

**March 2011**  
**OUR 91<sup>st</sup> YEAR AS A CHAPTER**

## The Link Newsletter

[www.nd-asm.org](http://www.nd-asm.org)

### Tech Seminar!

The Tech Seminar this year will be “The Future of Materials Technology: Design, Failure Analysis and Societal Impact” presented by Frederick Schmidt, Jr. PhD on April 13 from 9 am to 4 pm. The cost will be \$135 and includes lunch and all course material. Please see attached flier for more information on the Tech Seminar and for information on how to sign up to attend the seminar.

### It is Scholarship Time!

It is time to submit scholarship applications for the year. If you know a student or a parent of a student in college, please have them apply for this scholarship.

Are you being published? Have you been promoted? Are you retiring? Does your company have a job opening? Do you have announcements you would like to share with ASM-ND Chapter? If so, please e-mail me so we can put it in the LINK! Contact Tim Conrad at [tlconrad@gmail.com](mailto:tlconrad@gmail.com).

The members of the Executive Board want to hear from you! What meeting topics would interest you? Is there a plant tour you or someone else would like to give? Is there a topic you are an expert on and would like to share your knowledge with the other chapter members? Let us know! We are always open to ideas from our members. Contact Tim Conrad at [tlconrad@gmail.com](mailto:tlconrad@gmail.com).

### Synthetic Bone Substitutes Based on Hydroxyapatite Reinforced Polymeric Composites

Presented by: **Tim Conrad**  
Tuesday March 22, 2011 in Warsaw, IN

While the human body has the amazing ability to regenerate bone and heal fractures, there are times when the body needs a little help to repair bone injuries. Hydroxyapatite (HA) reinforced polymeric composites have generated interest for implants due to bone being able to form a bond with the HA composite. This presentation will examine the design of hydroxyapatite reinforced polymeric composites for use as bone substitutes from a material science perspective: processing affects structure; structure affects properties; properties affects processing; and processing, structure, and properties all affect the performance of the implant. The presentation will use HA reinforced polyetheretherketones (PEEK) as an example. The current state of research on HA reinforce PEEK at the University of Notre Dame will also be presented.

Tim Conrad is a graduate student in Bioengineering at the University of Notre Dame. He received his B.S. in Materials Engineering from Purdue University. While attending Purdue University he was an intern at Biomet. After graduating from Purdue University in 2005 he worked as an R&D Materials Engineer at TP Orthodontics for two years. He currently has one patent application.

Date/Time: Tuesday, March 22  
6:00 PM Social  
6:30 PM Presentation  
Dinner will follow the presentation

Location: The Boat House Restaurant  
700 Park Avenue  
Winona Lake, IN 46590

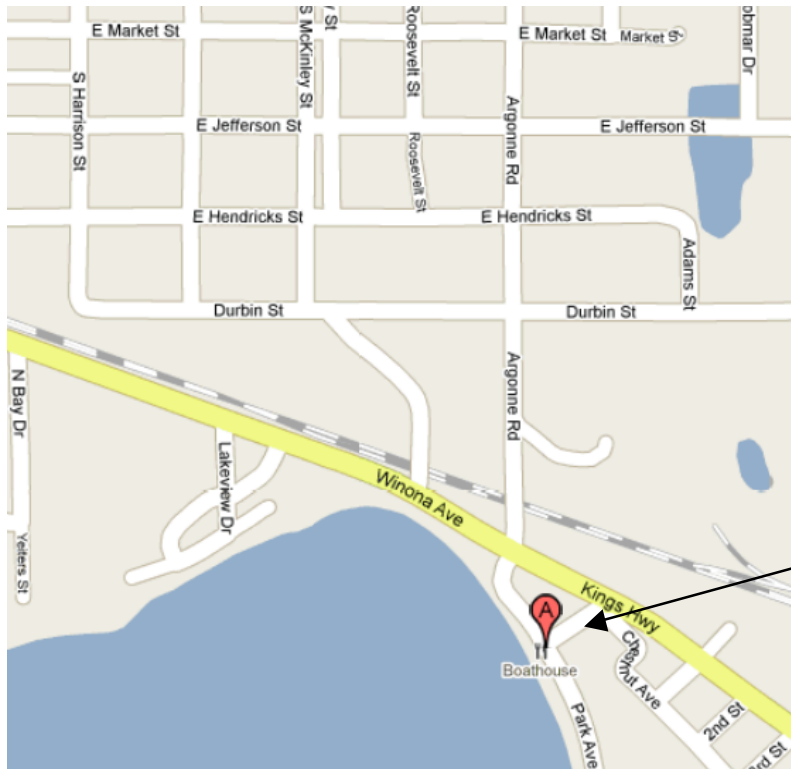
Dinner: Char Grilled Prime Rib, Mahi-Mahi, or Roasted Red Pepper Pasta.

Cost for Dinner: \$25

Please RSVP via the Google Invite you received by email or email Tim Conrad at [tlconrad@gmail.com](mailto:tlconrad@gmail.com).

## Past and Future Meetings

21 September	“Materials Issues in Commercial Aircraft Wheels and Brakes” presented by Randy Griffith
19 October	Tour of Nimet Industries by Steve Greeve
17 November	“Shot Peening, and Shot Peening with Fine Media for Surface Modification of Medical Devices” presented by Jack Champaigne, Warsaw, IN
December	No Meeting
18 January	“Tech Session for Investing” presented by James Ruthrauff, South Bend, IN
February	Engineers Week
March	“Hydroxyapatite Reinforced Polymers for Bone Substitutes” presented by Tim Conrad Warsaw, IN
April	TBA
May	Social Event



The location of the Boat House in Winona Lake

### **Directions to The Boat House in Warsaw, IN from US 30 East**

Take US 30 to Warsaw until you reach East Center Street. Turn south onto E. Center Street. In 0.4 miles turn left at Parker Street/Argonne Road. Continue on Argonne Road. After 0.4 miles Argonne Road becomes Park Ave. The Boat House will be on your right.