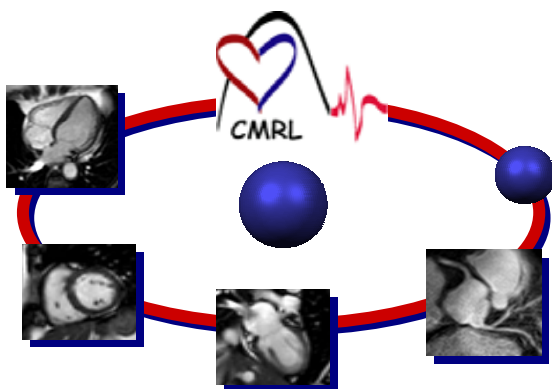


**7<sup>th</sup> Annual CMR Training Course:  
“Principles and Practice of  
Cardiovascular MR”**

***March 29-April 1, 2005***



Eric P. Newman Education Center  
Washington University Medical Center, St. Louis

*Course Chairs*

Samuel A. Wickline, M.D.  
Mary P. Watkins, R.T. (MR)

*Presented By*

Cardiovascular MR Laboratories (CMRL)  
the Division of Cardiovascular Medicine and  
Department of Biomedical Engineering  
The Society for Cardiovascular MR

*Sponsored By*

Washington University School of Medicine Continuing Medical Education

*Supported in Part By*

Corporate Sponsors

# AGENDA

TUESDAY, March 29



## **Hands-On Section Part I**

- 7:30** *Hands-On Registration and Continental Breakfast*  
**8:00** **Demonstration of ECG/VCG Setup & Basic Functional Study**  
**11:00** *Luncheon-for Hands-On Registrants*

## **Lecture Series**

- 11:15** *Lecture Series Registration (Eric P. Newman Educational Center)*  
**12:00** **Introduction of Cardiac MR & Course Overview**-Dr. Wickline  
**12:20** **Basic Physics of CMR (I)** – Dr. Winter  
**13:20** **Cardiovascular Anatomy and Pathophysiology** – Dr. Wickline  
**13:50** *Break*  
**14:00** **MRI ECG Applications & CMR Basic Function Protocol**  
*-Ms. Watkins & Mr. Williams*  
**14:30** **Valves & Flow** – Dr. Wickline  
**15:15** **Diastolic Function** – Dr. Kovacs  
**16:15** **Case Studies** - Faculty  
**17:00** **Welcome Reception & Marketplace Exhibition**<sup>†</sup>

WEDNESDAY, March 30

## **Lecture Series Continued**

- 7:30** *Continental breakfast*  
**8:00** **Basic Physics of CMR (II)**- Dr. Caruthers  
**9:00** **Pediatric/Congenital CMR**-Dr. Fogel  
**9:45** *Break*  
**10:00** **Pediatric/Interventional CMR**-Dr. Razavi  
**10:45** **MR Angiography of the Peripheral Vasculature, Aorta, and Pulmonary**-Dr. Martin  
**11:30** **Luncheon & Marketplace Exhibition**<sup>†</sup>  
**14:00** **MR/CT Coronary Imaging and Plaque Characterization**-  
*Dr. Fayad*  
**14:45** **Myocardial Perfusion/Viability**-Dr. Flamm  
**15:30** *Break*  
**15:45** **Setting Up a Clinical CMR Practice**-Dr. Martin  
**16:30** **Case Studies** -Faculty

# AGENDA

THURSDAY, March 31

## Lecture Series Continued

- 7:30 *Continental Breakfast*  
8:00 **Basic Physics and Clinical Uses of CMR (III)**  
**Contrast Agents** –*Dr. Winter*  
8:45 **Patient Safety and CMR Image Analysis**  
9:15 **Interventional MRI: Electrophysiology Applications-**  
*Dr. Lindsay*  
10:00 *Break*  
10:15 **Stress Testing**-*Dr. Wickline*  
11:00 **Personalized Medicine and MRI** -*Dr. Lanza*  
11:45 **Lecture Series Closing Comments**-*Dr. Wickline*  
**Hands-on Section Part II**  
12:00 *Luncheon*  
13:30 **Scanning Exercises/Image Analysis**  
15:30 *Break*  
15:45 **Scanning Exercises/Image Analysis**

FRIDAY, April 1

## **Hands-on Section Part II**

- 8:00 *Continental Breakfast*  
8:30 **Scanning Exercises/Case Studies**  
10:00 *Break*  
10:15 **Scanning Exercises/Case Studies**  
11:45 *Luncheon*  
12:45 **Scanning Exercises/Practice Image Analysis/Case Studies**  
14:15 *Break*  
14:30 **Scanning Exercises/Practice Image Analysis/Case Studies**  
16:00 **Closing Comments**

**† CMR Market Place Exhibition 2005**

**Come visit the Market Place twice!**



## OBJECTIVES

This course is designed for cardiologists, radiologists, technologists, nurses, and sonographers interested in obtaining knowledge of the principles of cardiovascular MR and its implementation in a clinical environment. After completion of the three-day lecture course, the attendee should be able to:

- ♥ **Acquire** a generalized knowledge of Cardiovascular MR imaging techniques.
- ♥ **Utilize** the techniques of CMR to evaluate congenital heart disease, coronary disease, and myocardium viability.
- ♥ **Demonstrate** familiarity with the implementation of a basic cardiac MR function exam.
- ♥ **Assess** basic imaging protocols for most common referrals.

With completion of the four-day lecture course including hands-on training, all of the above previous objectives plus:

- ♥ **Demonstrate** familiarity with and ability to perform a basic cardiac MR function exam.
- ♥ **Employ** the techniques of CMR for flow assessment in the aortic and mitral valves

## ACCREDITATION

Washington University is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

## CREDIT

Washington University designates this educational activity for a maximum of **27.5** hours (hands-on and lectures) and **15** hours (lectures only) in Category 1 credit towards the Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

The American Society of Radiologic Technologist designates this educational activity for a maximum of **30** hours (hands-on and lectures) and **19** hours (lectures only) in Category A CE credits (**approval pending**).

## DISCLOSURE POLICY

It is the policy of Washington University School of Medicine, Continuing Medical Education, to ensure balance, independence, objectivity and scientific rigor in all its educational activities. All faculties participating in this activity are expected to disclose to the audience any significant financial interest or other relationship he/she has with the manufacturer(s) of any commercial product(s) discussed in an educational presentation.

## GUEST FACULTY

### **Zahi Fayad, PhD**

*Associate Professor, Radiology  
Assistant Professor, Medicine / Cardiology  
Mount Sinai School of Medicine*

### **Scott D. Flamm, MD**

*Director, MRI and Cardiovascular MRI Research  
St. Luke's Episcopal Hospital home of the Texas Heart Institute – Houston, Texas*

### **Mark Fogel, MD**

*Attending Cardiologist  
Assistant radiologist  
University of Pennsylvania Medical Center and The Children's Hospital of Philadelphia*

### **Edward T. Martin, MD**

*Clinical Associate Professor of Medicine  
University of Oklahoma College of Medicine, Tulsa  
Director of the MRI Center at Oklahoma Heart Institute*

### **Reza Razavi, PhD**

*Professor of Pediatric Cardiovascular Science, Director of Cardiac MRI and Honorary  
Consultant Pediatric Cardiologist, Division of Imaging Sciences, King's College London- London,  
United Kingdom*

## WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

### ACTIVITY FACULTY

**Shelton Caruthers, PhD**, *MR Clinical Scientist, Philips Medical Systems, Associate Director of  
Cardiovascular Magnetic Resonance Laboratories*

**Lynn Coulter, RN**, *Project Manager, Cardiovascular Magnetic Resonance Laboratories*

**Tamara Donahue, RN, BSN**, *Clinical Research Coordinator, Cardiovascular Magnetic Resonance  
Laboratories*

**Bruce Lindsay, MD**, *Associate Professor of Medicine, Director of Clinical Electrophysiology*

**Sandor Kovacs, PhD, MD**, *Associate Professor of Medicine, Physics, & Biomedical Engineering,  
Adjunct Associate Professor of Physics*

**Gregory Lanza, PhD, MD**, *Assistant Professor of Medicine, Assistant Professor Biomedical  
Engineering, Cardiovascular Magnetic Resonance Laboratories*

**Kamilla McGhee, BS**, *Research Assistant, Cardiovascular Magnetic Resonance Laboratories*

**Mary P. Watkins, RT (MR) (R)**, *Cardiovascular MR Technologist, Cardiovascular Magnetic  
Resonance Laboratories*

**Samuel A. Wickline, MD**, *Professor of Medicine, Physics, & Biomedical Engineering,  
Co-director of the Cardiovascular Division; Co-director Cardiovascular Engineering*

**Todd Williams, RT (MR) (R)**, *Cardiovascular MR Technologist, Cardiovascular Magnetic  
Resonance Laboratories*

**Patrick Winter, PhD**, *Research Instructor of Medicine, Cardiovascular Magnetic Resonance  
Laboratories*

# GENERAL INFORMATION

**Location:** **Eric P. Newman Education Center**, 320 S. Euclid Avenue, St. Louis, MO 63110. A map can be downloaded from <http://cmrl.wustl.edu>. Since meeting room temperatures are difficult to regulate to everyone's appeal, bringing a jacket or sweater is recommended.

**Parking:** Parking is available in the following garages:

- ♥ Children's Garage located at the corner of Children's Place and Kingshighway Blvd. (enter from Children's Place)
- ♥ North Garage (Euclid Avenue)

**Hotel Accommodations:** A block of one and two bedroom suites is available at the Chase Park Plaza. To assure lodging at the special discount rates, reservations must be made by February 28, 2005 after which time reservations are accepted on an availability basis at the current rate. A block of rooms is also available at the Parkway Hotel. To assure lodging at the special discount rate, reservations must be made by January 31, 2005. Make your hotel reservations directly with the hotel and indicate that you are attending the *7<sup>th</sup> Annual CMR Training Course*. The following is a partial listing of recommended hotels. Please contact the Cardiovascular MR Laboratory for other options, if needed.

## **Chase Park Plaza**

232 N. Kingshighway  
St. Louis MO 63108 (314) 633-1000  
*(Hotel courtesy van or walking distance)*

## **Hyatt Regency at Union Station**

One St. Louis Union Station  
St. Louis MO 63103 (314) 231-1234  
*(Metro Link accessible to medical ctr.)*

## **The Parkway Hotel**

4550 Forest Parkway Blvd.  
St. Louis MO 63110 (314) 256-7777  
*(1 block from Eric P. Newman Center)*

## **The Daniele Hotel**

216 N. Meramec Ave.  
St. Louis MO 63105 (314) 721-0101  
*(Transportation Available)*

**Metro Link:** The Central West End MetroLink Station is conveniently located at the medical center on Euclid Avenue between Scott Avenue and Children's Place, ½ block south of the Eric P. Newman Center. Metro Link is accessible as far north as the Airport to downtown St. Louis with stations located at Forest Park; Union Station; Savvis Center; Busch Stadium; 8th & Pine; Convention Center; Laclede's Landing and ending in Shiloh-Scott, Illinois.

**Please Note:** Washington University is not responsible for airline or hotel reservations. Please confirm registration acceptance prior to purchase of non-refundable or penalty airline tickets. If you have not received an acknowledgment within two weeks of your registration submission, please call the Cardiovascular MR Laboratories.

**Cancellations:** Registration fee less \$100 administration charge is refundable only if cancellation is received **in writing by March 7, 2005**. Substitutions allowed with written notice.

## **For Further Seminar Information:**

**Cardiovascular MR Laboratories, Washington University School of Medicine**

**Phones: (314) 454-7459 FAX (314) 454-7490**

**Website at <http://cmrl.wustl.edu/education>**

**Minimum and maximum enrollments have been established.**

# ADVANCE REGISTRATION

## *7<sup>th</sup> Annual CMR Training Course: "Principles and Practice of Cardiovascular MR"*

***March 29-April 1, 2005***

Please register at <http://cmrl.wustl.edu> with our secure online forms, otherwise complete this convenient form. To ensure proper spelling of your name, please print clearly. The information provided will be printed on the attendance roster and when requesting your CME credits exactly as it appears below.

\_\_\_\_\_  
First Name Initial Last Name Degree

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City / State / Zip Code

\_\_\_\_\_  
Office Telephone Number FAX

Specialty/Title: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Medical School Graduate of:

Washington University \_\_\_\_\_ Other School (indicate) \_\_\_\_\_ Year \_\_\_\_\_

### REGISTRATION FEES

		<u>before 3/8</u>	<u>after 3/7</u>
All Attendees	Lectures and Hands-On	\$1,750.00	\$1925.00
Physicians	Lectures Only	\$475.00	\$525.00
Allied Health	Lectures Only	\$250.00	\$275.00
Fellows	Lectures Only	\$250.00	\$275.00

\* **For groups of three or more a 20% discount of lecture portion of fees until March 7th**

*Fees include enrollment, continuing education credits, educational materials, continental breakfasts, refreshment breaks, luncheons, and admission to the **Market Place Exhibition**.*

**Cancellations:** Registration fee less \$100 administration charge is refundable only if cancellation is received **in writing by March 7, 2005**. Substitutions allowed with written notice.

### FOUR CONVENIENT WAYS TO REGISTER!

**MAIL** *this completed form with your check or money order payable to:*

**Washington University**

Mail to: Washington University, Cardiovascular Division, Attn: Marie Duncan, Campus Box 8086, 660 South Euclid Ave., St. Louis, MO 63110

**ON-LINE** at <http://cmrl.wustl.edu/education> (*preferred*)

**FAX** *this completed form with your credit card information to: (314) 454-7490*

*\_\_ MasterCard \_\_ VISA*

Name on Card \_\_\_\_\_

Card# \_\_\_\_\_

Exp. Date \_\_\_\_\_ Signature \_\_\_\_\_

**PHONE** *your registration to: (314) 454-7459*

**For further information refer to our website at <http://cmrl.wustl.edu/education>**