



Research & Advanced Engineering

High School Science and Technology Program

<http://www.stem.ford.com/STEM/HSSTPOverview>

Lightweight Materials in the Automotive Industry

When? Saturday, October 22nd, 2016
9:00 a.m. – 11:30 a.m.

Where? Research & Innovation Center,
2101 Village Rd, Dearborn, MI 48121

Who can attend? You and a small group of interested and motivated students of your choosing. **Please distribute this announcement to your selected students.**

How to register? **Interested students can register on-line thru the program's website:**

<http://www.stem.ford.com/STEM/HSSTPOverview>

Also, teachers or parents can send an email to hsstp@ford.com with the names of their students. Please include the names of these students' drivers if the students will not be driving themselves. Everyone entering the Ford laboratory must be pre-registered. Carpooling is strongly encouraged.

Prior to attending this session, participants will need to complete one of the following forms (see attachments) depending on whether you are under 18 years at the time of registration or older:

- **Students who are minors (under 18 years of age) must provide signed parent/guardian consent in order to participate. Due to space limitations, sessions are not open to parents/guardians.**
- **Participants who are 18 years or older, must provide the signed "General Waiver Agreement".**

All required data on the Parental Consent and General Waiver should be completed and submitted on the day of the session.

>>> Registration deadline is October 19th, 2016<<<<

Additional Information:

- **Unless you register AND bring proper ID, you may NOT be admitted to the Ford laboratory. Acceptable forms of identification include: driver's license, student photo ID, birth certificate, or passport.**
- Because of space limitations, admittance is not guaranteed to anyone arriving after 9:00 a.m.
- Parents are not allowed to accompany tour groups.
- No cameras are permitted at the Ford laboratory.
- Cell phones must be turned off.

Session Abstract:

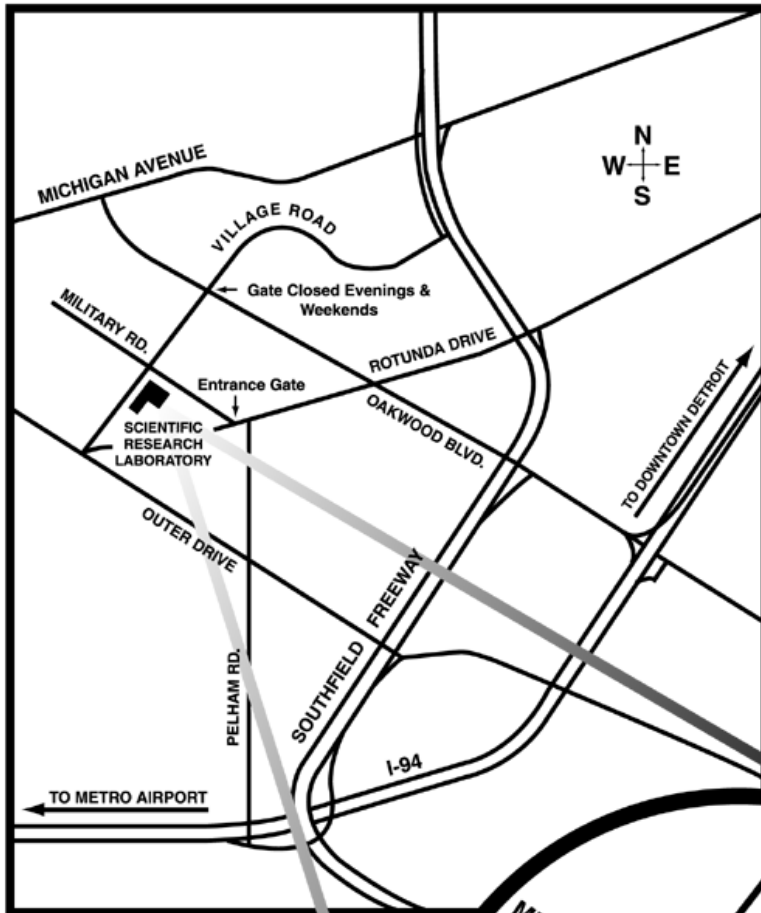
The topic is "Lightweight Materials in the Automotive Industry". The session will begin with a lecture on the subject. The past four decades have seen dramatic changes in the use of materials in the automotive industry. During this time, multiple requirements to improve fuel economy, reduce emissions, increase safety, improve passenger comfort, and increase durability have driven the implementation of new materials in the typical passenger vehicle. This presentation will examine the topic of lightweight materials usage in the automotive vehicle industry. The key drivers that have led to material changes will be discussed. Next, the approach for implementing lightweight materials will be presented. Finally, the newer developments in materials such as steels, aluminum, magnesium, and polymer composites will be presented.

Dates to Remember:

- **Session 2: November 19th, 2016**
- **Session 3: December 10th, 2016 – "*Career Day*"**
- **Session 4: January 21st, 2017**
- **Session 5: February 18th, 2017**
- **Session 6: March 18th, 2017 – *Last Session***



If you are traveling :



South on the Southfield Freeway:

Take the Rotunda Exit and turn right. Cross Oakwood Boulevard and pass the Ford Research and Engineering Center Sign. Proceed on Rotunda Drive to first driveway past Pelham Road (Military Road) and turn right. Proceed to traffic light (Village Road) and turn left. Laboratory is first building on left.

North on the Southfield Freeway:

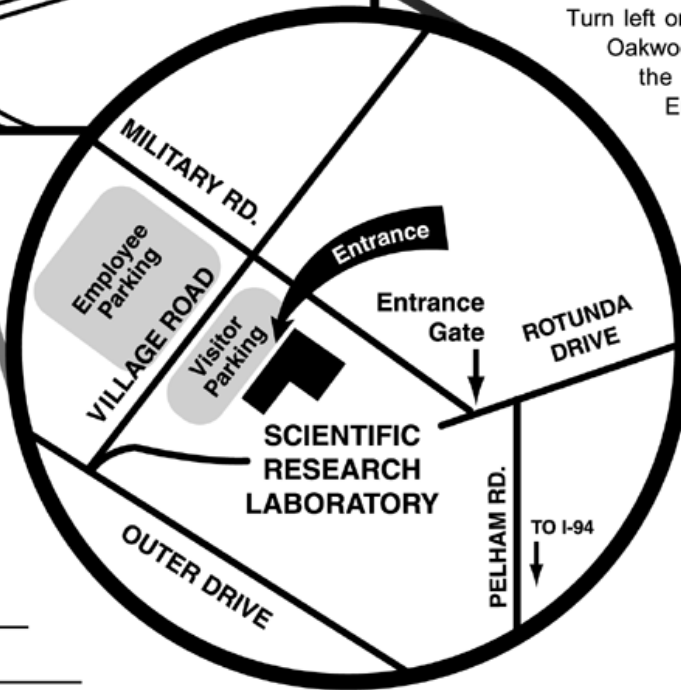
Take the Oakwood Boulevard Exit. Turn left on Oakwood Boulevard to Rotunda Drive and turn left. Proceed on Rotunda Drive to first driveway past Pelham Road (Military Road) and turn right. Proceed to traffic light (Village Road) and turn left. Laboratory is first building on left.

West on I-94:

Take the Oakwood Boulevard Exit. Turn right on Oakwood Boulevard to Rotunda Drive and turn left. Proceed on Rotunda Drive to first driveway past Pelham Road (Military Road) and turn right. Proceed to traffic light (Village Road) and turn left. Laboratory is first building on left.

East on I-94:

Take the Southfield Freeway North and follow Southfield to the Rotunda Drive Exit. Turn left on Rotunda Drive. Cross Oakwood Boulevard and pass the Ford Research and Engineering Center Sign. Proceed on Rotunda Drive to first driveway past Pelham Road (Military Road) and turn right. Proceed to traffic light (Village Road) and turn left. Laboratory is first building on left.



Facsimile Information

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