



# The Link Newsletter

*Notre Dame Chapter*

*A 5-Star Chapter*



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## Joint Meeting With ASME-St. Joseph Valley Section and Valparaiso University Student Section

**February 17, 2004**

**Karen E. Warden – “Orthopaedic  
Engineering”**

So what is 'Orthopaedic Engineering;' is it sort of like building the bionic man? Well, no it is not quite that glamorous or futuristic yet, but the mechanical engineering contributions to our knowledge of musculoskeletal biomechanics, biologic and synthetic biomaterials, and implant design, development and performance have played a major role in the advances seen in sports medicine and orthopaedic surgery. Consider that in the most recent national survey, an estimated 11 million individuals had some form of medical implant and 50% of these were orthopaedic devices. Think of the increases in athlete performance over the past fifty years. Compare the surgical scars left by knee surgery 25 years ago to those of today's arthroscopic surgery. All of these examples involve some form of "Orthopaedic Engineering." This talk describes some history of the discipline, the application of mechanical engineering fundamentals to the analysis of the musculoskeletal system, the types and materials of orthopaedic implants and the role of the engineer in implant development. Samples of orthopaedic implants will be exhibited.

## Reservations due Wednesday, Feb 11.

**Time:** 5:30 Central Standard Time Social Hour  
(6:30 Eastern Standard Time Social Hour)  
6:00 CST (7:00 EST) Dinner

**Location:** Refectory at Mueller Hall  
(Christ College)  
Valparaiso University

**Cost:** \$20.00 per person

**Dinner:** Mandarin Orange Salad, Chicken Breast en Croute w/Veloute Sauce with Wild Rice Blend and Seasoned Whole Green Beans, Apple Pie. **Note:** A vegetarian meal is available upon request. Please specify this when making your reservation.

### **Reservations:**

Email Jim Koontz at [jhk@csinet.net](mailto:jhk@csinet.net) (preferred) or call 219-326-8978(H) by 4:00 PM Wednesday, February 11<sup>th</sup>. Please give your name(s); phone number; email address; and society, company; or other affiliation.

*For further information contact Charles Parker at (574) 231-2810 or [charles.parker@honeywell.com](mailto:charles.parker@honeywell.com) or Pat Foster at (269) 982-2266 or e-mail [pat\\_foster@leco.com](mailto:pat_foster@leco.com).*

**About the Speaker:** Ms. Warden is a doctoral candidate in the Mechanical Engineering Department at Case Western Reserve University specializing in spinal biomechanics. She has been active in the field for the past ten years in academic, industrial and consulting capacities, has co-authored numerous peer-reviewed publications and received research and achievement awards. Karen received a BSME in 1981 from West Virginia University and a MEBE in 1985 from the University of Virginia.

**Chapter Officers:** Patrick Foster – *Chairman* (269) 982-2266; Charles Parker – *Vice-Chairman* (574) 231-2810; Larry Lapp – *Secretary* (574) 293-7511; Walt Hornberger - *Treasurer* (269) 683-5208; Derek Olinger – *Past-Chairman* (219) 325-7238;  
**Board Members:** Ed Cataldo, Jim Hendricks, Jon Oram, Jimmy Chan, Lori Culver

## Next Board Meeting

**February 10 – Four Seasons Restaurant**  
Please contact Pat Foster if you plan to attend.  
(6:00 Indiana Time, 6:00 Michigan Time)

## Meeting Report January 20, 2004 Tour of ALCOA/Howmet LaPorte Casting Plant

ASM Notre Dame Chapter's January Meeting was a tour of the Howmet Investment Casting Plant, followed by dinner at Portofinos, in LaPorte. The tour opened with a safety presentation. Then, we toured the plant, where we saw the manufacturing of the intricate wax patterns, coating the patterns with ceramic, wax removal, alloy casting, and part clean up.

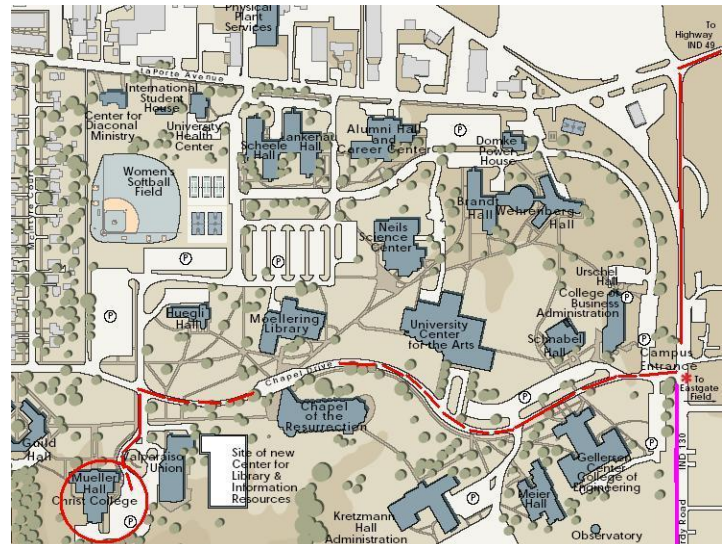
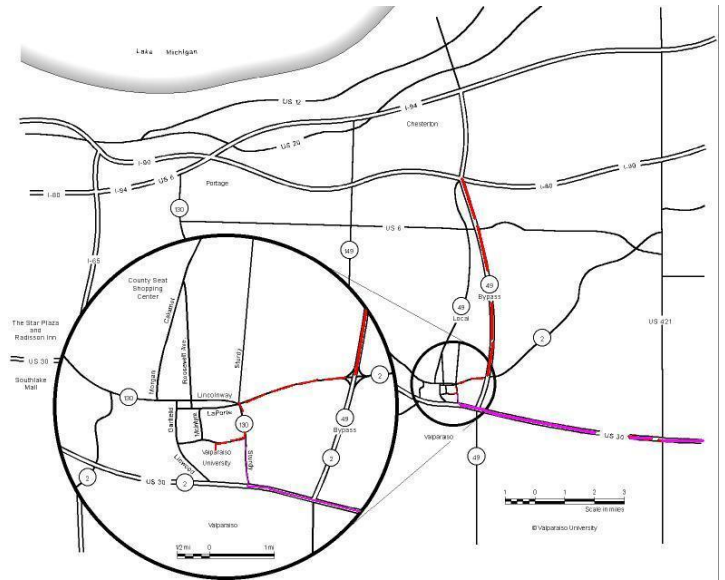
We were impressed by the detailed work performed by Howmet employees, as well as the commitment to safety and ergonomics by the company.

## Directions to Mueller Hall at Valparaiso University

**From Points in Michigan, LaPorte, South Bend:** Take Exit 26 from I 94, or Exit 31 from I 80/90 and go south on SR 49. In Valparaiso, exit west on LaPorte Avenue. In 0.8 miles, turn left on Sturdy Road. In ¼ mile, turn right at the campus entrance into the campus on Chapel Drive. Mueller Hall is just past the Valparaiso Union on the left. The Refectory is in the South end of Mueller Hall.

**From Warsaw, Plymouth:** Take US 30 to Valparaiso. Turn right on Sturdy Road about 0.8 miles after passing SR 49. Turn left in ¼ mile at the campus entrance into the campus on Chapel Drive. Mueller Hall is just past the Valparaiso Union on the left. The Refectory is in the South end of Mueller Hall.

## Map to Mueller Hall at Valparaiso University



### Upcoming Meetings:

**March 23: Ryan Fountain - Patents and Patentability – Tippecanoe Place, South Bend**

**April 20: (Dinner and lecture) Dr. Steven R. Schmid - Tribology and Practical Applications**

**April 21: (All day education seminar) Dr. Steven R. Schmid - Tribology and Practical Applications**

**For further info, see: <http://WWW.ASM-ND.ORG>**

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