

ADVENTURES IN LIFELONG LEARNING
Tallent Hall, 900 Wood Road, Box 2000, Kenosha, WI 53141-2000

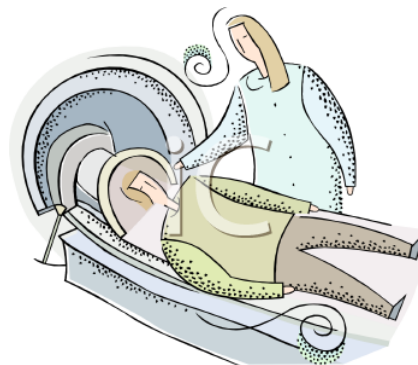
Superconductors, Superconducting Magnets & Their Applications

Monday, August 28, 2017 10 AM to 12 PM

Tallent Hall (or Cinema – TBD later)

Superconductors have the ability to carry an electrical current without the loss of energy. Since there is no loss in electrical energy, relatively narrow wires made of superconducting material can be used to carry huge currents.

Superconductors can be found in applications as commonplace as MRI systems installed in thousands of hospitals, in cellular telephone base stations, as well as monumental applications such as particle accelerators. Other applications include high-performance electric power transmission, power storage devices, electric motors, high speed magnetic levitation trains, etc.



When you flow electrical current in a wire, it creates a magnetic field around the wire. Thus superconductors are especially suited for making powerful electromagnets, which are at the heart of most particle accelerators for high-energy physics (e.g. Large Hadron Colliders in Europe and Fermi Lab in Chicago) as well as other scientific and technological applications.

In this class, we'll learn about the amazing and exciting world of superconductor science and superconductor magnets. In particular we'll explore what exactly is superconductivity and what are superconducting magnets, as well as their applications to human kind.

Information (and registration) for ALL's trip to Fermi Lab in a separate flyer

Questions? Call JoAnn Shea at 262-554-8081

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Class only **Member Cost \$ 5** **Guest Cost \$ 10** **Registration deadline: Aug. 14**

Name _____ Check # _____

Phone _____ Email _____

Emergency contact name & phone _____

Deliver **cash** registration to the ALL office in Tallent Hall. **Checks** payable to UW Parkside/ALL; deliver or mail to Vanessa. **Credit card** registration for members must be submitted online; an email with a member registration **LINK** will be sent around the 1st Monday each month. NO online credit card registrations can be accepted for guests. As registrations fill, members get preference in signing up.

Our presenter, Dr. Hom Kandel



Dr. Hom Kandel is Assistant Professor of Physics at the University of Wisconsin-Parkside. Dr. Kandel received his PhD in Applied Physics from the University of Arkansas at Little Rock in 2010, and an MS in Physics from Western Illinois University in 2004. In 2011, Dr. Kandel joined the National High Magnetic Field Laboratory (the largest and highest-powered magnet laboratory in the world) as a Postdoctoral Research Scientist where he developed novel electrical insulation materials for high field superconductor magnet technology.

Dr. Kandel has authored or co-authored over 20 peer-reviewed journal papers in leading scientific journals, holds two scientific patents (pending) and has presented over 25 invited and regular talks at scientific conferences, academic institutes, and industries.

Dr. Kandel has served as Chair of Young Professions Group at the IEEE Council on Applied Superconductivity (2014-2016), as a Peer Reviewer in many premium scientific journals, and as a Research Grant Proposal Reviewer for the High Energy Physics Division at the US Department of Energy.



Photo from inside Fermi Lab, Chicago