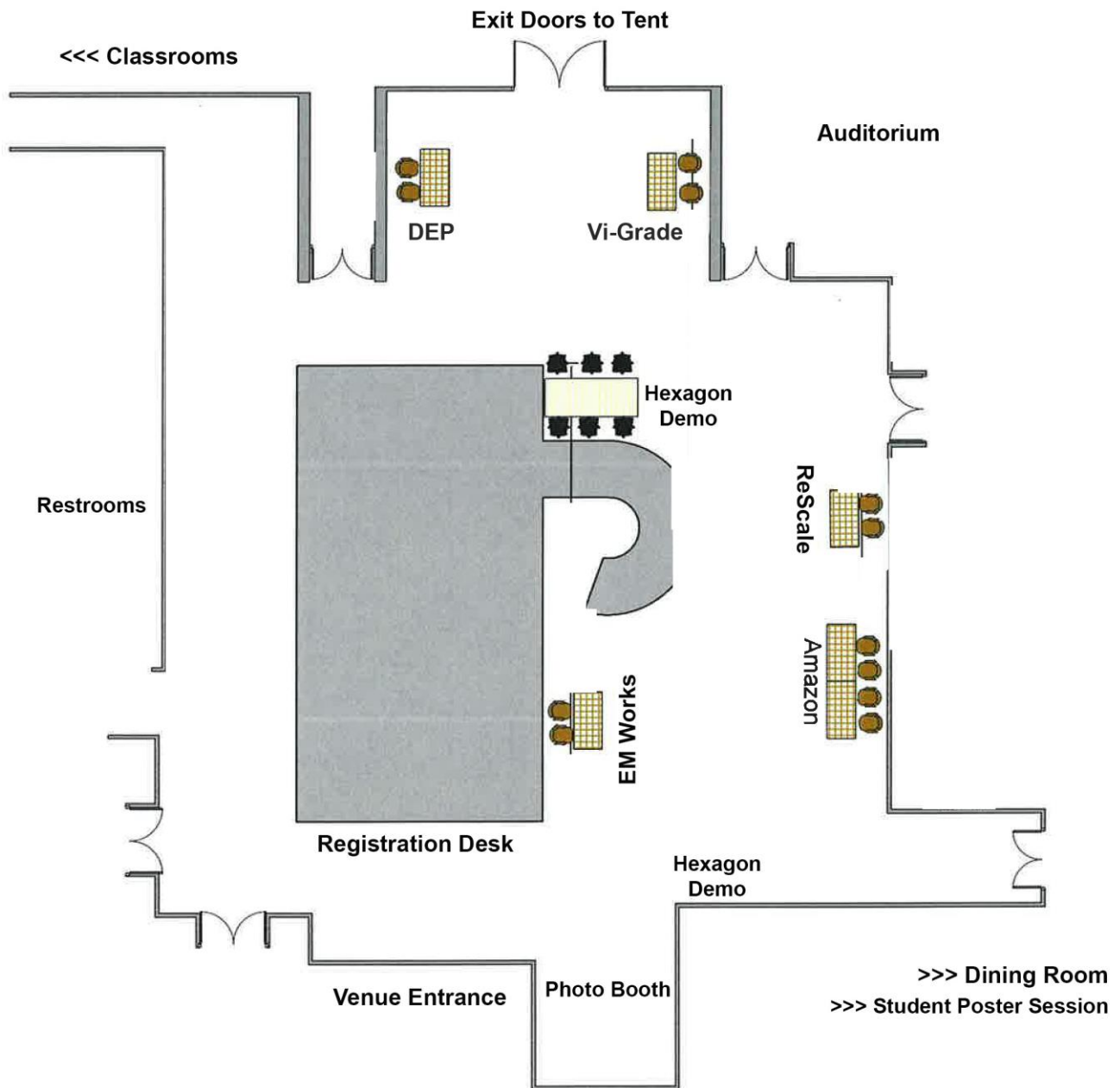# HxGN LIVE Smart Simulation Summit

Troy, MI | 09-10 November 2022

Conference Agenda

Venue Floorplan

Workshops

Wednesday November 9th | morning agenda

Registration Opens 7:30am			Continental Breakfast 7:30am-8:30am		
Non-linear FEA using MSC Apex Workshop Room 104	**Manufacturing Workshop** Room 105	**System Engineering Workshop** Room 103	**Materials Workshop** Room 101	**NVH Workshop** Room 102	**Machine Learning Workshop** Room 106
Introduction 8:30am-10:00am	An overview of sheet metal welding and mechanical joining simulation technologies 8:30am-9:45am	System Simulation 8:30am-10:00am	SMCs (Sheet Molding Compounds) for battery enclosures 8:30am-9:45am	ePowertrain NVH 8:30am-9:45am	ODYSSEE Introduction 8:30am-9:45am
	5 Minute Break 9:45am-9:50am		5 Minute Break 9:45am-9:50am	15 Minute Break 9:45am-10:00am	5 Minute Break 9:45am-9:50am
15 Minute Break 10:00am-10:15am	An overview of metal forming and costing simulation software technologies 9:50am-11:05am	15 Minute Break 10:00am-10:15am	Thermal shock with composite materials 9:50am-10:35am		ODYSSEE CAE for creating structural, fluids and multi-body dynamics surrogate models 9:50am-11:05am
Efficient Non-linear FEA Modeling 10:15am-12:00pm		Adams RT 10:15am-12:00pm	10 Minute Break 10:35am-10:45am	NVH Analysis for Low-Mid-High Frequencies 10:00am-12:00pm	
	10 Minute Break 11:05am-11:15am		Virtual material characterization with Nexus Material Enrich 10:45am-12:00pm		10 Minute Break 11:05am-11:15am
	Introduction for the Smart Assembly Shop 11:15am-12:00pm				ODYSSEE A-EYE for image processing 11:15am-12:00pm
Networking Lunch for Workshop Attendees & Sponsor Area Open 12:00pm-1:30pm					

Conference Agenda – General Sessions

Auditorium

Speaker	Time	Session
Robert Segal VP Sales, D & E, North America Hexagon MI	1:30pm - 1:35pm	**Welcome Address**
Parth Joshi Chief Technology and Product Officer, Hexagon MI **Mahesh Kailasam** Senior Vice President & GM, Hexagon MI	1:35pm - 2:05pm	**General Session**

Robert Segal

Hexagon MI, *VP Sales, Design & Engineering, North America*

Solving complex engineering challenges through a consultative approach, meet Robert Segal, VP of sales at Hexagon. Robert's experience in software sales, business development, and account management display strong ability to identify and exploit new business opportunities, with a history of exceeding quotas and implementing high-level sales strategies.

Parth Joshi

Hexagon MI, *Chief Technology and Product Officer*

Parth is Chief Technology and Product Officer at Hexagon and is an experienced executive with 20+ years of success in P&L ownership, strategy, product development, M&A, and operations across various industries, for both Fortune 500 and start-ups. Parth handles multiple Business Unit P&Ls, strategy, and organisations in MI across Design & Engineering Software BU, Metrology Devices BU, Metrology & Production Software BU, Volume Graphics, and Nexus Platform, along with leading the Product & Technology strategy, execution, and organisation for our future readiness.

Mahesh Kailasam

Hexagon MI, *Senior Vice President & GM - Design & Engineering*

With over 20 years of experience in CAE, Dr. Kailasam is driving strategy, industry, and business development in Hexagon's Design and Engineering Business Unit and is the leader of our Structures Centre of Excellence. He brings a wealth of industrial experience spanning Automotive, Aerospace, Electronics, Energy, Consumer Products and Life Sciences. Mahesh holds an M.S. and Ph.D. in Mechanical Engineering and Applied Mechanics from the University of Pennsylvania with a B.Tech in Mechanical Engineering from the Indian Institute of Technology, Madras.

Conference Agenda – General Sessions

Auditorium

Speaker	Time	Session
Simon XU Technical Fellow, ML & Optimization, Chair, Global Optimization Focus Group, General Motors Advanced Vehicle Development	2:05pm - 2:35pm	**Innovative Optimization Strategies to meet the New Challenges in EV Architecture Development**
Rajiv Lulla Global Practice Leader, Systems & Engineering, Egon Zehnder	2:35pm - 3:05pm	**Changing Leadership with the Internet of Behaviors**
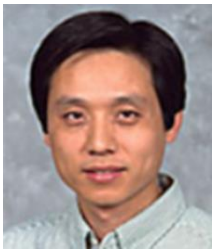
Dr. Simon Xu

General Motors, *Technical Fellow, ML & Optimization, Chair, Global Optimization Focus Group*

Simon Xu is Engineering Group Manager for Vehicle Optimization, Architecture Strategy at General Motors Technical Center. He sparks innovation in vehicle architecture development process, tools and strategies. Simon is an acknowledged expert in advanced optimization techniques such as parametric modeling, morphing, topology optimization and multi-disciplinary optimization. His knack for improving processes by the implementation of new tools and processes benefits vehicle performance, mass, cost and fuel economy. Simon has also played a major role in GM's advance technology programs which developed new electric and hybrid vehicle concepts and the optimal use of alternative light weight materials for future vehicle programs.

Rajiv Lulla

Egon Zehnder, *Global Practice Leader, Systems & Engineering*

Rajiv Lulla, Global Practice Leader at Egon Zehnder, approaches each conversation as an opportunity to build life-long friendships and find shared success. His passion for digital transformation, cross-pollinating innovation, and progress of industry 4.0 help businesses charter transformation programs, and talent pools across industry segments. He believes the Internet of Things and petabytes of data are merely new versions of the interconnected reality we already live in.

Conference Agenda – General Sessions

Auditorium

Speaker	Time	Session
Tony Bromwell Vice President, Engineering Operations, Americas Hexagon MI	9:00am - 9:10am	**Welcome Address**
Bruce Engelmann, CTO, Design & Engineering, Hexagon MI **Arno Zinke** Senior Vice President Software Engineering Hexagon MI	9:10am - 9:45am	**General Session**
Amberlee Haselhuhn, Ph.D. Director, Materials & ICME, LIFT	9:45am - 10:15am	**Solving the Manufacturing Equation**

Tony Bromwell

Hexagon MI, *Vice President, Engineering Operations, Americas*

As VP of Engineering Operations, Tony Bromwell comes with extensive experience across multiple industries and disciplines. A graduate of the University of Michigan with extensive knowledge and experience in Computer Aided Engineering (CAE), Tony leverages technologies to enhance both product and business value. As a strategic and creative problem solver, Tony has had the good fortune to help bring some unique products to life, ultimately exposing him to a broad range of engineering problems and challenging the innovation of successful solutions.

Bruce Engelmann

Hexagon MI, *Chief Technology Officer, Design & Engineering*

Meet Hexagon's Chief Technology Officer, Bruce Engelmann, who is responsible for technology leadership, research and development, and product-line-related functions for Design & Engineering within Hexagon Manufacturing Intelligence. Thought leader and champion of enterprise software, multiphysics simulation-driven design and optimization, nonlinear finite element methods, advanced materials, and bringing the promise of deep digital understanding of complex products to reality, Bruce can help inspire you to achieve it all.

Arno Zinke

Hexagon MI, *Senior Vice President Software Engineering*

Arno Zinke, Senior Vice President of Software Engineering, is fascinated by the emergence of the need to reinvent and transform businesses into digital platforms for staying competitive in the era of the cloud and AI. Connect with a start-up entrepreneur who comes with extensive experience in creating proprietary leading-edge technology for industrial research and digital content creation platforms. Connect with Arno to shift to zero.

Amberlee Haselhuhn, Ph.D.

LIFT, *Director, Materials & ICME*

Amberlee Haselhuhn, Director for Materials & ICME at LIFT, she has appeared in 30 Under 30: Recognizing the future leaders of manufacturing in SME's advancedmanufacturing.org. Amberlee is an avid researcher who has led research in welding and joining dissimilar materials, including high-strength steel. Haselhuhn earned her BS and PhD in materials science engineering and a BS in biomedical engineering from Michigan Tech. She holds a patent in control of intermetallic compound growth in aluminium-to-steel resistance welding and is proactively driven to deliver manufacturing solutions for the future.

Conference Agenda – General Sessions

Speaker	Time	Session
Brian Shyu Global Practice Leader, Systems & Engineering, Hexagon MI **Jessica Zheng** Senior Vice President Software Engineering Hexagon MI	1:30pm - 2:00pm	**Reimagining the future of collaborative engineering through Human-Centered Design**
Srini Sundararajan Manager at Ford Research & Innovation Center, Ford Motors	2:00pm - 2:30pm	**Simulation Challenges and Opportunities**
Jack Dolan Vice President and Managing Director, JD Power	2:30pm - 3:00pm	**Leveraging Voice of Customer & Voice of Vehicle Data to improve Automotive Product Development Efficiency**

Brian Shyu

Hexagon MI, *Sr. Director, Experience Design*

Meet recovering engineer turned designer, proactively driven towards all things creative. Brian is a graduate of the MII-PS program at CMU's Integrated Innovation Institute. Senior Director, Experience Designer at Hexagon, Brian strongly believes in the intersection of design, technology, and marketing. His experience in product design, service design, mechanical engineering, and brand strategy have geared him to solve energy and industrial safety challenges. Brian's focus on designing human-centered products & services in addition to integrating design into the DNA of the company helps accelerate progress in the world of manufacturing.

Jessica Zheng

Hexagon MI, *Head of Virtual Manufacturing & Costing CoE, D & E business unit*

Creator of values that scale, Jessica Zheng is the Head of Virtual Manufacturing & Costing CoE at Hexagon. Jessica pursued International Business and graduated from University of Regina. Her recent Massachusetts Institute of Technology certification has powered her to implement business strategy for AI. Jessica works closely to revolutionize development processes for manufacturers. Her commitment to deliver the best has pushed her to explore how Simufact technology shapes business strategy, leading to consistent progress.

Srinivasan Sundararajan

Ford Motors, *Manager at Ford Research & Innovation Center*

Srinivasan Sundararajan is Ford Motor Credit Company's Technical Leader. Srinivasan secured his PhD in Biomedical from Wayne State University. His research & development of advanced technologies in automotive restraints, post crash notification, advanced work in injury biomechanics including experimentation is insightful. Srinivasan has contributed 30+ years in developing advanced solutions to meet Automotive Safety (Crash) regulations.

Jack Dolan

JD Power, *Vice President and Managing Director*

Jack Dolan is Vice President, Product Quality Performance Improvement at J.D. Power. Jack holds a Bachelor of Mechanical Engineering from the University of Detroit, a Master of Science in Mechanical Engineering from The University of Michigan Dearborn, and a Master of Business Administration from the Michigan State University Executive MBA Program. He spent nearly 33 years with Fiat Chrysler Automobiles in a variety of senior leadership roles in Product Development, Manufacturing, and Quality including positions as Chief Engineer, Architecture Line Executive, and Head of Advanced Engineering for the company's North American portfolio. At J.D. Power, Jack leads activity leveraging data and insights to improve client product quality and business performance.

Autonomous Track   Room 103

Speaker	Time	Session
Edward Argalas Vehicle Performance Owner, Automated Driving Performance Simulation, General Motors **Blake Goodwin** Account Manager, Keysight Technologies	3:45pm - 4:20pm	**Keysight Technologies RSE and the Shift to Zero**
Gordon Heidinger Hexagon MI	4:20pm - 4:55pm	**GNSS Positioning for Autonomous Technology**
Matthias Schlegel Hexagon MI	4:55pm - 5:30pm	**Reduce building times of simulation environment to overcome the new challenges of ADAS and Autonomous Driving systems**

Edward Argalas

General Motors, *Vehicle Performance Owner, Automated Driving Performance Simulation*

Ed Argalas is the Vehicle Performance Owner for the Automated Driving Performance Simulation team at General Motors. He has spent his 24-year career as an automotive engineer at General Motors in vehicle dynamics, driveline, chassis control and active safety/autonomous driving roles, performing both advanced synthesis and development/validation roles. He is currently involved in the creation/execution of virtual development tools supporting ADAS/AV feature release on production vehicle platforms.

Blake Goodwin

Keysight Technologies, *Account Manager*

With a BS in Electrical Engineering from Purdue University, Blake Goodwin currently acts as an account manager for Keysight Technologies in the Detroit area. He began his career with Keysight's technical contact center in Englewood, Colorado before moving back home to the Midwest to support mainly automotive customers. He supports a broad range of testing applications including Radar and LiDAR Manufacturing Testing, In Vehicle Networking, and Electric Vehicle Development.

Gordon Heidinger

Hexagon MI, *Automotive Segment Manager*

Gordon Heidinger holds a B.Sc. in Electrical Engineering from the University of Manitoba. He started his career in designing electrical systems and vehicle development in 1998 at Motor Coach Industries and 2003 at DaimlerChrysler. He transitioned to program management in 2008 at Pacific Insight Electronics and 2013 at Harman International. Gordon now continues his passion for state-of-the-art technology at Hexagon Autonomy and Positioning as the Segment Manager for Automotive and Safety Critical Systems.

Matthias Schlegel

Hexagon MI, *Product Manager Autonomous Simulation*

As a product manager in the field of environment simulation, Matthias Schlegel is pushing for shorter development cycles of ADAS and AD systems. Having experienced both the world of privately owned vehicles as well as automated vehicle fleets, Matthias has a strong motivation to make the future of mobility safe, automated, and sustainable. As a former Scrum Master, he believes in agile principles. Top of his mind is making the product development team passionate about delivering customer value.

Manufacturing Track

Speaker	Time	Session
Hassan Ghassemi-Armaki Staff Researcher – General Motors Warren Tech Center	3:45pm - 4:20pm	**Reducing RSW Physical Prototypes with Virtual Process-Performance Assessment**
Kirk Rogers Advanced Manufacturing Engineer, The Barnes Global Advisors	4:20pm - 4:55pm	**Process Simulation and ML for Additive Manufacturing**
David Hicks Principal Engineer, Modeling and Simulation, ALMMII	4:55pm - 5:30pm	**Accelerating Materials Development and Manufacturing Agility via Simulation Chaining and Physical Validation: An ICME Approach**
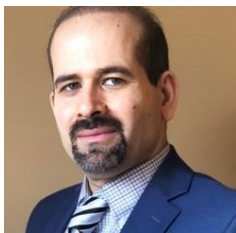
Hassan Ghassemi-Armaki

General Motors, *Staff Researcher – Warren Tech Center*

Dr. Hassan Ghassemi-Armaki is currently Staff Researcher in Global R&D, General Motors. He is working on Artificial Intelligence of welding to improve the quality of joints through Machine Learning of processing signals and Materials-Informatics using AI-computational tools considering continuous change in product design and variability of materials design from different suppliers. Before joining General Motors, Hassan has worked at ArcelorMittal Global R&D on Joining for Automotive parts with International Auto-OEMs and Additive Manufacturing of Ferrous Materials.

Kirk Rogers

The Barnes Global Advisors, *Advanced Manufacturing Engineer*

Dr. Rogers has used additive technologies to solve manufacturing, repair & supply chain problems for the last 10 years. He began consulting full time in 2018 after leading the technical team in startup of a $40M Additive Manufacturing R&D center. The majority of Kirk's nearly 20-year career at GE was in medical device manufacturing. Dr. Rogers has 25 years of experience in materials processing, metal additive manufacturing, powder metallurgy, and ceramic matrix composites. He has authored and co-authored nearly 50 publications and has been invited to speak on advanced manufacturing topics numerous times. Kirk obtained his Ph.D in Materials Science and Engineering from Purdue University.

David Hicks

ALMMII, *Principal Engineer, Modeling and Simulation*

David Hicks is a Principal Engineer for modeling and simulation at LIFT – a nonprofit public-private partnership and Department of Defense-supported national manufacturing innovation institute specializing in materials, processes, and systems development – based out of Detroit, MI. He is also an Adjunct Professor with the Center for Autonomous Materials Design at Duke University. David models' materials as a function of manufacturing processes to assess their performance in extreme environments and develops tools to streamline inter-software communication.

Manufacturing Track

Speaker	Time	Session
Tarek Belgasam Senior Materials Research Engineer Honda Development & Manufacturing of America, LLC	11:00pm - 11:30pm	**Advanced Engineering Simulation Approaches for Developing Innovative Future Applications**
Billy Karasz Sr. Solution Architect, Rescale	11:30pm - 12:00pm	**Using Cloud High Performance Compute in Design and Manufacturing**
Eric McCarty Sr. Project Manager, Auto/Steel Partnership	3:30pm - 4:00pm	**Collaborative Approach to Advancing the Modeling of Steel Joining Technologies**
Xavier Jauregui Global Vice President, Robotics, ESAB	4:00pm - 4:30pm	**Welding Software Platform Integration to Drive Efficiency**
Thomas Richter Sr Manager - Structural Analysis, Magna Cosma	4:30pm - 5:00pm	**Virtual Welding Simulation to Accelerate Process and Tolerance Definition to Reduce Prototype**

Tarek Belgasam

Honda Research & Manufacturing of America, *Senior Materials Research Engineer*

Dr. Tarek Belgasam has worked on computational and experimental mechanics of materials for 10 years. Dr. Belgasam earned his PhD in ME from Washington State University. As Senior Materials Research Engineer at Honda Research & Manufacturing of America, he supports automobile component materials development and design. During research, he applies computational material simulations, machine learning, probabilistic design and optimization to industrial applications.

Billy Karasz

Rescale*, Sr. Solution Architect*

Eric McCarty

Auto/Steel Partnership, *Sr. Project Manager*

Xavier Jauregui

ESAB, *Global Vice President, Robotics*

Thomas Richter

Magna Cosma, *Sr Manager - Structural Analysis*

Hailing from Eden Prairie, Minnesota, Tom is a graduate of Michigan Technological University and current Master's student at Oakland University. He joined with Cosma, the body and chassis division of Magna, in 2019 as a CAE engineer where he focused on building Cosma's capabilities in Welding Simulation. In Summer 2022, Tom transitioned to an R&D position in Cosma. He now works on developing ideas to shape and support the car and factory of the future.

Materials Track

Speaker	Time	Session
Benoit Devaux Virtual Engineering Roadmap Leader, Solvay	3:45pm - 4:20pm	**Towards Accelerated Characterization Approaches for Creep Modeling of Fiber Reinforced Specialty Polymers**
Guillaume Boisot Head of Materials & Enterprise Solutions Group Hexagon MI	4:20pm - 4:55pm	**Hexagon Materials Solutions: Driving the Automotive Industry to a More Sustainable Future**
Alex Baker Sr. Applications Engineer, Moldex3D Northern America, Inc.	4:55pm - 5:30pm	**Closed-Loop Simulation Solution for Analyzing Anisotropic Behavior of Composites**

Benoit Devaux

**Solvay,** *Virtual Engineering Roadmap Leader*

Beniot has a Master Degree in Mechanical Engineering, Faculty of Engineering Mons. His role at SOLVAY Materials as CAE Expert is to support customer development projects, holding the position of Virtual Engineering Roadmap Leader ensuring the coordination of CAE activities within different regional Application Development Labs.

Guillaume Boisot

Hexagon MI, *Head of Materials & Enterprise Solutions Group*

Dr. Boisot is leading the Materials & SPDM Solutions group for Hexagon Design & Engineering. He started his career at e-Xstream engineering in 2009, and successfully held a variety of technical, business and management positions. Dr Boisot holds a Ph.D and MS in solid mechanics and materials and totals more than 15 years in the field of computational material engineering.
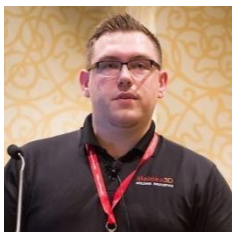
Alex Baker

Moldex3D Northern America, Inc., *Sr. Applications Engineer*

Alex Baker has a Bachelor's degree in Mechanical Engineering from Pennsylvania State University and has worked at Moldex3D as an Applications Engineer since 2015. At Moldex3D, Alex has provided training in molding simulation software for over a thousand users, has worked on numerous validation and benchmarking case studies, and supports the technological integration of Moldex3D for several different OEMs in various industries. In addition, Alex also manages the Moldex3D North America YouTube channel, a source of valuable information for new and existing users of all types.

Materials Track

Speaker	Time	Session
Amita Nikam Safety CAE Integration Engineer-Battery General Motors **Beichen Li** Lead Analysis Engineer General Motors	11:00pm - 11:30pm	**Development of EV Battery Module through Moldflow-CAE Coupling as a Step towards Virtual Validation**
Dustin Souza Senior Application Engineer, Hexagon MI	11:30pm - 12:00pm	**Predicting Fatigue Lifetimes of Short Fiber Reinforced Plastics**

Amita Nikam

General Motors, *Safety CAE Integration Engineer-Battery*

Amita Nikam is a Safety CAE Integration Engineer for EV Battery System Crashworthiness at General Motors Technical Center, Warren. Amita has more than 13 years of work experience in Automotive Safety CAE. She has worked on development of multiple automotive systems such as IP, Console, Seats and Body to meet NVH, Crash, Stiffness/strength, and fatigue performance.

In her current role, she is responsible for development of robust EV Battery Packs to meet global safety regulations. She also supports advanced EV programs for virtual validation. Amita possesses strong skills in CAE such as Primer, Hyper works, Meta-Post, LS Dyna, Opti struct, DIGIMAT, etc.

Beichen Li

General Motors, *Lead Analysis Engineer*

Beichen or "Mike" Li is currently working at GM EV RESS Crashworthiness group, leading various development of future EV programs. He has been working in the battery CAE area for over 12 years, starting from the first generation of the Volt battery. Throughout the past decade, he has been using various CAE methods, including linear, non-linear code, optimization, and manufacturing related tools, such as Digimat, for these EV programs.

Prior to working on EVs, Beichen has worked 20 years in vehicle safety domains, including vehicle crashworthiness, occupant safety, crash test dummy development, restraint systems and crash sensing systems. Beichen also developed new SMC material cards in LSDYNA for specific manufacturing process used in General Motors programs

Dustin Souza

Hexagon MI, *Senior Application Engineer*

Dustin graduated with his Bachelors and Masters in aerospace engineering from Purdue University. He currently works as a Senior Application Engineer with Hexagon where he supports key customers in the automotive industry with composite material modelling, helping them obtain more accurate material responses and in turn more accurate part level results. Structures has always been something Dustin is interested in, especially when it comes to accurately predicting the behaviour of a certain material through hand calculations or through FEA software.

Materials Track

Speaker	Time	Session
Nathan Brown Graduate Research Assistant, Clemson University	3:30pm - 4:00pm	Digital Lifecycle: A New Paradigm for Enabling Virtual Product Development
Damian Audus Business Development Manager Americas, Hexagon MI	4:00pm - 4:30pm	How the Automotive Industry can Leverage the Explosion of Data Resulting from the Digital Thread
Vahid Mortazavian Global CAE Lead, Ascend Performance Materials	4:30pm - 5:00pm	A Correlative Study between Analytical and Experimental Results of Glass Reinforced Thermoplastic Polyamides

Nathan Brown

Clemson University, *Graduate Research Assistant*

Nathan Brown is a Ph.D. candidate in the Department of Mechanical Engineering at Clemson University. Nathan's research interests included deep machine learning for engineering design and composite joining technologies. In addition, Nathan works with the Clemson Composite Center to create lighter, recyclable, more efficient, sustainable, and economical solutions using advanced materials, analysis methods, and manufacturing technologies. Nathan is a member of a team currently working on a DOE-funded project to design and develop a multi-material, cost-competitive, lightweight mid-size SUV body-in-white.

Damian Audus

Hexagon MI, *Business Development Manager Americas*

Damian graduated his BSc Hons in Business from Southampton Solent University, UK in 2002. From there he started his career in London selling complex enterprise solutions for large multinationals such as IHS, Reed-Elsevier, IBM and Telefonica. In 2016 Damian joined Granta, where he developed his expertise in Materials Data Management and quickly grew the Nordics sales territory into a successful business. In 2018 he moved to Arizona after being asked to help develop Granta's Western US business and acquired his expertise in Simulation Process Data Management when Ansys purchased Granta and drew parallels between the enterprise sales techniques required for both Materials and Simulation Data Management. In 2021 Damian joined Hexagon and has responsibility for enabling the global sales force to sell Hexagon's world class enterprise solutions, SimManager and MaterialCenter.

Vahid Mortazavian

Ascend Performance Materials, *Global CAE Lead*

Vahid Mortazavian is senior application technology engineer at Ascend Performance Materials. He holds PhD in mechanical engineering concentrating on durability behavior of thermoplastics. He has been in auto industry for over a decade focusing on predictive modeling of thermoplastics mechanical behaviors and their applications developments.

NVH & Durability Track

Speaker	Time	Session
Behrooz Khatib-Shahidi CAE Manager, Ford Motor Company	3:45pm - 4:20pm	Digital Transformation Preempts Physical Prototype Build with Virtual Build and Simulation
Xiaobing Hu Head of Applied Solutions, D&E BU, Hexagon MI	4:20pm - 4:55pm	Simulation in the development of a 3-in-1 integrated electric drive unit
Dnyanesh Digraskar Senior HPC Partner Solutions Architect, AWS	4:55pm - 5:30pm	Leveraging AWS HPC Infrastructure for Performance Gains with Hexagon Solvers

Behrooz Khatib-Shahidi

Ford Motor Company, *Manager, Vehicle Systems CAE Integration*

Behrooz Shahidi is the Manager of Ford Motor Company CAE Integration Department for North America and Europe vehicle programs. His department has responsibilities of leading Ford CAE disciplines, which includes vehicle safety, vehicle durability, vehicle NVH, Thermal System Engineering, vehicle weight optimization, through all phases of product development – from concept development through tooling release, testing, and Job 1.

Over 30 years' experience at Ford, leveraging CAE to achieve optimized body and vehicle designs that best balances attribute tradeoffs and performance targets. He has been a core part of Ford's truck, SUV, Commercial Vehicle, and future EV vehicle programs.

Xiaobing Hu

Hexagon MI, *Head of Applied Solutions, D&E BU*

Experienced senior manager with a demonstrated history of working in the simulation software and engineering consultancy areas. Strong business development and management professional skilled in Business Planning, Management, Leadership, Renewable Energy, Software, and Engineering.

Dnyanesh Digraskar

AWS, *Senior HPC Partner Solutions Architect*

Dnyanesh Digraskar is a Senior Partner Solutions Architect for High Performance Computing (HPC) at AWS, working with AWS HPC partners to help them build scalable well-architected HPC solutions. He specializes in the areas of CFD and CAE modeling, performance optimization, HPC simulations, and wind energy. Dnyanesh has a Master's degree in Mechanical Engineering from the University of Massachusetts, Amherst.

NVH & Durability Track

Speaker	Time	Session
Nigel Linden President, Re:Test, Inc.	11:00pm - 11:30pm	**Stochastic Approach for Standardized Loads**
Wenlong Yang Sr. Noise and Vibration CAE Engineer, General Motors	11:30pm - 12:00pm	**Test-Based Virtual AVAS Speaker for Actran Model**

Nigel Linden

Re:Test, Inc., *President*

Nigel Linden is president and owner of Re:Test, Inc. and has over 42 years experience in the automotive durability attribute, performing CAE and developing physical tests. Nigel has worked with virtually all the major automotive OEMs, their suppliers, universities, and many companies from other industries. His career began in 1980, when he had the honor of working for Dr. Peter Watson (of Smith Topper Watson fame), where he learned fatigue theory from the pioneers. He then joined MTS where he was a leader in the "Simulation Revolution."

Wenlong Yang

General Motors, *Sr. Noise and Vibration CAE Engineer*

Wenlong Yang has many years of Noise and Vibration experience. He has a PhD majored in Ocean Engineering. After graduation, he firstly worked for CIMC Raffles Offshore Engineering Company on the NV problem with offshore rigs and ships. He then worked for ESI North America as a vibro-acoustics application engineer, supporting customers from automotive, marine, and aerospace. He is currently a Noise and Vibration CAE engineer working for General Motors on its all EV future.

NVH & Durability Track

Speaker	Time	Session
Rabah Hadjit Technical Director, HBK	3:30pm - 4:00pm	**Road Noise Synthesis From Blocked Forces And Full Vehicle CAE Transfer Functions**
Thibault Lafont Team Leader - Computer Aided Engineering, Autoneum	4:00pm - 4:30pm	**A New Tool for an Efficient Design and Positioning of Damping Treatments**
Vasiliki Tsianika Product Manager Hexagon MI	4:30pm - 5:00pm	**Incorporating Uncertainties in a Durability Assessment of Off-Highway Axles - a Robust Design Approach**

Rabah Hadjit

HBK, *Technical Director*

Rabah Hadjit holds a Ph.D. from the University of Mons in Belgium. He currently works as Technical Director in the Sound & Vibration Engineering Services Department at Hottinger Bruel & Kjaer. Rabah focuses on leveraging his expertise to expand the capabilities of HBK's Service Team to deliver projects combining both test and CAE solutions in partnerships with CAE vendors.

Thibault Lafont

Autoneum, *Team Leader - Computer Aided Engineering*

Thibault is leading the acoustic simulation team of Autoneum in Winterthur, Switzerland. He has a degree in Signal Processing from the University of Lyon, a Master of Science in Audio and Acoustics from the EPFL Switzerland and a PhD in vibro-acoustics from the University of Lyon. Thibault has also the role of technical expert acoustic for Volvo cars and more generally, for new US OEM; this consists of supporting any demand by technical data (simulation, measurements, etc.) and prototypes.

Vasiliki Tsianika

Hexagon MI, Product Manager

A highly motivated engineer, meet Hexagon's Product Manager, Vasiliki Tsianika. Her solid background in Mechanical Engineering demonstrates expertise in structural dynamics, vibrations, durability and engineering design under uncertainty, developing new NVH methods, fatigue reliability and accelerated life testing analysis methods for engineering systems. Her solid analytical insights, problem-solving skills, and comprehensive knowledge of Uncertainty Quantification, Optimization, Reliability Analysis and Finite Element Analysis (FEA) techniques help her synthesize client requirements best.

Fluids & Thermal Track

Speaker	Time	Session
Anup Paul (on behalf of Morteza Marivani) Business Development Director – Fluids Hexagon MI	3:45pm - 4:20pm	**Thermal Comfort Analysis of a Mining Vehicle**
Anup Paul Business Development Director – Fluids Hexagon MI **Nobuyuki Oshitani, Tomasz Kwiatkowski & Veroljub Maksimovic** Hexagon MI	4:20pm - 4:55pm	**Front Loading PCB Thermal Analysis for Hexagon Laser Scanner**
Yuya Ando Hexagon MI	4:55pm - 5:30pm	**Cradle CFD Technologies for Thermal Battery Simulations**

Morteza Marivani

Mobile Climate Control, *Group Research & Development Scientist, Product Development*

Morteza has a Ph.D. degree in mechanical engineering from McMaster University majoring in computational fluid dynamics. With over 20 years of mechanical engineering experience in product development using advanced state-of-the-art modeling tools for the simulation of complex systems in the automotive industry. Currently, he works at Mobile Climate Control, a global HVAC solution provider for off-road, transit, utility, and defense vehicles as the group research and development scientist and advanced simulation center manager

Anup Paul

Hexagon MI, *Business Development Director - Fluids*

Dr. Paul is a subject matter expert in fluid mechanics and heat transfer with over 20 years of experience in the application of CAE across multiple industries including Energy, Chemical Process, Manufacturing, Electronics, Consumer Products and Life Sciences. He has extensive experience in CFD, FEA, failure analysis & remediation, design optimization and lab testing. With a Ph.D. in Mechanical Engineering from the University of Cincinnati, he is also a licensed Professional Engineer in the state of Ohio.

Yuya Ando

Hexagon MI, *Product Manager, Cradle CFD, D&E BU*

Yuya Ando has joined Cradle CFD in 2002 as a sales engineer. He led various CFD projects including optimization, multiphase, and Multiphysics problems across the industries.

He pioneered global business for Cradle CFD by establishing subsidiaries & affiliated companies, where he served as the president and board member. He also developed distributors and technology partners worldwide. He now serves as the Product Manager of CFD solutions under Hexagon.

Systems Track

Speaker	Time	Session
Simon He Advanced Senior Engineer, Stellantis	11:00pm - 11:30pm	**A Method using Adams/View Technique to Solve a Steering Issue in Adams/Car Simulation**
Susheel Ravuri, Nantu Roy, Yogesh Mehta American Axle & Manufacturing	11:30pm - 12:00pm	**Customization of ADAMS for efficient simulations of driveline systems**
Mario J Felice virsolTech Engineering Consulting / NAFEMS Council Member	3:30pm - 4:00pm	**Simulation: Driving the Convergence to Zero Prototypes, an Automotive Perspective**

Simon He

Stellantis, *Advanced Senior Engineer*

Simon He, a veteran of Adams user with more than 30 years of experience. He has worked in various areas in automotive industry from suppliers to OEM. He studied in mechanical engineering in three universities with a PH. D degree.

Susheel Ravuri, Nantu Roy & Yogesh Mehta

American Axle & Manufacturing

Mario J Felice

virsolTech Engineering Consulting / NAFEMS Council Member, *Principal and Founder*

Mr. Felice is Principal and Founder of virsolTechEngineering Consulting providing automotive engineering experience to Software Tech Companies helping create "Simple & Practical" integrated simulation technologies to assist OEMs drive a faster, more efficient Product Development Cycle. He serves as a member of the NAFEMS Council (Board of Directors) and the NAFEMS America's Steering Committee.

Mr. Felice recently retired as Global Manager for Powertrain Calibration, Controls and NVH CAE at Ford Motor Company. While at Ford, headed a large team of CAE engineers located in North America, Europe and India, supporting all analytical efforts to deliver Ford's global powertrains for best performance, fuel economy, drivability and sound quality.

Systems Track

Speaker	Time	Session
Yuping Cheng Research Engineer, Ford Motor Company	4:00pm - 4:30pm	**Romax Spectrum in Driving Early Design For EV Transaxles NVH**
Ammar Kouki Co-founder, EMWorks	4:30pm - 5:00pm	**Demonstrating Electromagnetic Simulation To The HxGN Community**

Yuping Cheng
Ford Motor Company, *Research Engineer*

Ammar Kouki
EMWorks, *Co-founder*

Ammar Kouki received the B.Sc. (Hons.) and M.Sc. degrees in Engineering Science from the Penn State University, in 1985 and 1987, respectively, and the Ph.D. degree in Electrical Engineering from the University of Illinois at Urbana–Champaign in 1991. He is the co-founder of EMWorks Inc. and serves as its vice president and CTO. He is also Full Professor of Electrical Engineering and Founding Director of the LTCC@ÉTS Laboratory at École de technologie supérieure, Montréal, Canada.

Machine Learning Track Room 106

Speaker	Time	Session
Kumar Kulkarni Technical Specialist, US Army, Ground Vehicle Systems Center	11:00pm - 11:30pm	**Are Machine Learning Algorithms Ready for Predicting Ground Vehicle Survivability Against High Energy Ballistic Threats**
Jesper Slattengren System Dynamic Solution Architect Hexagon MI	11:30pm - 12:00pm	**Reinforced Learning of Neural Network Controllers using Adams and Bonsai**
Laike Misikir Crash Safety and CAE Engineer, Ford Motor Company	3:30pm - 4:00pm	**Application of Machine Learning for Structural Optimization**

Kumar Kulkarni

US Army, Ground Vehicle Systems Center, *Technical Specialist*

Kumar B Kulkarni is a Mechanical Engineer at the US Army's Ground Vehicle Systems Center. His expertise is in computational structural mechanics, actively involved in developing/evaluating countermeasures and threats mitigation technologies to improve soldier protection and survivability. He has extensive automotive product development experience using Computer Aided Engineering tools while working at Ford Motor Company and Visteon Corporation as a Technical Specialist. He has three patents and has published several technical papers. His current areas of interests include structural optimization, mobility and autonomy of ground systems. He has a Master's degree in Mechanical Engineering from the University of Toledo.

Jesper Slattengren

Hexagon MI, *System Dynamic Solution Architect*

Jesper Slättengren holds the role of Integration Architect in the system dynamics area at Hexagon Manufacturing Intelligence with main tasks in integrating Adams with other internal and external software.

With over 30 years' experience with Adams and more than 35 years of vehicle dynamics background, Jesper is well known in the Adams community for his roles from starting MDI Sweden in 1994, later leading the MSC/Adams automotive consulting team in North America before starting the services division at Pratt Miller Engineering. Education: B.Sc. Aerospace Engineering from Royal Institute of Technology, Stockholm Sweden 1987.

Laike Misikir

Ford Motor Company, *Crash Safety and CAE Engineer*

Machine Learning Track Room 106

Speaker	Time	Session
Anthony Favaloro Solutions Architect, Hexagon MI	4:00pm - 4:30pm	**Smart Superelements with MSC Nastran and ODYSSEE**
Aditya Vipradas Business Development Manager, Hexagon MI	4:30pm - 5:00pm	**Methods to Integrate ODYSSEE Machine Learning Models with Adams**

Anthony Favaloro

Hexagon MI, *Solutions Architect*

Tony graduated with a PhD from Purdue University and continued as a Research Scientist in the Composites Manufacturing and Simulation Center. Tony's background provides expertise in nonlinear materials, nonlinear FEA, process simulation, and connected toolchains. Now, as a Solutions Architect in the Structures Center of Excellence, he is applying this expertise towards embedding modern data science and machine learning techniques into structural analysis to enable synergistic workflows.

Aditya Vipradas

Hexagon MI, *Business Development Manager*

Aditya is highly skilled in deploying various numerical tools to solve customer problems through reduced-order modelling, machine learning and optimization. His deep interest in deploying deep-learning algorithms, including RNN (LSTM) and CNN, inspire business leaders to explore smart manufacturing solutions.