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Frances Andrijich Photographer

The Marshall- Warren Annual Lecture Series

The Marshall-Warren Annual Lecture Series honours UWA Professor Barry J Marshall and Emeritus Professor J Robin Warren, joint recipients of the 2005 Nobel Prize in Physiology or Medicine for their ground-breaking discovery about stomach ulcers and their bacterial basis. Their work revolutionised the treatment of gastro-duodenal ulcers by enabling an antibiotic cure and has led to a significant reduction in the prevalence of gastric cancer. This is the first Nobel Prize to be awarded for research undertaken in Western Australia.

In addition to the numerous scientific awards for their work on *Helicobacter pylori* Marshall and Warren have received Australia's highest civilian honour, the Companion of the Order of Australia (AC). They represent the Government of Western Australia as Ambassadors for Life Sciences.

This lecture series, generously supported by Qantas Airways, honours their significant achievement by bringing other Nobel Laureates to UWA who will share the excitement of their research with our community.

Institute of Advanced Studies

The University of Western Australia
M021, 35 Stirling Highway, Crawley WA 6009

Tel +61 8 6488 1340
Fax +61 8 6488 1711
Email iasuwa@admin.uwa.edu.au
Web www.ias.uwa.edu.au

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The 2009 Marshall-Warren Lecture

How Advancements in Science are Made

by Douglas Osheroff, J.G. Jackson and
C.J. Wood Professor of Physics, Stanford
University

and

1996 recipient of the Nobel Prize for
Physics for discovery of superfluidity in
helium-3 (with co-recipients David M. Lee
and Robert C. Richardson)

24 November 2009

Winthrop Hall,

The University of Western Australia

6.00 – 7.00pm

All are welcome to this free event, however a ticket is
essential.

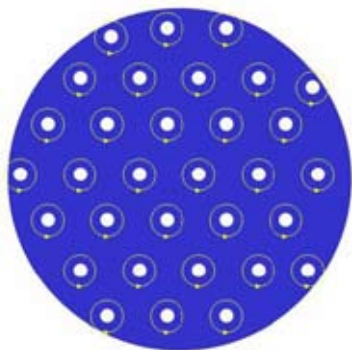
Tickets are available from the Octagon Theatre Box Office.

Tel (08) 6488 2440, Monday – Friday, 12.00-4.15pm.

The Marshall-Warren Lecture

How Advancements in Science are Made

How advances in science are made, and how they may come to benefit mankind at large are complex issues. The discoveries that most influence the way we think about nature seldom can be anticipated, and frequently the applications for new technologies developed to probe a specific characteristic of nature are also seldom clear, even to the inventors of these technologies. One thing is most clear: Seldom are such advances made by individuals alone. Rather, they result from the progress of the scientific community; asking questions, developing new technologies to answer those questions, and sharing their results and their ideas with others. However, there are indeed research strategies that can substantially increase the probability of one's making a discovery. Professor Osheroff will illustrate some of these strategies in the context of a number of well known discoveries, including the work he did as a graduate student, for which he shared the Nobel Prize for Physics in 1996.

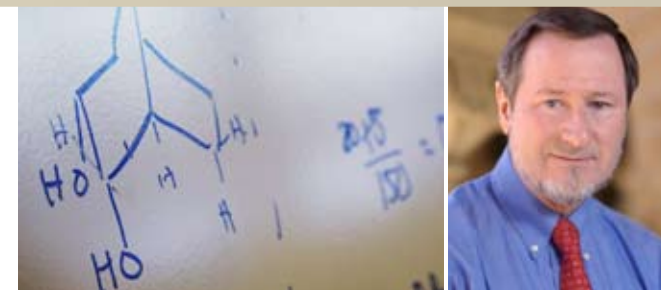


About the speaker

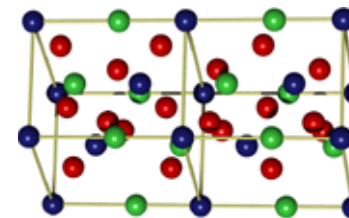
Douglas Osheroff, J.G. Jackson and C.J. Wood
Professor of Physics, Stanford University

Douglas Osheroff was born and raised in Aberdeen, Washington, a logging town in the Pacific Northwest. There he attended public schools and spent his summers while in college working in a local paper mill. He did his undergraduate work at Caltech, receiving his B.S. in physics in 1967. His graduate work was done at Cornell University, where his Ph.D. thesis work resulted in the discovery of three superfluid phases of liquid ^3He . These phases are neutral analogs to the superconductors, but with greater complexity in their order. Leaving Cornell in the fall of 1972, he spent the next fifteen years in the physical research division at AT&T Bell Laboratories, the last six as the head of their Low Temperature and Solid State Research Department. Here, in collaboration, he worked on the newly discovered superfluid phases of liquid ^3He , the nature of nuclear spin order in solid ^3He , and made the first observations of weak localization in thin disordered metallic films. In 1987 he came to Stanford University, along with his good friend Steven Chu, who was recently appointed Secretary of Energy by President Obama. At Stanford, Osheroff is the J.G. Jackson and C.J. Wood Professor of Physics and the Gerhard Casper University Fellow for Undergraduate Education. His research there still focuses on the properties of condensed matter near the absolute zero of temperature. In 2003 he served as a member of the Columbia Accident Investigation Board, which determined the causes of the accident that led to the destruction of Space Shuttle Columbia during re-entry, on Feb. 1, 2003.

Osheroff has received numerous honours for his research. These include the Sir Francis Simon Memorial Award, the Oliver E. Buckley Condensed Matter Physics Prize, the MacArthur Prize Fellowship Award, and the 1996 Nobel Prize for Physics.



In 1991 Stanford University gave him their Walter J. Gores Award for Excellence in Teaching. Osheroff is a member of the American Academy of Arts and Sciences and the National Academy of Sciences. Douglas and his wife Phyllis enjoy classical music, hiking and photography. At Stanford University Osheroff shares his interest in photography by teaching a freshman seminar entitled 'Technical Aspects of Photography' and often uses his favourite photo images to decorate his lectures.



We wish to thank our sponsor, Qantas Airways Limited, for their generous support and enthusiasm for the Marshall-Warren Lecture Series.

