INDUSTRY & ACADEMIA ALIGNMENT THROUGH THE SAE AUTODRIVE CHALLENGE

Chris Ciuca
Director of Pre-Professional Education
SAE International
cciucan@sae.org
724.772.4038
Let’s start from our workforce development roots…

…building from balloon power to automated mobility.
1) Build formal workforce development connections between industry and academia.

2) Establish an integrated standards-based educational program that requires component integration and software development to enable J3016 (level 4) automated operation.

3) Provide the latest resources, equipment and training needed to accelerate development.
Build formal workforce development connections between industry and academia.
Industry & Academia Alignment through SAE AutoDrive
GENERAL MOTORS

Continental
Radar Supplier

Intel
Compute Platform Supplier

MathWorks
Simulation Software Supplier

Velodyne LiDAR
LiDar Supplier

Altair
Invented for life

BOSCH
SOLIDWORKS

Kistler
Sensor, analyze, innovate

MSC Software

FEV
ON Semiconductor

OXTS

Hexagon

SAE Detroit

Industry & Academia Alignment through SAE AutoDrive
Establish an integrated standards-based educational program that requires component integration and software development to enable J3016 (level 4) automated operation.
AutoDrive Challenge - Designed to SAE Standards

SAE J3016-201806

<table>
<thead>
<tr>
<th>Level</th>
<th>Automation Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Automation</td>
<td>Zero autonomy; the driver performs all driving tasks.</td>
</tr>
<tr>
<td>1</td>
<td>Driver Assistance</td>
<td>Vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design.</td>
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<tr>
<td>2</td>
<td>Partial Automation</td>
<td>Vehicle has combined automated functions, like acceleration and steering, but the driver must remain engaged with the driving task and monitor the environment at all times.</td>
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<tr>
<td>3</td>
<td>Conditional Automation</td>
<td>Driver is a necessity, but is not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice.</td>
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<tr>
<td>4</td>
<td>High Automation</td>
<td>The vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle.</td>
</tr>
<tr>
<td>5</td>
<td>Full Automation</td>
<td>The vehicle is capable of performing all driving functions under all conditions. The driver may have the option to control the vehicle.</td>
</tr>
</tbody>
</table>
Industry & Academia Alignment through SAE AutoDrive
Provide the latest resources, equipment and training needed to accelerate development.
Testing in Driving Scenarios.