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January 2006

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

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RRVS Section and IAS Chapter Meeting

## Electric Drive Inverter-Induced Bearing Failure Mitigation

**When** January 26, 2006

**Where**

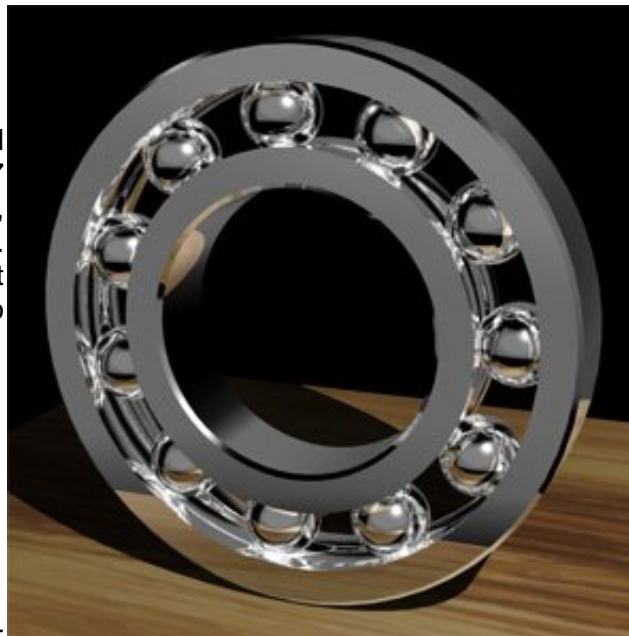
Rock Valley College, **Woodward Technology Center, Room 117 & 119.** I-90 to Riverside Blvd., exit and go west to Mulford Rd. Go south to 2nd light, turn east into RVC. Follow road to left to last building on right.

**Agenda**

6:00 PM Social  
6:30 PM Dinner  
7:30 PM Presentation

**Program**

Fast-switching IGBT inverters provide wide-bandwidth control and energy efficient operation of variable speed drives. However, the rapid switching of devices can create unintended currents through the machine bearings that can lead to premature failure of the drive. A systematic investigation of the influence of the system parameters on the bearing currents is presented. The discussion includes reliable measurement techniques, modeling techniques that are supported by numerous measurements, and elaboration of the alternative mitigation techniques.



**Speaker**

**Annette Muetze** received the Dipl.-Ing. in Electrical Engineering at Darmstadt University of Technology, Germany, and the degree in General Engineering at Ecole Centrale de Lyon, France, in 1999, and the Dr. tech. degree in Electrical Engineering at Darmstadt University of Technology in 2004. Her work on inverter-induced bearing currents has recently been awarded with the FAG Innovation Award. In May 2004, she became an Assistant Professor in the Electrical and Computer Engineering

Department, University of Wisconsin, Madison, WI.

**Meal Reservations**

Dinner will feature a buffet consisting of roast turkey and a vegetarian entree, rolls, salad, vegetables, potatoes, and assorted small deserts. The costs are: member and student non-members: \$7, non-member: \$11, and student members: \$5. Please make your **dinner reservations** by calling **Ginger** at **815-394-5696** or sending her an email

([ginger.spinasant@hs.utc.com](mailto:ginger.spinasant@hs.utc.com)) by **Monday, January 23, at 5pm.** Please include the following information: your name, phone number, email address, IEEE member number, and choice of dinner entrée. Unemployed members may call one of the officers for special arrangements.

**Note**

The meeting is open to the general public. You need not be an IEEE member. Guests are welcome. Please call Ginger at 815-394-5696 for questions.

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## 2005 IEEE RRVS Executive Committee



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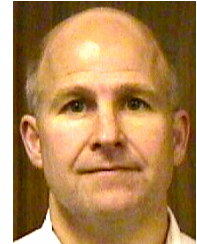
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**RRVS Calendar**

- January RRVS Section & IAS Chapter Meeting ..... January 26  
"Electric Drive Inverter-Induced Bearing Failure Mitigation" at Rock Valley College
- February RRVS Annual Engineering Week Meeting ..... February 23  
"Ram-Air Turbine (RAT) Emergency Aircraft Power" at Rock Valley College
- March RRVS Section Meeting ..... March 30  
"Nanotechnology" at Rock Valley College



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