

**The Department of Engineering  
Science**

*announces the 5<sup>th</sup> lecture of the*

**Engineering Science Lecture Series  
Academic Year 2009-2010**

This is a series designed to benefit the Sonoma State students and faculty in the School of Science and Technology, high tech and biotech industries and related businesses and community in the North Bay Region.

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The Lecture Series covers a broad range of topics with focus on recent developments and trends and provides a platform for the exchange of ideas among the audience.

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Attendance is open to the students, faculty and staff of SSU and other academic institutions, engineers and scientists from industries, members of the business community and members of the community, in general.

**Days & Dates:** 1<sup>st</sup> & 3<sup>rd</sup> Thursday of every month

**Venue:** Cerent Engineering Science Complex, Salazar Hall Room #2009A

**Reception:** 4:00 to 4:30 p.m.

**Lecture:** 4:30 to 5:15 p.m.

**Q&A:** 5:15 to 5:30 p.m.

**Acknowledgement**

*The ES Lecture Series is sponsored by the Agilent Technologies Foundation under the SSU-Agilent Partnership Program.*

**“Trends in Cardiovascular Devices”**

by

**Mr. Matt Birdsall, CardioVascular  
S&T Director of Engineering &  
Bakken Fellow, Medtronic**

**Thursday, November 5, 2009**

**ABSTRACT** – Cardiovascular medical devices have gone through numerous changes over the past 50+ years. These life-changing and life-saving technologies have facilitated numerous new fields of expertise in the areas of medicine and engineering. Millions of people have been able to live longer, more fulfilling lives as a result of devices such as pacemakers, balloon catheters, stents and implantable defibrillators. Novel technologies have enabled groundbreaking new and less-invasive treatment modalities. These technology developments are the result of continued collaboration between the medical, scientific and engineering disciplines. This discussion will provide an overview of the trends in the area of cardiovascular medical devices. Examples of some of the learnings, technology developments and scientific / engineering disciplines will help illustrate this evolutionary journey.

**Matthew Birdsall** is Director of Engineering in the Science and Technology department at Medtronic CardioVascular in Santa Rosa, CA. In this role, he oversees the research and early stage development of next-generation cardiovascular devices and

implants along with research into other technologies for treating diseases and conditions addressable via the cardiovascular system.



Birdsall received a Bachelor of Science in Materials Engineering from California Polytechnic State University, San Luis Obispo in 1992. He has been working in the medical device field for over 16 years. In 2006, he was elected into the Medtronic Bakken Society in recognition of numerous contributions to the advancement of cardiovascular implant devices. Birdsall is an inventor on 12 issued US patents with numerous pending applications.

**Upcoming Lectures**

<b>Date 2009</b>	<b>Title of the Lecture</b>	<b>Guest Speaker</b>
Nov. 19	Recent advances in solid-state laser technology	Dr. Shally Saraf, ES Dept., Sonoma State University