



# WINTER 2006 SCHEDULE



**28 January**  
**Maternal Diet &  
Sex of Offspring**

*Mike Roberts*

A female's nutritional status can greatly affect the sex ratio her offspring. What function could this serve, and how does it affect populations? This talk will explain the implications of the link between diet and sex ratio in animals ranging from dairy cows to humans.



**4 February**  
**What the Bugs in Your  
Yard Talk About**

*Rex Cocroft*

A typical backyard contains an alien, vibrating soundscape that isn't audible to humans but does carry important messages between communicating insects—some of which may be talking about you! Come learn what they are saying.



**11 February**  
**Climate, Climate Change,  
& Hurricanes**

*Anthony Lupo*

We will explore the Earth's climate system, including a look back at the remarkable hurricane season of 2005. We also will examine the causes of the dry conditions that afflicted Missouri last summer.



**18 February**  
**What Is  
Archaeometry?**

*Michael Glascock*

Archaeology is a subject of popular and academic appeal because of its ability to shed light on human history and where and how people lived. This talk will discuss the application of scientific methods and technology to investigate archaeological questions.



**25 February**  
**Where Did HIV  
Really Come From?**

*Marc Johnson*

Where did HIV come from, why did it start infecting humans, and why isn't there a cure for AIDS? This talk will discuss what makes retroviruses like HIV unique and how retroviruses impact our species.



**4 March**  
**Diagnostic & Therapeutic  
Radiopharmaceuticals**

*Silvia Jurisson*  
Chemistry

Nuclear medicine imaging is different from other types of imaging because it evaluates physiology rather than anatomy. This talk will discuss the role of radiopharmaceuticals in diagnosing, imaging, and treating disease.



**11 March**  
**What Is  
Superconductivity?**

*Paul Miceli*

Metals conduct electricity, some incredibly well. These superconductors can carry currents that persist for years. We will use demos to explore these materials, look at the reason behind this extraordinary behavior, and explain why cars will fly in the future.



**18 March**  
**The Accelerating  
Universe**

*Bahram Mashhoon*

The universe is dominated by dark matter and energy—and it is expanding faster and faster. How can this fit with known physical laws? We'll briefly describe the Big Bang, Hubble expansion, and the problems of dark matter and energy.



**8 April**  
**Keep on the Sunny Side**

*Candace Galen*

How do plants, rooted in one place, track down a meal? How do alpine and arctic plants turn up the heat? Can a sunflower tell you the time of day? Come explore the power of movement in plants.



**15 April**  
**Explosion Effects &  
Blast-Resistant Design**

*Sam Kiger*

Efforts to mitigate the effects of explosions to better protect people from injury and death have been going on for many years. This talk will cover the effects of explosions and current methods to minimize the effects of blasts on people. *(This talk will be in the Physics Bldg. Come early or stay late for the Physics Open House.)*

**Saturdays**  
**10:30 a.m. – 11:30 a.m.**  
**Monsanto Auditorium**  
**MU Life Sciences Center**

For directions and parking:  
<http://map.missouri.edu>

*Sponsored by:*  
*MU Office of Research, Biochemistry,*  
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