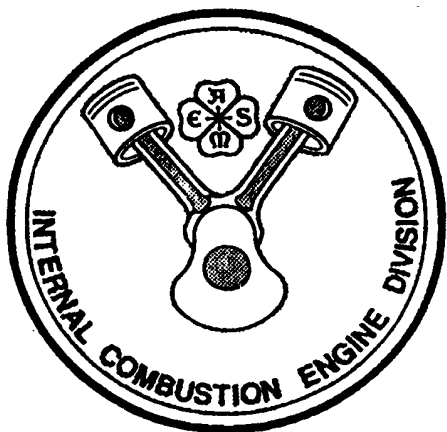




**The American Society of Mechanical Engineers
International**



PRELIMINARY PROGRAM

**2003 FALL TECHNICAL JOINT CONFERENCE WITH
INTERNAL COMBUSTION ENGINE DIVISION AND
RAIL TRANSPORTATION DIVISION**

September 7 - 10, 2003

**Courtyard Marriott Conference Center
Erie, Pennsylvania, USA**

Hosted By:

GE Transportation Systems and Gannon University

ICE Division Chair: Victor Wong

RT Division Chair: Al Bieber

Local Arrangement Chair: Paul Flynn and Gong Chen

Technical Program Chair: Neil X. Blythe

GENERAL INFORMATION

The Internal Combustion Engine Division (ICED) and Rail Transportation Division (RTD) of ASME cordially invite you to attend its joint 2003 Fall Technical Conference from September 7 - 10, at the Courtyard Marriott Conference Center in Erie, Pennsylvania, USA. Advanced registration is strongly encouraged. Please complete the registration forms on the following pages or download an electronic registration form from the conference website: www.asmeconferences.org/icert03/. Submit payment by August 22nd to receive the early registration discount. For additional conference information, please visit the ASME web site. For general visitor information on Erie, Pennsylvania, please visit www.visiteriepa.com

ACKNOWLEDGEMENTS

Many individuals contributed to the organization of the Conference. The support of GE Transportation Systems and Gannon University as the conference co-hosts, Paul Flynn and Gong Chen as local arrangement coordinators, Peggy Flynn as the spouses activities coordinator and Sue Napierkowski as the assistant local arrangements co-coordinator are gratefully acknowledged.

The contributions of the anonymous technical paper reviewers are greatly appreciated. The support of the ASME-ICED Executive Committee in making the Conference arrangements was essential. Special thanks go to all the session organizers and co-organizers. Finally, we recognize and honor all the authors of the papers, and our Honda lecturer, Wallace R. Wade, who are the major contributors to the success of the Conference.

TECHNICAL PAPER PRESENTATION RATING FORM

At each technical session, you will receive a Technical Paper Presentation Rating Form on which you are requested to rate the presentations you attend. This is to encourage and reward the most outstanding presentations.

INTERNAL COMBUSTION ENGINE DIVISION MEETINGS

The ICED will hold its Board of Associates meetings at the end of the technical sessions on Monday afternoon (16:00 – 17:30) to discuss the Division business. ICED Associates and attendees who are interested in actively participating in future conferences and activities of the Division are invited to attend the meetings.

PUBLICATION SALES

ASME papers presented at this conference will be included in the Conference Proceedings and are included in the registration fee. Additional Conference Proceedings are available to purchase at the Conference. After the conference, they can be ordered from ASME Order Department at Tel: (800) 843-2763 Ext. 795 or by Fax: (201) 882-1717 or 5155.

TRANSPORTATION

The Courtyard Marriott Conference Center and the other hotels are at Exit 24 (Peach Street, Route 19) on I-90 just south of Erie.

You can fly directly to Erie on US Airways, Delta, Northwest, or Continental. To drive to the conference center from the airport, go east on 12th Street to I-79, turn south to I-90 and proceed east one exit to Exit 24.

Erie is equal distance (approx. 2 hrs) from Pittsburgh, Buffalo and Cleveland airports.

From Pittsburgh: drive east on the Airport Freeway to I-79 North 120 miles to I-90, turn east and proceed one exit to Exit 24. From Cleveland: drive north on I-77 to downtown and take I-90 90 miles east to Exit 24 at Erie. From Buffalo: drive west on I-90 85 miles to Exit 24 at Erie.

HOTELS

A block of rooms has been reserved for conference delegates at the Courtyard Marriott Conference Center. When making reservations, be sure to indicate that you are attending the ASME conference. You must make reservations by August 7, 2003 in order to receive the discounted rate. Information on other nearby hotels may be found on the conference website at <https://www.asmeconferences.org/icert03/HotelInfo.cfm>.

SPOUSES/GUESTS PROGRAM

MONDAY, September 8, 2003 - Mansions of Mercer County

After a short bus ride through scenic Amish country, you will tour the beautiful Buhl Mansion. Now a guest house and art gallery, it was built by Frank Buhl in 1890 as a present for his wife. It contains a magnificent garden with elaborate statuary and an original Victorian solarium. Next you have an interesting and tasty tour of Daffin Chocolates. Lunch will be served at Tara, inspired by the movie "Gone with the Wind", a virtual museum of rare and priceless antiques, works of art and collectibles. Lunch will be followed by a guided tour of Tara's beautiful rooms and garden.

TUESDAY, September 9, 2003 - ERIEsistable Sites

The day will start with a historical visit to the Erie Maritime Museum and a tour of the Brig Niagara. You will relive the Battle of Lake Erie during the War of 1812 that secured this part of the continent for the U. S. The restored Niagara is the oldest commissioned ship in the US Navy. Then you will ride to the top of the Bayfront Tower for a beautiful overlook of Presque Isle Bay. Be sure to bring your camera! Lunch will be served on a two hour cruise around Presque Isle Bay on the Victorian Princess, an authentic paddlewheel.

SPECIAL EVENTS

EARLY BIRD RECEPTION - Sunday, September 7, 2003, 18:00-21:00

Begin the Conference by joining us for complementary hors d'oeuvres/cash bar at 6:00 p.m. at the hotel. You are then free to enjoy dinner at one of the many fine Erie restaurants. A map and selected menus will be available.

KEYNOTE ADDRESS and HONDA LECTURE

Monday, September 8, 2003, 08:00-09:10 a.m.

Wallace R. Wade, Chief Engineer at Ford Motor Co will present the 2003 Honda Lecture on Monday Sept. 8, at the Fall Technical Conference of the ICED of ASME. His topic is "**Near Zero Emission Internal Combustion Engines**", a lecture you will not want to miss. Mr. Wade is a Ford Technical Fellow and Chief Engineer, Powertrain Systems Technology and Processes, North America Engineering, Ford Motor Company. He is currently responsible for the application, development and certification of emission and control system technologies for Ford Motor Company's powertrains in North America.

Mr. Wade has received 26 patents related to improvements in powertrains and has written 24 published technical papers on powertrain research and development. He received the prestigious Henry Ford Technology Award in 1986. He is a Fellow Member of the Society of Automotive Engineers and a Member of the American Society of Mechanical Engineers.

Mr. Wade's inventions range from control systems for traction control, as used on many Ford vehicles, to diagnostics for monitoring the operation of emission control systems, new designs for emission control systems and new designs for engines with reduced friction and heat loss.

Mr. Wade has a BME from Rensselaer Polytechnic Institute and an MSME from the University of Michigan. He is the sixteenth Honda Lecturer, established by ASME through a gift from Soichiro Honda in 1986 to "recognize achievement or significant contributions in the field of personal transportation".

GE TRANSPORTATION SYSTEMS LOCOMOTIVE ASSEMBLY PLANT TOUR

Monday, September 8, 2003, 18:00

Buses will be provided to take you from the hotel to GE Transportation Systems in Erie, PA. Dinner will be provided at the GE Learning Center and groups will be given a guided tour of the Assembly and Test Buildings. You must register for the tour in advance and ride the bus to the plant. Flat, closed-toe shoes are required for the tour. No high heels or sandals. Eye and ear protection will be provided. No cameras or video equipment is allowed in the GE plant.

ICE AWARDS BANQUET

Tuesday, September 9, 2003, 18:00

The annual ASME-ICE awards banquet will be held at the historic Union Station. The station was built in the 1930's and operated as passenger rail station until the late '80s. It was restored to its original grandeur and has been operated as fine restaurant and brewpub since the early '90s. Please join us for a delicious meal and exciting program in authentic railroad surroundings.

GE TRANSPORTATION SYSTEMS DIESEL ENGINE PLANT TOUR –

Wednesday, September 10, 2003, 08:00-13:00

The GE Diesel Engine Plant is half way between Erie and Pittsburgh in Grove City, PA. Bus transportation will be available from the hotel returning to Erie at about 1:00 pm. You may want drive yourself to Grove City if you are flying out of Pittsburgh or Cleveland, but you must still register for the tour in advance. A short presentation will be followed by a guided tour of the machining and engine assembly area. The same shoe and camera restrictions apply as with the Erie tour.

CONFERENCE REGISTRATION FORM

Name _____ Title _____
 Company _____
 Address _____
 City _____ State _____ Zip _____ Country _____
 Business Phone _____ Fax Number _____
 Email Address _____ Spouse/Guest (if attending) _____
 ASME Member Yes No ASME Member Number _____

REGISTRATION

Fees must be paid in U.S. dollars. To receive benefits of advanced registration, payment must be made before August 22, 2003. Partial attendance will require full registration fee payments. Conference registration includes all Conference Proceedings, Reception on Sunday, Breakfast on Monday, Tuesday and Wednesday, Lunch on Monday and Tuesday, and Coffee breaks in the mornings and afternoons.

	#	Price	Sub Total
<input type="checkbox"/> Registration Fee - Advanced Author/Session Organizer	_____	× \$225	_____
<input type="checkbox"/> Registration Fee - Advanced ASME Member	_____	× \$225	_____
<input type="checkbox"/> Registration Fee - Advanced Non ASME Member	_____	× \$325	_____
<input type="checkbox"/> Registration Fee - Onsite, ASME Member	_____	× \$275	_____
<input type="checkbox"/> Registration Fee - Onsite, Non ASME Member	_____	× \$375	_____
<input type="checkbox"/> Additional Conference Proceedings	_____	× \$50	_____
<input type="checkbox"/> Welcoming Reception (Cash Bar) - Sunday, Sept 7	_____	no charge	_____
<input type="checkbox"/> Spouses/Guests Tour (Lunch Included) - Monday, Sept 8	_____	× \$ 30	_____
<input type="checkbox"/> Dinner (Buffet)/GE Erie Plant Tour - Monday, Sept 8	_____	× \$ 15	_____
<input type="checkbox"/> Spouses/Guests Tour (Lunch Included) - Tuesday, Sept 9	_____	× \$ 25	_____
<input type="checkbox"/> Awards Banquet – Tuesday, Sept 9	_____	× \$ 25	_____
<input type="checkbox"/> Champagne Chicken <input type="checkbox"/> 12-oz Rib Eye Steak <input type="checkbox"/> Vegetarian Cous-Cous _____			
<input type="checkbox"/> GE Grove City Engine Plant Tour – Wednesday, Sept 10	_____	no charge	_____

Transportation Selection: Bus to Grove City Tour Your Own Transportation to Grove City Tour

Total Remittance \$ _____

Which format do you prefer for publishing future ASME-ICED Confr. Proceedings Bound Hard Copy CD

• Cameras and video equipment are prohibited during the GE plant tours on Sept 8 and 10, 2003.

PAYMENT METHOD

Check enclosed (payable to ASME ICE Division)

Pay with credit card: Visa Mastercard

Credit Card Number _____ Expiration Date _____

Print Name Shown on Card: _____ Signature _____

Please mail Registration Form, with check payable to ASME ICE Division or credit card information, to: (Registration is also accepted by fax or email)

Ann Banko
 Gannon University
 109 University Square
 Erie, PA 16541
 Phone: 814-871-7620 Fax: 814-871-7616 Email: banko001@gannon.edu

HOTEL REGISTRATION FORM

(Please print clearly)

Please reserve accommodations for me at the 2003 ASME ICED Fall Technical Conference as indicated below and send confirmation.

Room Rates (excluding taxes):

Courtyard Marriott	\$94 (std) \$104 (King Jacuzzi)
Residence Inn by Marriott	\$104 (std)
Holiday Inn Express	\$85 (std)
Comfort Inn	\$75 (std)

Reservations can be made at all four hotels by calling 1-888-833-7953

Arrival: Day _____ Date _____ Time _____
 Departure: Day _____ Date _____ Time _____
 Room Requested: Single _____ Double _____
 Smoking: Yes _____ No _____
 You may check in after 4:00 p.m.

Name _____
 Company _____
 Address _____
 City _____ State _____ Zip _____
 Business Phone _____
 Fax Number _____

Reservation requests must be received by August 7, 2003. Reservation requests made after August 7, 2003 are subject to availability as the rooms in the ASME-ICED block will be released.

Credit Card (Visa/MC/AMEX) Exp. Date _____

Credit Card No. _____

Signature _____

Note:

When making reservations by phone, be sure to **indicate that you are attending the ASME conference.**

For additional conference information, please visit the ASME web site at:
[Http://www.asmeconferences.org/icert03/](http://www.asmeconferences.org/icert03/)

CONFERENCE SCHEDULE

SUNDAY, SEPTEMBER 7, 2003

08:00 – 14:00 ICED Executive Committee Meeting (*Room Name*)
 14:00 – 15:00 Session Organizers Meeting (*Room Name*)
 16:00 – 19:00 Conference Registration (*Conference Center Lobby*)
 18:00 – 21:00 Early Bird Reception (*Room Name*)

MONDAY, SEPTEMBER 8, 2003

07:00 – 16:30 Conference Registration (*Conference Center Lobby*)
 07:00 – 07:50 Continental Breakfast (*Room Name*)
 07:15 – 07:45 Authors Briefing (Monday Sessions) (*Room Name*)
 08:00 – 09:00 Spouses/Guests Continental Breakfast (*Room Name*)
 08:00 – 09:10 Opening Remarks & Honda Lecture (*Room Name*)
 09:00 – 09:10 Spouses/Guests Tour Departs (*Hotel Lobby*)
 09:00 – 17:00 Spouses/Guests Hospitality Suite (*Room Name*)
 09:10 – 09:30 Break (*Room Name*)
 09:30 – 12:00 Tech Session I – (*Room Name*)
 09:30 – 12:00 Tech Session II – (*Room Name*)
 09:30 – 12:00 Tech Session III – (*Room Name*)
 12:00 – 13:30 Lunch (*Room Name*)
 13:30 – 16:00 Tech Session IV – (*Room Name*)
 13:30 – 16:00 Tech Session V – (*Room Name*)
 13:30 – 15:30 Tech Session VI – (*Room Name*)
 15:30 – 16:30 RTD Executive Committee Meeting – (Tech Session VI room)
 16:00 – 17:30 Associates Meeting (*Room Name*)
 18:00 – 21:00 Dinner & GETS Tour (*GETS Learning Center*)

TUESDAY, SEPTEMBER 9, 2003

07:00 – 16:30 Conference Registration (*Conference Center Lobby*)
 07:00 – 08:00 Continental Breakfast (*Room Name*)
 07:15 – 07:45 Authors Briefing (Tuesday Sessions) (*Room Name*)
 08:00 – 09:00 Spouses/Guests Continental Breakfast (*Room Name*)
 09:00 – 09:10 Spouses/Guests Tour Departs (*Hotel Lobby*)
 09:00 – 17:00 Spouses/Guests Hospitality Suite (*Room Name*)
 08:00 – 12:00 Tech Session VII – (*Room Name*)
 08:00 – 12:00 Tech Session VIII – (*Room Name*)
 08:30 – 12:00 Tech Session IX – (*Room Name*)
 12:00 – 13:30 Lunch (*Room Name*)
 13:30 – 17:00 Tech Session X – (*Room Name*)
 13:30 – 16:30 Tech Session XI – (*Room Name*)
 13:30 – 16:30 Tech Session VIII – (*Room Name*)
 18:00 – 21:00 Awards Banquet (*Union Station*)

WEDNESDAY, SEPTEMBER 10, 2003

07:00 – 07:45 Continental Breakfast (*Room Name*)
 08:00 – 13:00 Tour of GE Transportation Systems Engine Plant (*Hotel Lobby*)
 13:00 Return to Hotel (*Hotel Lobby*)

PRELIMINARY TECHNICAL PROGRAM

Time	Monday, September 8		
08:00 - 09:10	Honda Lecture and Keynote Address: Near Zero Emission Internal Combustion Engines, by Wallace R. Wade, Chief Engineer, Ford Motor Company (Room Name)		
09:10 - 09:30	Break		
Rooms	Room Name	Room Name	Room Name
	Session I	Session II	Session III
09:30 - 10:30	Engine Design (I)	Spray, Combustion and Emissions (I)	Lubrication and Friction
10:30 - 11:00	Break		
11:00 - 12:00	Engine Design (I) (continued)	Spray, Combustion and Emissions (I) (Continued)	Lubrication and Friction (Continued)
12:00 - 13:30	Lunch		
	Session IV	Session V	Session VI
13:30 - 14:30	Engine Design II	Spray, Combustion and Emissions (II)	Sensors & Controls
14:30 - 15:00	Break		
15:00 - 16:00	Engine Design II (continued)	Spray, Combustion and Emissions (II) (continued)	Sensors & Controls (continued)
16:00 - 17:30	Associates Meeting		
Time	Tuesday, September 9		
	Session VII	Session VIII	Session IX
08:00 - 10:00	Engine Design (III)	Spray, Combustion and Emissions (III)	Rail Transportation
10:00 - 10:30	Break		
10:30 - 12:00	Engine Design (III) (continued)	Spray, Combustion and Emissions (III) (continued)	Rail Transportation (continued)
12:00 - 13:30	Lunch		
	Session X	Session XI	Session XII
13:30 - 15:00	Gas Engines & Alternative Fuels	Micro-pilot Ignition in Gas Engines	Rail Transportation (continued)
15:00 - 15:30	Break		
15:30 - 16:30	Gas Engines & Alternative Fuels (continued)	Micro-pilot Ignition in Gas Engines (continued)	Rail Transportation (continued)

Preliminary ** Monday, September 8, AM Sessions ** Preliminary			
08:00	Honda Lecture and Keynote Address: Near Zero Emission Internal Combustion Engines, by Wallace C. Wade, Chief Engineer, Ford Motor Company		
09:10	BREAK		
	SESSION I – ROOM NAME Engine Design (I)	SESSION II – ROOM NAME Spray, Combustion and Emissions (I)	SESSION III – ROOM NAME Lubrication and Friction
09:30	Chair – James Cole, Southwest Research Institute Co-Chair – James Vogt, Ricardo, Inc ICF2003-703 Effects of Turbine Blade Tip Clearance on Turbocharger Performance: an Experimental Investigation, by Kirby Chapman	Chair – Ramesh Poola, EMD Co-Chair – Chris Rutland, University of Wisconsin ICF2003-716 A Study on the Numerical Prediction of Heat Release Rate and NOx Production in Medium Speed Marine Diesel Engines, by Joo Youn Kim	Chair – Susumu Ariga, Inter-Tech Energy Progress, Inc. Co-Chair – Richard Stanley, Kettering University ICF2003-732 Reduced fuel consumption engine for a CO₂ < 125 g/km vehicle, through friction losses reduction and combustion optimization, by Enrico Torella
10:00	CEF2003-704 Effects of Ambient Conditions on Turbocharger Compressor Performance, by Kirby Chapman	ICF2003-719 Studies on Influence of Injection Timing and Diesel Replacement on LPG-Diesel Dual Fuel Engine, by Sudhir Vural	ICF2003-735 Three-Dimensional Analysis of Tribological Performance and Heat Transfer in Piston and Cylinder Liner System, by Ye Xiaoming
10:30	BREAK		
11:00	ICF2003-737 Turbocharger Power for Future Railway Applications, by David-Austin Pesten	ICF2003-772 An Experimental Study of Cyclic Variations in a Lean Burn Natural Gas Fuelled Spark Ignition Engine, by Ramesh A	ICF2003-745 Friction Teardown Data from Motored Engine Tests on Light Duty Automotive Diesel Engines at Low Temperatures and Speeds, by Paul Shayler
11:30	ICF2003-757 Rotor Dynamic Improvement for a Locomotive Turbocharger	ICF2003-713 Kinetics Modeling of NOx Formation Using a Super-Extended Zel'dovich Mechanism, by K.C. Midkiff	ICF2003-751 Two Dimensional Effects in the Lubrication of the Cam-Tappet Contact, by Dinu Taraza

Preliminary ** Monday, September 8, PM Sessions ** Preliminary			
TIME	SESSION IV – ROOM NAME Engine Design (II)	SESSION V – ROOM NAME Spray, Combustion and Emissions (II)	SESSION VI – ROOM NAME Sensors & Controls
13:30	Chair – James Cole, Southwest Research Institute Co-Chair – James Vogt, Ricardo, Inc ICF2003-702 Experimentally Determined Port Discharge Coefficients from Large-Bore Reciprocating Engines, by Kirby Chapman	Chair – Ramesh Poola, EMD Co-Chair – Chris Rutland, University of Wisconsin ICF2003-724 Preliminary Energy-Efficiency Analyses Of An Active-Flow Aftertreatment System For Lean-Burn IC Engines, by Ming Zheng	Chair – John Hedrick, Southwest Research Institute Co-Chair – Brian Smith, Transportation Technology Center, Inc. ICF2003-725 Instantaneous Engine Speed Analysis for Cylinder Isolation in Multiple Misfire Events, by Fabrizio Ponti
14:00	ICF2003-741 An Assessment of Intake and Exhaust Philosophies for Variable Valve Timing, by Girish Parvate-Patil	ICF2003-749 Water Addition In Diesel Engine Intake for NOx Reduction: Comparison of Modeling and Experiments, by Bhaskar Tamma	ICF2003-756 Normalization of the Cylinder Pressure of a Diesel Engine in the Frequency Domain, by Pin Zeng
14:30	BREAK		
15:00	ICF2003-731 Integration of a Cam Phaser on an Engine to Reduce Fuel Consumption: a Comprehensive Approach to the System, by Enrico Torella	ICF2003-773 The Goal of Emissions Regulations for Large Engines, by Thomas Bouche, Stephen Dexter	ICF2003-736 Missing Combustion Diagnosis: Distinguishing Misfire From Misfuel, by Enrico Corti
15:30	ICF2003-747 Fuel Economy Improvement Potential of a PFI Gasoline Engine Using VVT/VCR, by Ming-Chia Lai	ICF2003-721 High Pressure Diesel Engine Modeling, by Rossella Rotondi	

Preliminary ** Tuesday, September 9, AM Sessions ** Preliminary			
TIME	SESSION VII – ROOM NAME Engine Design (III)	SESSION VIII – ROOM NAME Spray, Combustion and Emissions (III)	SESSION IX – ROOM NAME Rail Transportation (I)
08:00	Chair – James Cole, Southwest Research Institute Co-Chair – James Vogt, Ricardo, Inc ICF2003-733 The Geislinger Gesilco Advanced Composite Coupling with High Misalignment Compensation Capability and Low Weight, by Christof Sigle	Chair – Ramesh Poola, EMD Co-Chair – Chris Rutland, University of Wisconsin ICF2003-729 A Modeling Approach to the Design Optimization of Catalytic Converters of I.C. Engines, by K.S. Schirmer	Chair – Allen Bieber, Retired Co-Chair – Brian Smith, Transportation Technology Center ICF2003-707 Crankcase Blowby Characterization From an EMD 16-645-E Locomotive Diesel Engine, by Steven Fritz
08:30	ICF2003-730 Controlling Vibration of the Entire Engine Rotating System, by Kevin Knox	ICF2003-739 Modeling High-Pressure Spray Impingement, by Rossella Rotondi	ICF2003-708 General Electric GEVO Engine for Tier 2 Locomotive Application, by Paul Flynn
09:00	ICF2003-750 Genetic Algorithms for the Vibroacoustic Optimization of the Thin Parts of I.C. Engine, by Xiaolong Deng	ICF2003-760 A Comprehensive Thermodynamic Approach to Acoustic Cavitation Simulation in High-Pressure Injection Systems by a Conservative Homogeneous Barotropic-Flow Model, by Andrea Catania	
09:30	ICF2003-722 A Method to Predict Fretting in Diesel Engine connecting Rod Bearing Bores, by John Dowell	ICF2003-727 Investigation of Injection Pressure Effects on Medium Speed Diesel Engine Emissions, by Doug Glenn	
10:00	BREAK		
10:30	ICF2003-711 Mechanical Validation – An Integral Part of Medium Speed Diesel Engine Development, by Michael Franke	ICF2003-752 A Study of Fuel Temperature Effects on Fuel Injection and Combustion of Compression-Ignition Diesel Engines, by Gong Chen	ORAL PRESENTATION Railroad and Locomotive Technology Roadmap, Frank Stodolsky
11:00	ICF2003-720 A Theoretical and Experimental Investigation of a Small Scale Trigeneneration – A Comparison Between Trigeneneration and Separate Generation Systems, by Yaodong Wang	ICF2003-758 Design of a Compression Pressurized Air Blast Direct Injection System for Small Displacement Two-Stroke Engines, by Allan Kirkpatrick	ORAL PRESENTATION U.S. Railroad Perspective on Energy and Emissions, Brian Smith
11:30	ICF2003-738 Simulation of a Two-Stroke Free Piston Energy Converter, by Jakob Fredriksson	ICF2003-748 Integration of System and Detailed CFD Models for IC Engine Applications, by Manoj Gokhale	ORAL PRESENTATION European Railway Perspective on Energy and Emission, Dr. Thomas Kohler

Preliminary ** Tuesday, September 9, PM Sessions ** Preliminary			
TIME	SESSION X – ROOM NAME Gas Engines & Alternative Fuels	SESSION XI – ROOM NAME Micro-pilot Ignition in Gas Engines	SESSION XII – ROOM NAME Rail Transportation (II)
13:30	Chair – Allan Kirkpatrick, Colorado State University Co-Chair – Frank Aboujaoude, Fairbanks Morse Engine ICF2003-717 Thermophysical Properties of Working Substance and Heat Transfer in a Hydrogen Combustion Engine, by Toshio Shudo	Chair – Charles French, Gas Technology Institute Co-Chair – Raj Sekar, Argonne National Laboratory ICF2003-714 The Advanced Injection Low Pilot Ignited Natural Gas Engine – A Combustion Analysis, by K.C. Midkiff	Chair – Allen Bieber, Retired Co-Chair – Brian Smith, Transportation Technology Center PANEL DISCUSSION AND Q/A Impact of Emissions Restrictions – Opportunities, Steve Fritz, Paul Flynn, Brian Smith, Dr. Kohler
14:00	ICF2003-771 Development and Commercialization of Large Stationary Engines Utilizing Low BTU Fuel Containing H ₂ /CO, by Paul Danyluk	ICF2003-715 Preliminary Results from a Quasi-Dimensional Phenomenological Simulation of Combustion and NO Formation in a Pilot-Ignited Natural Gas Engine, by K.C. Midkiff	
14:30	BREAK		
15:00	ICF2003-742 Design and Evaluation of High Pressure Fuel Valve Nozzles Using the Method of Characteristics and CFD, by Allan Kirkpatrick	ICF2003-762 On-Engine Demonstration of Micro-Pilot Ignition System, by Jakob Brown	
15:30	ICF2003-743 Virtual Valve Design for Three Dimensional Simulation of Large Bore Natural Gas Engine Operated at High Injection Pressure, by Allan Kirkpatrick	ICF2003-768 Prospect of Reduced CO and NO _x Emissions in Diesel Dual Fuel Engines, by Mwila Clarence Mulenga	
16:00	ICF2003-755 Computational Study of Fuel Injection in a Large Bore Gas Engine, by Snehaunshu Chowdhury	ICF2003-718 Numerical Investigations On Extended Expansion Engine, Tamil Porai	
16:30	ICF2003-723 Ignition System Designed to Extend the Plug Life and the lean Limit in a Natural Gas Engine, by Anthony Chan		

FUTURE CONFERENCES

CIMAC CONGRESS 2004 / ASME-ICED STC KYOTO, JAPAN JUNE 7-11, 2004

Historically, ASME-ICED and CIMAC collaborate in presenting papers and organizing special sessions in each other's conferences. The 2004 Spring Technical Conference will be held in conjunction with the 24th CIMAC Congress on June 7-11, 2004 in Kyoto, Japan. The ASME-ICE Division will conduct a track of six sessions consisting of approximately 25 technical papers focusing on gas engines and related technologies. Session organizers and paper abstracts are being actively solicited. This is a great opportunity to get involved and participate in a good track of ASME-ICED sessions and experience the vibrant technical and social atmosphere of a CIMAC Congress where industry leaders congregate and share their new innovations.

FTC 2004 – KANSAS CITY, MO

The 2004 Fall Technical Conference will be held in Kansas City, Missouri in the month of September. The conference will be hosted by Kansas State University and will continue the long valued tradition of an excellent technical program as well as an enjoyable social event. Look forward for more details in the coming months.

CALL FOR PAPERS

Internal Combustion Engine Division of ASME and the CIMAC World Congress

**Invite Papers for the
2004 CIMAC Congress
June 4th – 11th, 2004
Kyoto, Japan**

The 2004 ASME-ICED Spring Technical Conference will be held as a track of sessions at the 2004 CIMAC World Congress on Combustion Engine Technology. This conference will be held in Kyoto, Japan from June 4th – 11th, 2004. Papers are invited for publication and presentation on topics related to all types of automotive, marine, locomotive, off-highway, and industrial engines. Papers may address any aspect of the design, development or application of compression-ignition (diesel), spark ignition, rotary or reciprocating engines. Light-duty and heavy-duty engines, as well as large-bore I.C. engine systems for power generation and transportation propulsion are welcome.

Anticipated technical sessions span the range from fundamental research to practical in-use applications. Examples of topics include, but are not limited to, combustion, noise and vibration, engine-fuel interactions, in-cylinder emission control and flow processes, exhaust after-treatment, alternative fuels, engine cooling, lubrication, fuel injection and ignition systems, engine design, control and monitoring, engine simulation and diagnostics, advanced engine concepts, component dynamics, wear, and materials.

All accepted papers will be published in the Conference Proceedings, which will be published on a searchable CD and available at the conference. Papers will be considered for the Journal of Engineering for Gas Turbines and Power. Exceptional written papers and presentations will be considered for ASME IC Engine Division Conference awards. ASME review and publication policies will apply.

Please submit an abstract of the paper to the CIMAC conference web site at http://www.cimac.com/congress_events/Index1-congress2004.htm. When submitting the abstract, make sure you select the ASME session (session 15). You may also contact the Technical Program Chair at:

Kirby S. Chapman, Ph.D.
Kansas State University
National Gas Machinery Laboratory
245 Levee Drive
Manhattan, Kansas 66502
Phone: (785) 532-2319 Fax: (785) 532-3744
Email: chapman@ksu.edu

Important Dates

July 3, 2003	Offer of Paper, One Page Abstract
October 1, 2003	Abstracts Accepted
December 15, 2003	Draft Manuscript Due for Review
February 1, 2004	Draft Paper Reviews Complete
March 1, 2004 (tentative)	Camera Ready Paper Due

CALL FOR PAPERS

Internal Combustion Engine Division of ASME

2004 Fall Technical Conference

September XX - XY, 2004
Kansas City, MO, USA

Hosted by
KANSAS STATE UNIVERSTIY

The 2004 Fall Technical Conference will be held in Kansas City, MO, USA from September xx–yy, 2004 and hosted by Kansas State University. Papers are invited for publication and presentation for topics related to all types of automotive, marine, locomotive, off-highway, and industrial engines. Papers may address any aspect of the design, development or application of compression-ignition (diesel), spark ignition, rotary or reciprocating engines. Light-duty and heavy-duty engines, as well as large-bore I.C. engine systems for power generation and transportation propulsion are welcome.

Anticipated technical sessions span the range from fundamental research to practical in-use applications. Examples of topics include, but are not limited to, combustion, noise and vibration, engine-fuel interactions, in-cylinder emission control and flow processes, exhaust after-treatment, alternative fuels, engine cooling, lubrication, fuel injection and ignition systems, engine design, control and monitoring, engine simulation and diagnostics, advanced engine concepts, component dynamics, wear, and materials.

All accepted papers will be published in the Conference Proceedings and available at the conference. Papers will be considered for the Journal of Engineering for Gas Turbines and Power. Exceptional written papers and presentations will be considered for ASME IC Engine Division Conference awards. ASME review and publication policies will apply.

Please submit an abstract of the paper via the conference website (www.asmeconferences.org/icef04) or contact the Technical Program Chairman and Proceedings Editor:

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Important Dates

November 15, 2003	Conference Website Available
February 23, 2004	Offer of Paper, One Page Abstract
April 9 2004	Draft Manuscript Due for Review
May 31, 2004	Camera Ready Paper Due