We congratulate our 2020 Altair Enlighten Award Winners

Harley-Davidson Motor Company
Livewire, Electric Motorcycle
Full Vehicle Winner
- Electrification, Sustainability
- Energy capacity improved by 90%
- Ratio of energy capacity to mass improved by 60%
- Chassis stiffness increased 143% and 97% in the two primary directions of interest
- Rolling chassis mass reduced 2.3 kg

Toyota
Injection Molded Fiber Reinforced Thermoplastic Seat Back Module Winner
- 15% cost, and 30% mass reduction
- 2 x safety performance increase
- Consolidation of 15 components to one part
- Industry first free standing, two-occupant injection molded back frame

Marelli
Advanced Sheet Compression Molded Suspension Steering Knuckle
Future of Lightweighting Winner
- 25% mass savings of newly developed ASMC suspension knuckle as compared to the aluminum version on a medium segment SUV
- 50% mass savings newly developed ASMC suspension knuckle as compared to the cast iron version of a medium segment SUV

Mubea (Muhr und Bender)
Mubea GFRP Tension Leaf Spring
Enabling Technology Winner
- Innovation in GFRP tension leaf springs
- Special geometry with bend at rear end of spring
- Comparative weight savings potential increased by up to 75%

Nissan
Sentra 2020 New Platform
Full Vehicle Runner-up
- Brand-new global platform
- Dramatic safety and performance improvement
- Increased UHSS application

Toyo Tires
One Tread All Season Tire
Enabling Technology Runner-up
- Comparative tooth load reduction of 30% for a 215/65R16 tire
- 20% reduction in rolling resistance
- 10% reduction in CO2 footprint
- Shorter braking distance

Mazda
Knowledge Discovery using Multidisciplinary Design Optimization and Data Mining
Enabling Technology Honorable Mention
- Mazda provides a methodology that captures top technology trends applying simulation driven design and data analytics for product design. That provide inspiration to industry peers.

The Altair Enlighten Award, jointly presented with the Center for Automotive Research (CAR), is intended to honor the greatest achievements in vehicle weight savings each year. Learn more about nominees and winners of 2020 as well as how to take part in the Enlighten Award 2021 at: altairenlighten.com/award

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