be reviewed for technical merit, currency, and relevance to the Conference. When assigning accepted abstracts to program slots, the Technical Program Committee will consider authors' suggestions as to session and format

(platform or poster), but the final decision on placement will be based on best overall design of the Conference program.

Notification of Acceptance/Placement. By July 31, 2004, a letter stating the Committee's decision on each abstract will be mailed to the corresponding author. If the abstract was accepted, this letter will state the platform or poster session to which the abstract has been assigned and will provide information on preparing the presentation.

Proceedings. Acceptance letters will include information on submitting manuscripts for publication in the proceedings, which will be published shortly after the Conference. Manuscripts will be invited for all abstracts accepted for platform or poster presentation; the submittal deadline will be October 31, 2004.

Because registration fees are the major source of funding for the Conference and a significant percentage of the registrants will make presentations, all presenting authors and session chairs are expected to register and pay the standard fees.

Call for Exhibits

Organizations that conduct environmental-related activities or supply equipment used in such work are invited to exhibit at the Conference. Exhibits will be displayed throughout the Conference in a large area adjacent to the platform areas. Exhibitors will have the opportunity to present information to a large, focused audience of up to 1,500 people who acquire and use environmental research/management products and/or services at industrial and government sites around the world. The fee for a 10-ft by 10-ft booth and standard furnishings is $2,500; a discounted fee of $1,995 applies if payment is made before June 30, 2004. For exhibitor information and an application form, send an e-mail to exhibit@AASci.org or call

(580)332-8666. Space is limited and will be assigned on a first-come/first-served basis.

Advance Registration

To register, go to http://www.AASci.org/conference and register on line or print a form for registration by mail or fax. We encourage you to register early - registrations will be limited to the number that the facility can accommodate efficiently. Registration fees are as follows:

	Paid by 31 Oct.04	Paid after 31 Oct. 04
Industry	U$725	$825
Government/University	US$625	$725
Student*	US$375	$425

*Student fees do not include the proceedings

The registration fee covers admission to all platform and poster sessions, exhibits, group lunches, receptions, and daily continental breakfasts and refreshment breaks. Registration materials will include the final program and a set of abstracts. In addition, each full-program registrant will receive a set of the proceedings, which will be published by a press and mailed soon after the Conference.

Checks should be drawn on a U.S. bank, payable in U.S. funds to " AAS, FEIN #30-0104536" and referencing "Environmental Conference". Payment can be made also by American Express, MasterCard, or Visa. Cash, wire transfer and money orders are also accepted (Account name: American Academy of Sciences; Account number: 646 681 197; Bank routing number: 065 4 00 137 (for USA domestic) or BONE US 44 (swift code for international) at Bank One, 729 Harrison Avenue, New Orleans, 70124, USA). The postal address is "ATTN: Environmental Conference, American Academy of Sciences, 6464 Avenue B, New Orleans, LA 70124, USA". Cancellations received by December 31, 2004, will be refunded. No refunds will be made after December 31, 2004, but paid no-shows will

receive all registration materials covered by their registration fees. Substitutions will be accepted at any time, preferably with advance notice.

Meeting Site/ Accommodations/Travel

Meeting Headquarters/Accommodations. The Conference will be held at the Fairmont Hotel New Orleans (123 Baronne Street, New Orleans, LA 70112, USA), in the heart of the Crescent City. Located just one block from Bourbon Street and within walking distance of the Riverwalk, Jackson Square, and the French Quarter, the hotel puts all the fun and festivities of New Orleans at your doorstep. Time will be allowed within the program's schedule to take advantage of the scenic locale, and optional pre- and post-conference activities will be available for conference delegates and their companions.

Because New Orleans is one of the most popular tourist cities in the United States, rooms at centrally located hotels sell out months ahead. Therefore, the Conference secretariat has reserved the largest possible block of sleeping rooms at the Fairmont Hotel, as well as substantial blocks of rooms at several hotels near the Canal Street. It is impossible to guarantee that rooms will be available for late registrants. It is extremely important that you make your hotel reservation as soon as you know that you likely to attend the Conference. Conference registrants can reserve rooms at the Fairmont Hotel at the reduced group rate of $169/night (single or double) plus tax. Comparable discounts in rates for suites are available. These rates are good through December 21, 2004, unless the block sells out before that date. The hotel will begin taking reservations on February 1, 2004. To reserve a room at the Fairmont Hotel, call the Fairmont's Global Reservations Center at 1-800-441-1414 or 1-506-863-6310. To qualify for the group rate, mention that you are attending the "International Environmental Conference." Be sure to inquire about the hotel's cancellation policy. The promotional code for the reservations is GRIES1.

Attendees can access the website at http://www.Fairmont.com and follow the instructions to make an online reservation. A direct link to the reservations has been set up at our website. US Government attendees will have to call the 800-number to receive the government per diem rates. If you have any questions on the reservations, please send email to reservations@fairmont.com.

Government Per Diem Rates. A percentage of rooms of the block will be available at per diem rates on a first-come, first-served basis to qualified Government representatives. Appropriate documentation (as determined by the individual hotel) will have to be presented upon check-in.

Travel. It is 14 miles (22 KM) from the New Orleans International Moisant Field Airport (MSY) to the Fairmont Hotel or the downtown area of New Orleans.

Inquiries

Questions on abstract submission and review:
E- mail: abstract@AASci.org

Exhibits:
E-mail: exhibit@AASci.org

Registration::
E-mail: registration@AASci.org

Other questions:
E-mail: conference@AASci.org; fax: (504)486-6332.
Always check updated information online at:
http://www.aasci.org/conference

Please be sure to specify that you are inquiring about Environmental Science and Technology Conference and include your complete mailing address and phone/fax/e-mail information.

The City of New Orleans

Nestled against a bend in the mighty Mississippi River, New Orleans is an extraordinary city rich in culture, traditions, architecture, and cuisine. World-famous landmarks include the French Quarter and Bourbon Street, Jackson Square, Farmer's Market, and Metairie Cemetery. These historic sites, along with more modern destinations, such as the Aquarium of the Americas, the shops at the Riverwalk, and Harrah's Casino are just a few minutes away by foot from the hotel. Walk through the downtown to see the beautiful balconies and lovingly restored homes of the French Quarter and watch riverboats and ocean-going vessels on the Mississippi. At every turn, you will find one of the restaurants that make New Orleans world-famous for its cuisine - Cajun, Creole, French, Italian, and good old southern home cooking. You can eat the best seafood in the local restaurants. The streetcar will take you to the Garden District, known for its elegant and historic homes and gardens, and to the zoo. In the evening, after *café au lait* and *beignets* at the Café du Monde, take a walking tour and hear stories of the places haunted by 300 years' worth of ghosts. Discover a city known the world over for its soulful jazz, Creole cuisine and Mardi Gras. Arrive a day or two before the Conference, or stay after and drive to antebellum plantation homes such as Nottoway and Oak Alley, or to Bayou Sauvage National Wildlife Refuge, home to bald eagles, falcons, alligators, and other wild critters. For more information, visit the official New Orleans web site at www.neworleanscvb.com.