



166 South Industrial  
Saline, Michigan, 48176, USA

**7th Course: Automotive Technology**  
**SENIOR MANAGEMENT MEETING**

**By Invitation Only**  
Register by September 1, 2005

**September 19 – 21, 2005**  
Four Points Sheraton  
Ann Arbor, Michigan, USA



## **7th Course: Automotive Technology** SENIOR MANAGEMENT MEETING

In cooperation with

International Automotive

**BODY**  
**CONGRESS**

INTERNATIONAL AUTOMOTIVE  
BODY CONGRESS (IABC 2005)

September 19 – 21, 2005  
By Invitation Only

Four Points Sheraton  
Ann Arbor, Michigan

Sponsor  
Global Automotive Management Council  
[www.gamcinc.org](http://www.gamcinc.org)



To bring together the leaders of the International Automotive Industry in A Synergistic Discussion of Strategies for Tomorrow's Automotive Industry

Defining Directions and Resource Allocations for the Advancement of Science, Technology and Safety

## GOALS

To provide formal and informal exchanges of scientific, technological, business and cultural ideas, trends, concerns and solutions in a non-competitive environment

To propagate a knowledge base vital for the corporate growth and expertise of members

To formulate resolutions on common concerns and goals

To form a Global Senior Management Network

**1:30 Active Head Restraints/Child Booster Seats**  
Juergen Huertgen, Grammer

**2:00 Bonded Hybrid Instrument Panel**  
Hein Koelman & Sophie Sanders, Dow

**2:30 Buzz, Squeak & Rattle Prediction for Instrument Panels**  
BP Naganarayana, Shankar, Lohitsa

**3:00 BREAK**

**3:15 Convertible Top Mechanism Design Solution for Improved Packaging Efficiency**  
Christopher Dilluvio, ASC

**3:45 Virtual Key Life Tests of Instrument Panels by Use of CAE Technologies**  
Hong Su, Ravi Thygarajan,  
Joel Brown, Visteon

**4:15 Q & A Panel Discussion**

**4:45 SESSION ADJOURNED**

**1:30 Strategies and Technologies for Low Volume Car Body Production**  
Jay Baron, PhD, Car Group

**2:00 KUKA Technologies for Production Application – Flexible Assembly and Joining**  
Marty Costa, Rippl, PhD, KUKA

**2:30 Achieving Flexible Bodyshops without the Complexity**  
Neil Willetts, Comau-Pico

**3:00 BREAK**

**3:15 VALUE-Flex – A Novel Concept for the Future Automotive Body Shops**  
Dominique Baulier, Valiant

**3:45 Flexible & Modular Body Shops**  
Simon Mathieu, ABB

**4:15 Aluminum Bodyshop Manufacturing Engineering Considerations**  
Neil Willetts, Comau-Pico

**4:45 Q & A - Panel Discussion**

**5:15 SESSION ADJOURNED**

**1:40 Design & Engineering Panel Interactive Discussion**  
“Designers & Engineers – How Can We Work Best Together to Get Superior Interiors?” From the Designers’ Viewpoint

Robert Demick  
Seating Specialist  
General Motors  
G.L. Pabst  
Manager  
DaimlerChrysler  
Rus Shafer  
Director  
Intier

**2:15 Advances in Instrument Panel Design & Manufacturing Technologies**  
Andrew Dargaveill  
Director  
Intertec Systems

**3:00 BREAK**

**3:15 Innovative Occupant Protection: Electronic-Triggered Active Headrest & Integrated Child Booster Systems**  
Juergen Huertgen  
Vice President  
Grammer

**3:45 Design & Engineering Panel Interactive Discussion**  
“Designers & Engineers – How Can We Work Best Together to Get Superior Interiors?” From the Engineers’ Viewpoint

**4:15 Q & A - Panel Discussion**

**4:30 SESSION ADJOURNED**

# Wednesday, September 21

## Afternoon Sessions

**Program:** Interior, Exterior, & Safety Systems

**1:30 pm to 5:15 pm, Room: Grande II**

**SESSION:** INTERIOR SUB-SYSTEMS & PACKAGING

Dr. Sitkins is a tenured and full professor in the Industrial and Manufacturing Engineering Department at western Michigan University. He is a certified Manufacturing Engineer in both Robotics and Manufacturing Management. He is also a Certified Motion Control Specialist. He is a recognized consultant to industry in materials processing, advanced manufacturing systems, Quality standards, computer integrated manufacturing techniques and non-traditional machining.

**SESSION CHAIRMAN**

Fred Sitkins, PhD, Professor, Western Michigan University

**Program:** MANUFACTURING

**1:30 pm to 5:15 pm, Grande III**

**SESSION:** ADVANCED FLEXIBLE BODY SHOPS

Dr. Forrest joined Chrysler Corporation in 1977, and is currently a Sr. Manager, working at the Liberty and Technical Affairs - Advanced Manufacturing Technology Development group, Daimler-Chrysler Corporation in Rochester Hills, MI. Dr. Forrest published several papers in professional journals and international conferences, and is active in promoting the application of laser welding technology within DaimlerChrysler Corporation Body-In-White. She is a graduate of the Chrysler Institute of Engineering, and holds an MSEE from the University of Michigan and a PhD, in EE from Wayne State University.

**SESSION CHAIRMAN**

Mariana Forrest, PhD, Senior Manager, DaimlerChrysler

**Program:** Interiors, Exterior & Safety Systems

**1:30 pm - 4:30 pm, Room: Michigan IV**

**SESSION:** INTERIOR & SAFETY

Mr. Zumhagen formed the Zumhagen Company, LLC in 1998, bringing over 30 years of experience and achievements to clients in the automotive and plastics industries. He holds a bachelor's degree in plastics technology from the University of Massachusetts at Lowell, and furthered his business education via several company and university-sponsored accelerated management programs. He is a member of APA, GACC, OESA, SAE, and SPE.

**SESSION CHAIRMAN**

Conrad Zumhagen, President, The Zumhagen Company

**1:30 Introduction**

Conrad Zumhagen

# Basic Information

## Course Headquarters

Global Automotive Management Council (GAMC)  
166 South Industrial  
Saline, Michigan 48176  
Phone: (734) 944-5850 Fax: (734) 944-5840  
www.gamcinc.org

## Course Title

7th Course: Global Automotive Technology – Senior Management Briefing

## Course Duration

Monday, September 19, 2005 – Wednesday, September 21, 2005

## Hotel Check-In

Sunday, September 18, 2005

## Hotel Check-Out

Wednesday, September 21, 2005

## Course Fees Do Not Cover

Travel such as airfare, transportation, local transportation, car rental, etc. Participants are responsible for all personal expenses such as phone calls, room service, other personal amenities and incidental charges and should remit all of these payments directly to the hotel.

## Contact at Course Site

If anyone needs to contact you, please ask them to use the following means of correspondence:

## Four Points Sheraton Ann Arbor

3200 Boardwalk  
Ann Arbor, MI 48108  
(734) 996-0600

## Attire

Business suit suggested for all formal and informal lecture sessions. Informal attire suggested for all receptions, dinners and social events.

## Accompanying Person

All persons accompanying participants are entitled to attend receptions, meals and other activities arranged by GAMC. Accompanying person must be at least 21 years of age and would share a room with the participant.

## Hospitality Room

Light meals, soft drinks, beer and wine will be available for participants and their accompanying persons on September 19 – 21, 2005 during normal business hours at the GAMC hospitality suite.

## Four Points Sheraton Ann Arbor

3200 Boardwalk

Ann Arbor, Michigan, 48108, USA

Phone: (734) 996-0600

Fax: (734) 996-8136

www.fourpointsannarbor.com



## DIRECTIONS TO FOUR POINTS SHERATON - ANN ARBOR

### HOTEL INFORMATION

The GAMC Senior Management Meeting will be held on September 19-21, 2005 at the Four Points Sheraton Ann Arbor, Michigan, USA.

### From Detroit / Detroit Metro Airport

I-94 West to Exit 177 (State Street). Turn right off exit onto State Street. Turn right again onto the first street, Vectors Way. Go one block to Boardwalk, turn left and go one half block - the Four Points by Sheraton Ann Arbor is on the left.

### From Chicago

I-94 East to Exit 177 (State Street). Turn left onto northbound State Street and go to the first street on the right past the freeway, Vectors Way. Go one block to Boardwalk and turn left. The Four Points by Sheraton Ann Arbor is one half block ahead on the left.

### From Southfield/Livonia

From interchange of I-96 and I-275, go West on M-14 toward Ann Arbor. Take US-23 southbound (exits on left) and follow US-23 to I-94. Go West on I-94 (toward Chicago) to Exit 177 (State Street). Turn right off exit onto State Street. Turn right again onto the first street, Vectors Way. Go one block to Boardwalk, turn left and go one half block - the Four Points by Sheraton Ann Arbor is on the left.

**9:00 Case Study – Development of IIHS Side Impact Structural Requirements Using Numerical Simulation**

Joseph Cusuman, Rasik Dholakia,  
Gulam Mohiuddin, General Motors

**9:30 Cross-Car Fixed Beam Strategy for Dynamic Side Impact**

Rasik Dholakia, Babu Mehta, General Motors

**10:00 Advanced Solutions for Next Generation Roof Crush Requirements**

John Riley, L & L Products  
Gulam Mohiuddin, General Motors

**10:30 BREAK**

**10:45 Enhancement of Modal & Durability Performance of Structural Assemblies with Spot Welds**

BP Naganarayana, S Shankar, Lohitsa

**11:15 Structural Performance of Thinner A Pillar Under Different Welding Configuration**

Ibrahim El-Sebakhy, PhD  
General Motors

**11:45 Convertible Body Design Solution for Bending and Torsion Stiffness, Crash worthiness and Occupant Packaging Efficiency**

Mostafa Rashidy, PhD, ASC

**12:15 Q & A Panel Discussion**

**12:30 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

**9:00 Materials & Engineering Design Solutions to Meet Pedestrian Safety Requirements**

Padraig Naughton, Samar Teli, Dow Mike Reeves, Senoplast

**9:30 Optimized Ultra High Strength Center Pillar for Side Impact Performances**

Tony Castillo, General Motors, Curt Connell, Bentler Automotive

**10:00 Extruded in Color (EIC): Thermoplastic Film Technology Review**

Joe Schulz, Mayco Plastics

**10:30 BREAK**

**10:45 Strategies to Optimize the Automotive Body Structures for Side Impact Performance**

Gulam Mohiuddin, General Motors

**11:15 A Cost Effective Solution for Automotive Doors**

Dinesh Seksharia, Alcoa

**11:45 Q & A - Panel Discussion**

**12:15 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

**9:00 Near-Zero Breakdown Body Manufacturing**

Jay Lee, PhD, University of Wisconsin

**9:30 Maintenance Decision Support Utilizing Online Information About System Conditions**

Zhirin Yang, PhD  
University of Wisconsin

**10:00 An Integrated Condition Monitoring Solution for Down time Reduction and Through put Improvement**

Emily Rose Kloehn, Hai Qiu, Jay Lee: University of Wisconsin  
Pamela Hutchinis-Pugh, PhD, Charles Cook: DaimlerChrysler

**10:30 BREAK**

**10:45 Q & A Panel Discussion**

**11:15 SESSION ADJOURNED**

**12:45 LUNCH SERVED**



# Wednesday, September 21

## Morning Sessions

### Program: Design & Engineering

9:00 am to 12:45 pm, Room: Grande I

SESSION: DURABILITY/ CRASH WORK THINNESS

Mr. Mohiuddin is currently working at General Motors on future automotive products. He has been with General Motors for 20 years working on various products from early design stage to production. He has also worked on advanced manufacturing processes for several years. He has worked for IIT and Textron for 8 years. He has published several papers on new products and processes including Laser applications. He also holds a master's degree in engineering from University Of Detroit and bachelor of engineering degree from Osmania University from Hyderabad.

#### SESSION CHAIRMAN

Gulam Mohiuddin, Lead Engineer General Motors

### Program: Interior, Exterior & Safety Systems

9:00 am to 12:45 pm, Grande II

SESSION: MATERIALS FOR EXTERIOR & SAFETY

Mr. Oikarinen, Senior Product Development Specialist, Advanced Vehicle Engineering, DaimlerChrysler Corporation. Mr. Oikarinen holds a Bachelor of Science Degree in Mechanical Engineering from Lawrence Technological Institute and a BSBA from Wayne State University. He has worked extensively as a plant and industrial engineer in his early career at Ford Motor Company. The last several years he has worked in the Advanced Vehicle Engineering area at Daimler Chrysler pursuing new technology that could be productonized into current and near term vehicles.

#### SESSION CHAIRMAN

Kenneth Oikarinen, Sr. Product Development Specialist, DaimlerChrysler

### Program: Manufacturing

9:00 am to 11:30 am, Room: Grande III

SESSION: NEAR-ZERO BREAKDOWN – BODY MANUFACTURING

Dr. Lee is the Ohio Eminent Scholar and L.W. Scott Alter Chair Professor in Advanced Manufacturing of the Department of Mechanical, Industrial, and Nuclear Engineering sector of the University of Cincinnati. He is also the Director of NSF Industry/University Cooperative Research Center on Intelligent Maintenance Systems (IMS) at the University of Cincinnati. Dr. Lee received his B.S. degree from Taiwan, a M.S. in Mechanical Engineering from the University of Wisconsin-Madison, a M.S. in Industrial Management from the State University of New York at Stony Brook, and D.Sc. in Mechanical Engineering from the George Washington University.

#### SESSION CHAIRMAN

Jay Lee, PhD, Professor University of Cincinnati

# Monday September 19, 2005

7:30 am – 8:30 am

## **Breakfast**

8:40 am – 12:30 pm

## **Keynote Session 1**

Theme:

**Moderator: M. Nasim Uddin, Executive Vice President and Secretary, Global Automotive Management Council**

8:40 am – 8:50 am

**Introduction & Course Objectives: M. Nasim Uddin**

8:50 am – 10:15 am

**Attendees introduction, each invited to speak for 5 minutes on his/her affiliated organization and her/his view on Automotive Industry Trends.**

10:15 am – 10:30 am

## **Coffee Break**

10:30 am – 12:30 pm

**Special course on Management of Innovation in R&D Environment**

### **Speaker: Bruce Cheroudi**

Dr. Chehroudi is currently a Principal Scientist and Group Leader at the Engineering Research Corporation Inc. He has been a Chief Scientist at Raytheon STX (formerly Hughes Aircraft STX) and is a former Professor of Mechanical Engineering. Dr. Chehroudi previously served as a Research Staff Member at Princeton University and has established and directed an Engine Laboratory at the University of Illinois. Dr. Chehroudi has more than 100 publications in conferences, national and international journals. Dr. Chehroudi received his PhD from Princeton University.

12:30 pm – 1:30 pm

## **Lunch Break**

1:30 pm – 4:30 pm

**Special course on Management of Innovation in R&D Environment Continued**

## **COURSE DESCRIPTION**

Innovation is in the core of the survival of the fittest organization in today's technology-driven global economy. Innovation process begins with identification of the market needs or technology opportunity and then goes through stages such as adopting or adapting existing technology that satisfies the identified need or opportunity, inventing when needed, and finally transferring

this technology by commercialization or other instrumental means. Considering the key role R&D plays in the economic health of a nation and the world as a whole, the profitability of a business enterprise, the effectiveness of a technology-based governmental agencies, and the enormous investments nations make in R&D activities, effective and efficient R&D management can have profound and determining consequences. Today, the complexity of the technology created complex organizations in which many disciplines have to be coordinated. It is the manager's primary responsibility to bring components together so they can operate smoothly and harmoniously, each making an optimal contribution to the R&D organization. Managing R&D organizations and concentrating on their productivity and excellence offers a unique set of problems and unusual challenges which is amplified when the team is scattered spatially in a global economy. The uniqueness arises primarily from two basic facts: (1) the character of the enterprise and (2) the highly-specialized, articulate, and autonomous people involved in R&D. As American economist and noble laureate Kenneth J. Arrow stated, "the central economic fact about the processes of invention and research is that they are devoted to the production of information." Obviously, the generation of information requires research. And in addition to the R&D organizations' focus on information, research involves considerable uncertainty because the outcome can never be predicted perfectly from the different inputs used. Therefore, it will become clear in this seminar that why managing an R&D organization is largely the art of integrating the efforts of diverse, creative, intelligent and independent individuals. The ideas presented in this seminar consist of the condensed works of multitude of experts focusing on ways to improve the productivity of R&D and foster excellence and innovation in organizations.

4:30 pm – 5:00 pm

## **Q & A – Discussion**

6:00 pm – 7:00 pm

## **Reception & Cocktails**

7:00 pm – 9:00 pm

## **Dinner**

# Tuesday, September 20

## Morning Sessions

### Program: Design & Engineering

9:00 am to 12:30 pm, Room: Grande I

#### SESSION: DESIGN CONCEPTS

Dr. Kelkar is a Technical Leader in the area of Durability and CAE of Vehicle Systems. His recent accomplishments include the development of: the Durability Attribute Engineering Process, the Durability CAE Process, the Durability CAE Acceptance Criteria, and training programs: CAE 101 and CAE 201. He holds an M.S. (1969) and a Ph.D. (1973) in Mechanical Engineering from the University of Missouri-Rolla.

#### SESSION CHAIRMAN

Subhash Kelkar, PhD, Technical Leader  
Ford

### Program: Materials Applications for Automotive Body

9:00 am to 12:45 pm, Room: Grande II

#### SESSION: NEW MATERIAL APPLICATIONS IN BIW STRUCTURES

Dr. Lorenzo is Vice President, Application Development and Engineering within Dow Automotive. Dr. Lorenzo joined Dow Chemical in 1989 after having previous experience in several research and development activities involving plastic and composite structural systems. He holds a Doctor of Science degree from Washington University in St. Louis, Missouri, and a Mechanical Engineer degree from the University of Buenos Aires, Argentina

#### SESSION CHAIRMAN

Luis Lorenzo, PhD, Vice President, Dow

### Program: Manufacturing

9:00 am to 12:45 pm, Room: Grande III

#### SESSION: FORMING & TOOLS

Mr. Broggi is Director, Advanced Manufacturing Technology Development, Ford Motor Company. His responsibilities include providing technology development for improving manufacturing methods and processes as well as enabling new product technology to be introduced into new vehicle programs. He holds a master's degree in chemical engineering and a master's in business administration from Wayne State University.

#### SESSION CHAIRMAN

Nick Broggi, Director, Ford

### Program: Emerging Technology

9:00 am to 12:45 pm, Petit II

#### SESSION: Product Design & Engineering Methodology

Mr. Welton received engineering degree from Purdue University and masters degree from Oakland University. Conducted structural analysis for McDonnell Aircraft (now Boeing), Chrysler, and General Motors. Held executive positions at General Motors in Product Performance, Vehicle Development, Advanced Vehicle Engineering, Interior & Safety Systems, Vehicle Launch Manager, Systems Engineering, and currently Director of Vehicle Synthesis and Simulation for the North American Car Group.

#### SESSION CHAIRMAN

Jim Welton, Director, General Motors

**1:30 Design Consideration for Door Header Rigidity in Linear and Non-Linear Range**  
Abraham El-Sebakhy, PhD  
General Motors

**2:00 Structural Design & CAE Simulation for Vehicle Pitch & Drop**  
Mohammad Ali, Michael Chang, Mohammed Rahaman, Tau Tyan, Marwan El-Bkaily, James Cheng, Ford

**2:30 Design & Engineering Challenges of Mesh Automotive Grill Panels**  
Kelleh Mansaray, General Motors, Andre Ferland, Lax Corp.

**3:00 BREAK**

**3:15 Engineered 3-D Aluminum Foam Structural Solutions**  
Jon Riley, L & L Products, Dave Reed, Cymat Corp.

**3:45 Body Structural Optimization Using Structural Foams & Adhesives**  
Luis Lorenzo, Mansour Mirdamdi, Dow

**4:15 Q & A Panel Discussion**

**4:45 SESSION ADJOURNED**

**5:15 PROGRAM CHAIRS RECEPTION & DINNER ARBOR BREWING COMPANY., ANN ARBOR**

**1:30 Comparative Study of Materials for BIW Structures**  
John McGuire, USS

**2:00 Bonded Hybrid Automotive Front End Carriers**  
Padraig Naughton, Samar Teli, Dow

**2:30 Vehicle NVH – ABA Dashmat**  
Saeed Siavoshani, Jay Tudor, Dow

**3:00 BREAK**

**3:15 The ABC of Surface Finish**  
Mike Reeves, Senoplast USA

**3:45 Q & A - Panel Discussion**

**4:15 SESSION ADJOURNED**

**5:15 PROGRAM CHAIRS RECEPTION & DINNER ARBOR BREWING COMPANY, ANN ARBOR**

**1:30 Latest Developments of Joining Technologies for Automotive Body Manufacturing**  
Herman Tang, PhD, DaimlerChrysler

**2:00 Deformation Resistance Welding and Space Frames**  
Jayson Pankin, Delphi

**2:30 Cold Spray Applications in Body in White**  
Julio Villafuerte, PhD, Wally Birtch, Centerline

**3:00 BREAK**

**3:15 Simulation of Self-Piercing Riveted Joining Process Using a Coupled Finite Element & Mesh free Method**  
Wayne Cai, PhD & PC Wang, PhD, General Motors

**3:45 Advanced Hemming Systems Concepts for Flexibility and Improved Product Quality**  
Dominique Baulier, Valiant

**4:15 Spot Friction Welding – A New Joining Method for Aluminum Sheets**  
Tsung-Yu Pan, PhD, Ford

**4:45 Q & A - Panel Discussion**

**5:15 SESSION ADJOURNED**

**PROGRAM CHAIRS RECEPTION & DINNER ARBOR BREWING COMPANY, ANN ARBOR**

**1:30 A New Method of Production Implementation of Laser Welding of Zinc Coated Sheet Steels**  
Jyoti Mazumder, PhD  
University of Michigan

**2:00 Laser and Laser Hybrid Welding of High Strength Steels**  
Francis Briand, Air Liquide

**2:30 Laser Welding of Advanced High Strength Steels**  
Matt Gallagher, Benda Yan, PhD, ISPAT, Gopal Nadkarni, Mittal  
Mario Polon, GM, Hartmut Zefferer, PhD, Han Leidich, TRUMPF

**3:00 BREAK**

**3:15 Tube & Profile Welding: Use of Slab Laser to Enhance Quality and Improve Competitive Advantage**  
Christopher Pilcher, Cutting & Welding Solutions

**3:45 Laser Welding Process Quality Control Systems in Production**  
Marcel Van Schaik, Soudronic

**4:15 New Innovations in Quasi-Simultaneous Laser Welding of Polymers for Mass-Production Applications**  
Anssi Jansson, VTT Industrial Systems

**4:45 Q & A Panel Discussion**

**5:15 SESSION ADJOURNED**

**PROGRAM CHAIRS RECEPTION & DINNER ARBOR BREWING COMPANY, ANN ARBOR**

# Tuesday, September 20

## Afternoon Sessions

**Program:** Design & Engineering

**1:30 pm to 5:15 pm, Grande I**

**SESSION:** CAE & STRUCTURES

Dr. Hiroyuki graduated from Sophia University, Science and Technology in March, 1979. He joined Nissan Motor Company in April, 1979. Dr. Hiroyuki supervised the painting technology development for 15 years. In 1996, he transferred to Nissan Technical Center North America as Manager of Technology Planning. Returned to Nissan Japan in 2000 as Manager of Advanced Vehicle Manufacturing Technology and transferred back to US as Manager of Advanced Manufacturing Research at Nissan North America in 2004.

**SESSION CHAIRMAN**

Kishi Hiroyuki, Manager, Nissan

**Program:** Material Applications For Automotive Body

**1:30 pm to 5:15 pm, Grande II**

**SESSION:** MATERIALS SELECTION

Dr. Dinda brings his 31 years of expertise at DaimlerChrysler Corporation to his current position as the Senior Manager of Advanced Manufacturing Technology Development at the Advanced Vehicle Engineering of DaimlerChrysler. He received his B.S. in Metallurgical Engineering in India and both his M.S. and Ph.D. in Materials Engineering from Illinois Institute of Technology, Chicago, Illinois. He also received his M.B.A. from Central Michigan University.

**SESSION CHAIRMAN**

Subi Dinda, PhD, Senior Manager DaimlerChrysler

**Program:** Manufacturing

**1:30 pm to 5:15 pm, Grande III**

**SESSION:** JOINING & ASSEMBLY TECHNOLOGY

Mr. Wenneberg graduated as a Mechanical Engineer in 1980. He started to work for Volvo Car Corporation in Olofstrom Sweden in 1972 as a Tool Maker in the Technique Department, manufacturing Press Automation and Assembly Systems. He was the Chairman of the Swedish Canadian Chamber of Commerce, a member of the Board of Trade in Toronto and a member of the Board of Trade in Brampton. He is now the President of the Swedish America Chamber of Commerce in Detroit.

**SESSION CHAIRMAN**

Frank Wennberg, President, ABB

**Program:** Emerging Technology

**1:30 pm to 5:15 pm, Michigan IV**

**SESSION:** PRODUCT MANUFACTURING ENGINEERING

Mr. Chennat works as a Technical Specialist for Ford Advanced Manufacturing Technology Development Center in Redford, Michigan. He has developed automatic transmission laser weld applications for various programs as well as many other advanced laser applications and processes. Mr. Chennat graduated from the University of Baroda with a B.S. in Metallurgy and from Ohio State with an M.S. in Welding.

**SESSION CHAIRMAN**

Jay Chennat, Technical Specialist, Ford

**9:00 Application of CAE in 2005 Mustang Body Development**  
Chienhom Lee, Ford

**9:30 Cost Reduction Strategies for Automotive Body Structures**  
Melanie Corfield, General Motors

**10:00 Trends & Applications of CAE Tools in Vehicle Development**  
Mohammed El-Sayeed, PhD  
Dilip Nigam, ADSC

**10:30 BREAK**

**10:45 The Digital Body Development System**  
Richard Gerth, Car Group

**11:15 Vehicle Integration & Automotive Body**  
Robert Stark, ASC

**11:45 Q & A Panel Discussion**

**12:15 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

**9:00 Structural Thermoplastic Matrix Composites for Automotive Applications**

Pankaj Mallick, PhD  
University of Michigan-Dearborn

**9:30 Lightweight Front-End Structure**  
Jodi Shaw, USS

**10:30 BREAK**

**10:45 Advanced High Strength Steel Solutions in Future Vehicle Structures**  
Gopal Nadkarni, Nassos Lazaridis  
Mittal Steel  
Curt Norvath, General Motors

**11:15 Optimizing Body in White Geometry for Material Utilization**  
Derek Peeling, FTI

**11:45 Cold Spray Applications in Body in White**  
Julio Villafuerte, PhD, Wally Birtch  
Centerline

**12:15 Q & A Panel Discussion**

**12:30 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

**9:00 Modeling of Springback Variation in Stamping of Advanced High Strength Steels**

Muammer Koc, PhD  
PengChen PhD, University of Michigan

**9:30 Material Law with Consideration of Strain Rate Effects – Testing Data Processing**  
Wayne Li, Tau Tyan, Yijung Chen, Ford

**10:00 Applying Waveform Analysis in Stamping Process Control**  
Garcia Guzman, PhD, University of Michigan

**10:30 BREAK**

**10:45 Process and Press Equipment for Forming and Cutting HSS**  
Heinrich Peper, PhD, Schuler

**11:15 Robust Injection Molding of Exterior Automotive Panels Using the Waviness Index**  
Shawn Hui, PhD, General Motors

**11:45 Rapid Tooling for Metal Sheet Forming Tools**

Thomas Himmer, Eric Stiles, Anja Techel, PhD, Steffen Nowetny, PhD  
Eckhard Beyer, PhD, Fraunhofer

**12:15 Q & A Panel Discussion**

**12:30 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

**9:00 Body-in-White Joints Optimization Using Laser Processing – A Design Approach**

Gulam Mohiuddin, General Motors

**9:30 Product Design Incorporating Laser Welded Tailored Blanks**  
Mike Skiller, TWB

**10:30 BREAK**

**10:45 Designing in Value with Laser Welded Solutions for 21st Century Vehicles**  
Jim Degen, Steve Jansen, Noble

**11:15 Design Guidelines for Laser Welding of Sheet Metal Components**  
Hartmut Zefferer, PhD, Tim Morris  
TRUMPF

**11:45 Optimization of Parameters in Hybrid Laser-MIG Welding of Aluminium Sheet for Automotive Applications**  
Jo Verwimp, Vitto

**12:15 Q & A Panel Discussion**

**12:30 SESSION ADJOURNED**

**12:45 LUNCH SERVED**

# APPLICATION AND REGISTRATION FORM

Please submit by **September 1, 2005**

## Registration Information (Please Type or Print in Block Letters)

Full Name			
Profession/Title			
Organization/Institute			
Mailing Address			
State	Zip	City	Country
Tel	Zip		
Email	Fax		
Name of Accompanying Person			
Arrival Date		Departure Date	

## Fee Schedules

- Members:** \$3600  
 **Non-Members:** \$4800

### Fee covers

- All lectures / discussion sessions
- Course materials / Proceedings

- All refreshments

- Breakfasts, lunches, dinners
- Hotel Accommodations

Check in September 18

Check out September 21

- Receptions
- Accompanying person allowed

- Members:** \$1695  
 **Non-Members:** \$2695

### Fee covers

- All lectures / discussion sessions
- Course materials / Proceedings

- Breaks, lunches



You may wish to provide the following items with this form

- Two color photos (Executive Portrait -5" x7")
- Biography
- A 300-word abstract on the automotive industry technology, business and cultural trends
- Topics you wish to discuss with your peers

#### Membership Information

Yes! I want to become a LIFETIME member of the Global Automotive Management Council!

One time fee of \$4000.

#### Payment Method

Total Amount Remitted US\$ \_\_\_\_\_

#### Check or Money Order

Make payable to:  
Global Automotive Management Council  
166 South Industrial  
Saline, Michigan, 48176 USA

Bank Transfer

Contact Global Automotive Management Council Office for information.

Mastercard

Visa

American Express

Total Amount

Card Number

Exp. Date

Signature

## 7th Course Automotive Technology SENIOR MANAGEMENT MEETING

September 19 – 21, 2005  
By Invitation Only

Four Points Sheraton  
Ann Arbor, Michigan, USA

Sponsor:  
Global Automotive Management  
Council

All questions should be directed to

**M. Nasim Uddin**  
Course Director  
Executive Vice President & Secretary

**Global Automotive Management  
Council**  
166 South Industrial  
Saline, Michigan  
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