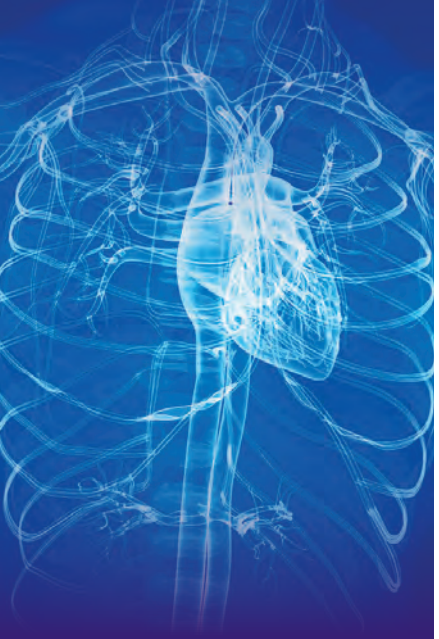

2014 ENGINEERING LECTURE SERIES

Presented by the College of Engineering in partnership with UW Alumni Association

Engineering the Heart:

FROM CELL THERAPY TO COMPUTER TECHNOLOGY

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2014 ENGINEERING LECTURE SERIES

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FROM CELL THERAPY TO COMPUTER TECHNOLOGY

October 15 **November 4** **November 18**

Alumni ASSOCIATION
1889-2014 125 YEARS

THE 2014 ENGINEERING LECTURE SERIES explores how engineers are improving our cardiac medical care and extending our lives. From growing heart cells that beat to improving blood coagulation to wirelessly powering pacemakers, the merging of engineering and medicine leads to extraordinary innovations. Join us for an expert look at the treatments of the not-so-distant future from the engineers and doctors advancing health care technology.

7 P.M.
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ROOM 120
UW SEATTLE

FREE! Registration required.
Visit **UWalum.com/engineering** or call (206) 543-0540.

Engineering a Broken Heart

WEDNESDAY, OCTOBER 15, 2014

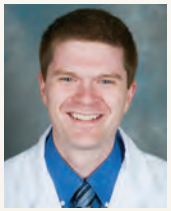
Charles Murry
Professor of Pathology, Cardiology and Bioengineering

The heart is a miraculous muscle. Yet every year for over one million people this vital organ quits. Heart muscle damage, most commonly caused by a heart attack, can lead to heart failure when the organ forms scar tissue rather than growing new muscle tissue. UW researchers, led by bioengineer and physician Charles Murry, are merging engineering technology, stem cells and medicine to regenerate heart muscle. The team recently published a significant breakthrough that brings us closer to addressing our nation and world's top public health concern. Join us to learn how this treatment may save lives within the decade.

Get a Grip: Cell Biomechanics in Cardiovascular Health

TUESDAY, NOVEMBER 4, 2014

Nate Sniadecki
Associate Professor, Mechanical Engineering



Nathan White
Adjunct Assistant Professor, Bioengineering

Our cardiovascular system depends on active cells that stretch, contract and twitch to keep our bodies healthy. These cells create blood clots when we have an injury to prevent blood loss and help pump blood through our bodies during exercise. By studying the biomechanics of these cells, mechanical engineers and physicians at the UW are finding lifesaving solutions that improve blood clotting to help us heal from traumatic injuries. Come hear how their work is changing medicine at a cellular level.

Cutting the Cord: Wireless Power for Implantable Devices

TUESDAY, NOVEMBER 18, 2014

Joshua Smith
Associate Professor, Computer Science & Engineering and Electrical Engineering

You or someone you know may rely on a cardiac pacemaker, heart pump or other implantable device. Powering these common medical devices is challenging. Existing approaches include batteries that must be surgically replaced every few years and cables extending out of the body, which can attract infection. It is becoming increasingly feasible to use wireless signals from a source placed in clothing or furniture—and perhaps even from cellular and television signal towers—to power implanted devices. Learn about emerging wireless technologies that may impact the quality of life for many individuals.