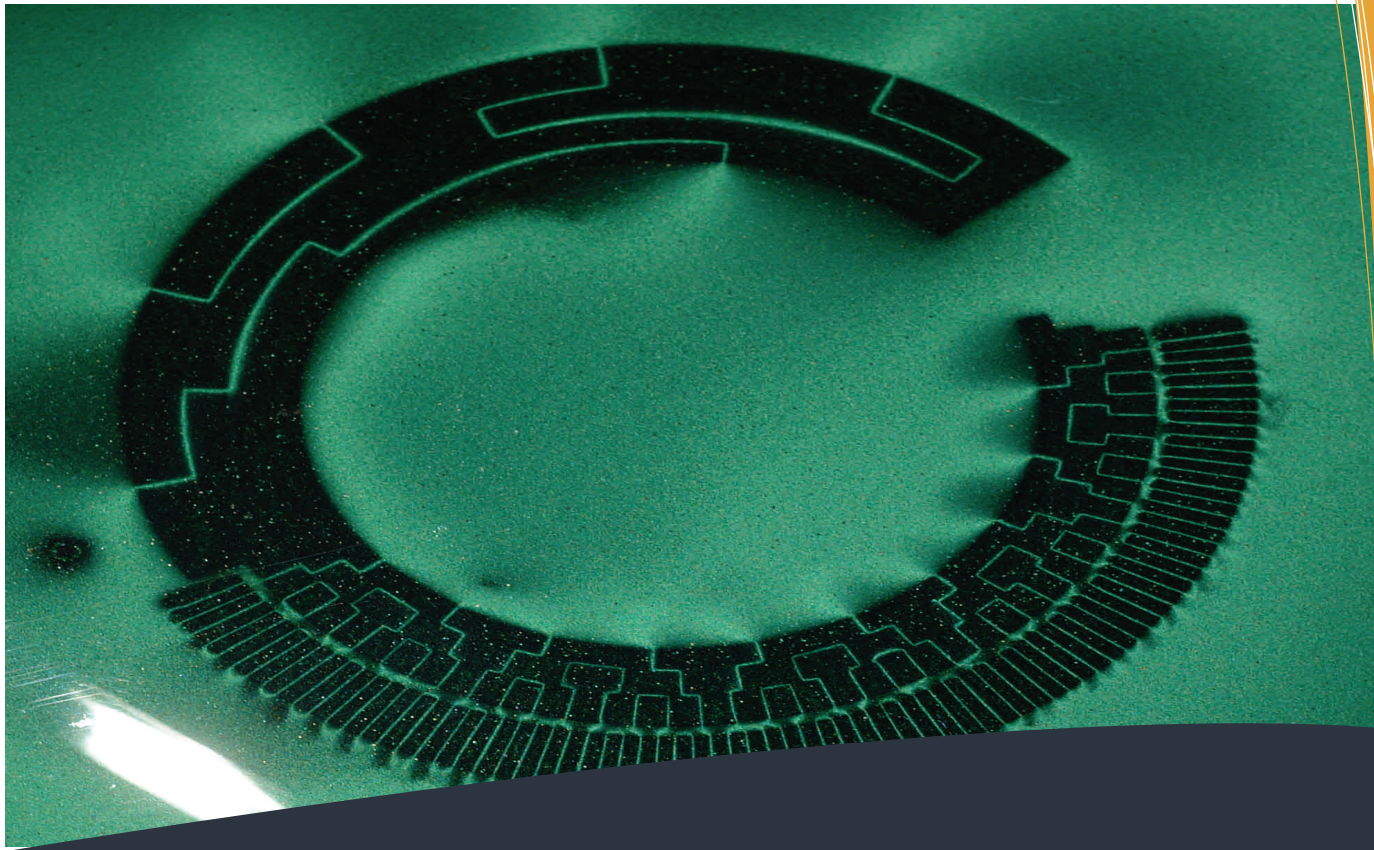




**MAGNETIC MATERIALS
MAGNETIZING AND TESTING
CONTACTLESS SENSORS**



May 05, 2014 Troy MI.

**Michigan State University
Management Education Center**

**Magnetics Workshop Tailored for
Automotive Industry Professionals**

Presented by:

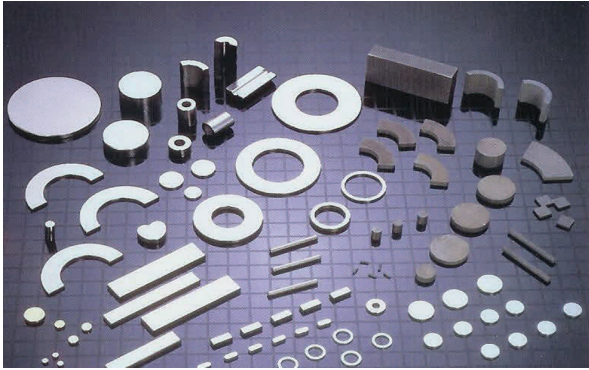
**Alliance LLC
Magsys Magnet Systems
Wise Magnet Applications
ams USA Inc.**

NOT FOR
PROFIT EVENT

**\$150.00
PER PERSON**

**OR \$700.00
PER COMPANY
OF 5 INDIVIDUALS**

Workshop Agenda



Magnetic Sensors

CONTACTLESS TECHNOLOGY

- ROTARY AND LINEAR MOTION DETECTION CIRCUITS
- ON-AXIS AND OFF-AXIS ROTATION ANGLE MEASUREMENT
- LINEAR POSITION MEASUREMENTS
- RELIABILITY AND ACCURACY

CHOOSING THE CORRECT SENSOR

- INTEGRATED HALL EFFECT IC
- ANGLE AND POSITION SENSORS

SPECIALIZED DESIGN TECHNIQUES

- EXTENDING VERTICAL RANGE
- ANGLE ERRORS AND MISALIGNMENT
- FIELD NON-LINEARITY AND MAGNETIC OFFSET



Schedule:

- 9:00 AM START OF WORKSHOP WITH BRIEF INTRODUCTION TO PARTICIPANTS, **SNACKS AND BEVERAGES SERVED**
- 9:15 AM 90 MINUTE PRESENTATION ON MAGNETIC MATERIALS, **15 MINUTE Q&A SESSION**
- 11:00 AM 60 MINUTE PRESENTATION ON TYPES AND USAGE OF MAGNETIC MODELING SOFTWARE
- 12:00 PM BREAK FOR BUFFET LUNCH IN DINING ROOM
- 1:00 PM 90 MINUTE PRESENTATION ON MAGNETIZING & TESTING EQUIPMENT, **15 MINUTE Q&A SESSION AND BREAK**
- 2:45 PM 90 MINUTE PRESENTATION ON MAGNETIC SENSORS, **15 MINUTE Q&A SESSION. CONFERENCE ENDS BY 5 PM**

Magnetic Materials

PROPERTIES AND TERMINOLOGY

- HYSTERESIS LOOP
- REMANENCE, COERCIVITY & ENERGY PRODUCT
- TEMPERATURE CHARACTERISTICS
- CHEMICAL AND PHYSICAL PROPERTIES

SELECTION CRITERIA

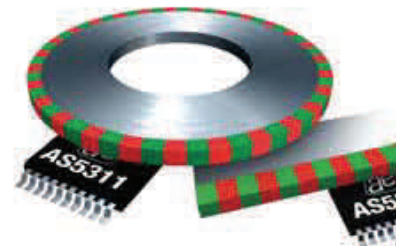
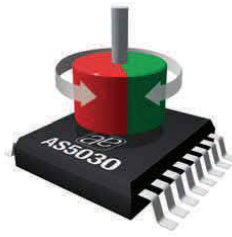
- INDIVIDUAL MAGNET CHARACTERISTICS
- AVAILABILITY AND PRICING ISSUES
- GLOBAL TRENDS AND SUPPLIER ISSUES

DESIGN CONSIDERATIONS

- APPLICATION AND ENVIRONMENTAL LIMITS
- REQUIRED SPECIFICATIONS ON DRAWINGS
- INFLUENCE OF FURTHER PROCESSING

MODELING SOFTWARE & METHODS

- BASICS FOR SETTING UP AND LIMITATIONS
- EXAMPLE OF A MAGNETIC CIRCUIT USING FEM
- IN HOUSE SOFTWARE VS. TURN KEY SOLUTIONS
- PROS AND CONS OF AVAILABLE SOFTWARE



Magnetizing & Testing

MAGNETIZING EQUIPMENT

- MAGNETIZING CONFIGURATIONS
- TYPES OF MAGNETIZERS AND SUITABILITY
- DEMAGNETIZING AND CYCLING
- ELECTRONICS AND PROCESSING

MAGNETIZING FIXTURES

- TYPES AND PROCESSING REQUIREMENTS
- COOLING AND LIFE EXPECTANCY

TESTING EQUIPMENT

- REQUIREMENTS FOR MAGNET PROPERTIES
- TYPES OF INSTRUMENTS



Magnetics Workshop for Automotive Industry Professionals

Single day and locally held workshop presented by:



Alliance LLC is an industry leader for permanent magnets and assemblies. The company is headquartered in Valparaiso Indiana and has several technical and warehouse facilities located throughout the US and Mexico. Alliance LLC is listed in Forbes Inc. 500 as one of the fastest growing private business in America. Our company's ability to solve complex problems and provide cost effective solutions for customers is the greatest contributor for this achievement.

The company MAGSYS Magnet Systeme GmbH stands for tailor-made, sophisticated products and system solutions pertaining to the utilization of permanent magnets. Since 1997, the company been valued by its customers throughout the world as a flexible and innovative partner for efficient and comprehensive solutions to challenges dealing with permanent magnets. These solutions include magnetizing systems and devices for permanent magnets, not only for manufacturers, but also for end-users.



ams is a global leader in the design and manufacturing of high performance analog ICs. With a full service foundry, over 30 years of experience and over 1,300 employees worldwide, we bring innovative solutions for power management automotive safety systems, industrial sensor interfaces and for a wide range of other applications. We offer the industry's broadest range of high performance absolute and incremental rotary and linear magnetic encoder ICs.

For additional information and any questions regarding this workshop, please contact any of the following:

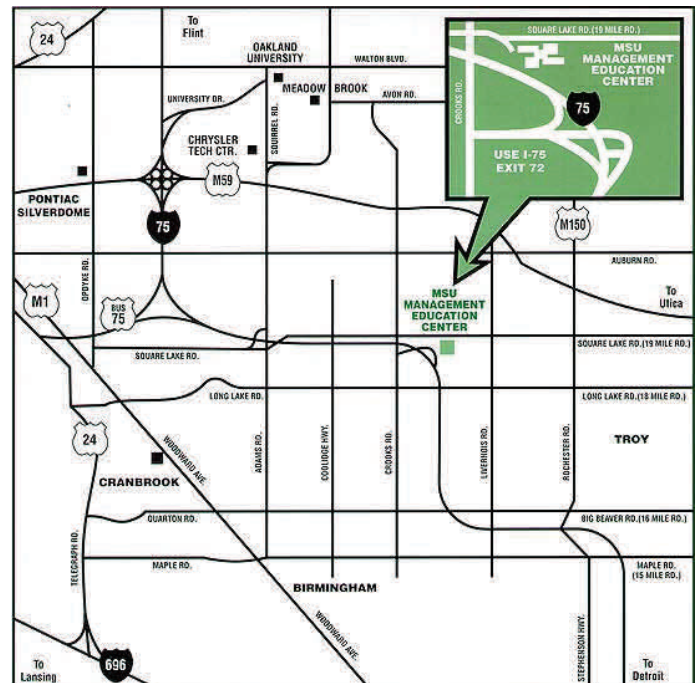
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Directions

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Phone 248-879-2456



DURING THE WORKSHOP, AND AT ALL TIMES, WE WILL HAVE FREE WI-FI, REFRESHMENTS, COFFEE AND SNACKS FOR THE ATTENDEES. EXECUTIVE LEATHER CHAIR SEATING AND OTHER AMENITIES.