

Tuesday, August 4, 2020

AM Session	Lecture: Introduction to Vehicle Crashworthiness Instructor: Sudip Bhattacharjee, PhD Supervisor Ford	PM Session	Lecture: Introduction to Vehicle Crashworthiness (cont.) Instructor: Sudip Bhattacharjee, PhD Supervisor Ford
Time	Virtual Classroom	Time	Virtual Classroom
8:15 am	Welcome & Introductions Mehdi Shafiei, PhD Technology Development Manager Novelis	1:00 pm	Fundamentals of Impact Dynamics - Impulse, Momentum and Energy - Engineering Metric in Vehicle Design for Vehicle Crashworthiness - Nonlinear Material Behavior and Crush Resistance of Structural Members - Crash Response of Thin-Wall Structural Members
8:30 am	Opening Remarks Warren Parsons Chief Architect General Motors		
8:45 am	Vehicle Accident Statistics and Role of Vehicle Crashworthiness - Trends in US Fatality Data - Human Factors in Road Traffic Accidents - Inadvertent Vehicle Crash Modes - Vehicle Design for Crashworthiness – Structure, Sensors and Restraints - Advanced Technologies for Active Intervention and Accident Avoidance - Current Vehicle Design for Crashworthiness – “Passive” Safety		
10:15 am	Break	3:00 pm	Break
10:30 am	Measurement of Vehicle Crashworthiness - Crash Safety Regulations and Competitive Performance Rating of new Vehicles - Standardized Crash Test Modes – Front, Side and Rear Impact - Structural Response Measurements - Occupant Response Prediction with ATDs and Injury Criteria - Vehicle Assessment for Pedestrian Protection - R&D in Injury Biomechanics - Crash Test Data in Public Domain: NHTSA Crash Test Database	3:15 pm	Design of Vehicle Structures for Crashworthiness - System Architecture and Critical Crash Structures - Bumper System Design for Protection of Critical Vehicle Systems in Low Speed Impact - Design for High Speed Front Impact – Crash Space & Pulse Severity - Structural Design for Oblique Front Impact - Structural Load Path for Side Impact Protection - Structural Design for Protection in Rear Impact - Design of Vehicle Top Hats (For Roof Strength) For Occupant Protection During Vehicle Rollover - Advances in Vehicle Propulsion System & Design for Protection of Energy Storage System - Impact Worthiness of Body Exterior for Pedestrian Safety
12:30 pm	Lecture Adjourned & Lunch	5:00 pm	Adjournment

Automotive Courses 2020

August 4 - 6, 2020

www.gamcinc.com

Phone: (734) 997-9249

Virtual Classroom

Start time, EST, USA, 8:00 am

CEST Europe, 2:00 pm

ET, China, 8:00 pm

Wednesday, August 5, 2020

AM Session	<p><u>Lecture: Aluminum Solutions for Automotive Body & Structures</u> Instructors: Blake Zuidema, PhD, Laurent Chappuis, Michael Bull, <i>Novelis</i> Jerome Fourmann <i>RTA</i></p>	PM Session	<p><u>Lecture: Aluminum Solutions for Automotive Body & Structures (cont.)</u> Instructors: John Hunter, PhD, Laurent Chappuis, Julio Malpica <i>Novelis</i></p>
Time	Virtual Classroom	Time	Virtual Classroom
8:00 am	<p>Blake Zuidema <i>Novelis</i></p> <p>Introduction & New Trends for AI Applications</p> <ul style="list-style-type: none"> - General Introduction - Fuel economy & lightweighting - Consideration for BEVs 	1:00 pm	<p>John Hunter <i>Novelis</i></p> <p>Surface Finishing & Corrosion Performance – AI Sheet Products</p> <ul style="list-style-type: none"> - Surface Finishing - Cleaning and Pre-treatment - Corrosion of AI Alloys
9:00 am	<p>Laurent Chappuis <i>Novelis</i></p> <p>Lightweighting Strategies and Environmental Impact</p> <ul style="list-style-type: none"> - New Trends in AI Sheet Applications - Recycling Considerations 		<p>Break</p>
10:00 am	<p>Break</p>	3:00 pm	<p>Break</p>
10:15 am	<p>Jerome Fourmann <i>RTA</i></p> <p>Material and Product Performance Selection Criteria – AI Castings & Extrusions</p> <ul style="list-style-type: none"> - AI Castings for Automotive Structures - AI Extrusions for Automotive Structures 	3:15 pm	<p>Laurent Chappuis, Julio Malpica <i>Novelis</i></p> <p>Forming Aluminum Automotive Body Sheet</p> <ul style="list-style-type: none"> - Material Data Cards for Simulation of Formability - Aluminum Stamping - Other Forming Technologies (Hot Forming, Roll Forming, Hydroforming, etc.)
11:30 am	<p>Michael Bull <i>Novelis</i></p> <p>Material and Product Performance Selection Criteria – AI Sheet Products</p> <ul style="list-style-type: none"> - AI Sheet Processing for Automotive Applications - Criteria for Outer, Inner, and Structural Applications 		<p>Adjournment</p>
12:30 pm	<p>Lecture Adjourned & Lunch</p>	5:30 pm	<p>Adjournment</p>

Automotive Courses 2020

August 4 -6, 2020

www.gamcinc.com

Phone: (734) 997-9249

Virtual Classroom

Start time, EST, USA, 8:00 am

CEST Europe, 2:00 pm

ET, China, 8:00 pm

Thursday, August 6, 2020

AM Session	<u>Lecture: Aluminum Solutions for Automotive Body & Structures</u> Instructors: Joao Maraes PhD, Patrick Lester, Akshay Kulkarni, <i>Novelis</i>	PM Session	<u>Lecture: Aluminum Solutions for Automotive Body & Structures (cont.)</u> Instructors: Donald Whitacre, Richard Newton <i>Novelis</i> Antonio Figueroa <i>Shiloh</i>
Time	Virtual Classroom	Time	Virtual Classroom
8:00 am	Joao Moraes, Patrick Lester <i>Novelis</i> Joining Technologies for Aluminum Sheet Products <ul style="list-style-type: none"> - Mechanical Joining – SPR, Cinch, Bolt - Resistance Spot Welding - Laser Joining - Adhesive Bonding 	12:30 pm	Donald Whitacre <i>Novelis</i> Advanced Design with Aluminum – Key Enablers <ul style="list-style-type: none"> - Key Enablers in Designing High-Volume, Low-Cost Sheet Aluminum Products - Application Examples (AI Doors, Battery Enclosures, Longitudinal Rails, Side Impact Beams)
10:00 am	Break	1:30 pm	Antonio Figueroa, Jim Evangelista <i>Shiloh</i> Design for Noise, Vibration, and Harshness <ul style="list-style-type: none"> - Noise & Sound Generation - Noise & Sound Transmission
10:15 am	Akshay Kulkarni <i>Novelis</i> Design for Crash Performance <ul style="list-style-type: none"> - Vehicle Crashworthiness - Key Structural Parts in Various Crash Modes - Material Fracture and Joint Failure in Crash - Novelis’ High Strength AI Crash Alloys - All AI Battery Enclosure Design for BEVs - Case Study – AI vs Steel 	2:30 pm	Break
		2:45 pm	Richard Newton <i>Novelis</i> Design Considerations for Lightweight Closures <ul style="list-style-type: none"> - Design Principles & Guidelines - Value-In-Use, Including Impact of Recycling
		3:45 pm	Q&A – Feedback
12:00 pm	Lecture Adjourned and Lunch	4:30 pm	Adjournment

A U T O M O T I V E
C O U R S E S

August 4-6, 2020

Virtual Course Registration Form

FEE SCHEDULE FOR REGISTRANTS

Fee for Attending for 3 Days is \$1,500

(Access to virtual lectures for all days of the courses; also includes access to the Courses 2020 Materials)

- Fee for Attending for 3 Days is \$1,500
- Team Fee for Attending for 3 Days \$1,200
- Fee for Attending for 2 Days is \$1,200
- Fee for Attending for 1 Day is \$1,000
- Fee for Attending for Half a Day is \$700

Tell us which day(s) you would like to attend *(If it is half a day please state whether it is am or pm):*

PLEASE PRINT OR TYPE (ALL FIELDS REQUIRED)

The address you provide must be the **billing address** associated with the account

I'd like to receive email communications about this and future GAMC events:

Full Name:

Position:

Organization:

Email:

Card Number:

Expiration Date:

CVC:

Amount:

Address:

ZIP:

Phone (Office):

Mobile:

PAYMENT METHODS: *(All checks must be drawn from U.S. banks in U.S. funds)*

Make Check Payable to: Global Automotive Management Council in the amount of, US\$ _____

Signature: X _____ Date: _____

Mail, Fax or Email Registration Form to:

Tarek Uddin, Business Development Manager, tareku@gamcinc.com

P.O. Box 131221

Ann Arbor, MI 48113 USA

FAX: (734) 786-2242

Refund Policy: No refunds. All returned checks receive a \$50 fee.

Online Registration Available at www.gamcinc.com

Comments: _____

How did you hear about us? _____