

**COURSE ORGANIZERS:**

Rangasamy Ramanathan, MD – Course Director  
Section Chief, Neonatology  
HIH Health, Good Samaritan Hospital  
Professor of Pediatrics  
Division Chief, LAC+USC Medical Center  
Keck School of Medicine, University of Southern California

Shahab Noori, MD, MS CBTI, RDCS  
Professor of Clinical Pediatrics  
Keck School of Medicine, University of Southern California

Yogen Singh, MD, MA (Cantab), DCH, FRCPC  
Professor of Pediatrics-Neonatology,  
Loma Linda University School of Medicine, California

Mahmood “Mac” Ebrahimi, RDCS  
Instructor of Clinical Pediatrics  
Keck School of Medicine, University of Southern California

**FACULTY:**

Ruben Acherman, MD  
Professor of Pediatrics, Cardiology  
University of Nevada, Las Vegas, Nevada

Tai-Wei Wu, MD  
Assistant Professor of Pediatrics  
Keck School of Medicine, University of Southern California

Jennifer Shepherd, MD  
Assistant Professor of Pediatrics  
Keck School of Medicine, University of Southern California

Merujan Uzunyan, MD  
Associate Professor of Clinical Pediatrics  
Keck School of Medicine, University of Southern California  
Director, Division of Cardiology, LAC+USC Medical Center

**Website for the course material and echo simulator:**  
[www.neochosim.com](http://www.neochosim.com)



Registration fee is \$1000. For those in training the registration fee is \$700

**For program information please contact: Ms Reyna Mayoral  
Program Coordinator at [Mayoral@usc.edu](mailto:Mayoral@usc.edu)  
or call (323) 409-3406**

**Space is limited.  
Please register prior to July 15, 2024**

**Simulator Instructors**

Dr. Rangasamy Ramanathan,  
Dr. Mahmood Ebrahimi  
Dr. Shahab Noori  
Dr. Yogen Singh  
Dr. Jennifer Shepherd  
Dr. Karla Ortiz  
Dr. Victoria Hamilton  
Dr. Gabriella Larusso

Dr. Paul Arichai  
Dr. Ivonne Sierra-Strum  
Dr. Jane Huang  
Dr. Staecy Kim  
Dr. Megan Chang  
Dr. Maria Martes Gomez  
Dr. Jessica Yom  
Dr. Rutuja Kibe

**Recommended Book for the course:**  
Practical Neonatal Echocardiography  
Mc Graw Hill, 2019

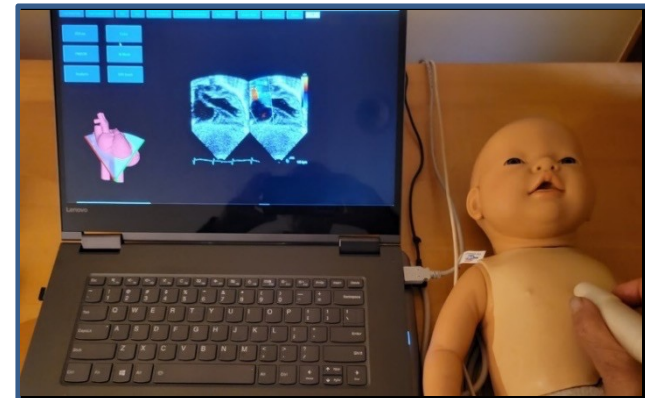
**FACULTY DISCLOSURE**

Current guidelines state that participants in continuing medical education activities should be aware of any affiliation or financial interest that could affect the speaker’s presentation(s). Faculty members have completed conflict of interest declarations and those potential conflicts will be listed in the course syllabus.

**ACCREDITATION STATEMENT**

The Keck School of Medicine of the University of Southern California is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Keck School of Medicine of the University of Southern California designates this educational activity for (to be determined) *AMA PRA Category 1 Credit(s)*™



**The 21<sup>st</sup> Annual Echo Course**

**Point of Care  
Echocardiography in the  
Neonate**

**August 12-16, 2024**

**PIH Health Good Samaritan Hospital  
Los Angeles, California**



## Course Highlights

- **Hands-on training on fifteen echo simulators:**
  - ✓ Obtain complete set of images from all cardiac windows and recognize various structures of a normal heart
  - ✓ Recognition of spatial relationship of cardiac structures obtained from cutting planes through a 3-dimensional heart image
  - ✓ Assessment of cardiac function and estimation of flow using calculation package
  - ✓ Differentiating abnormal cardiac structures from a normal heart
- **Opportunity to perform echocardiography on volunteers**

### Course Objectives

Upon completion of this course, the participants are expected to:

- Understand basic principles of ultrasonography
- Identify correctly basic echocardiographic views
- Evaluate blood flow direction and velocity by pulse and continuous wave and color flow Doppler
- Identify correctly shunts through patent ductus arteriosus and foramen ovale
- Understand application of indices used in measurements of systolic and diastolic function of the heart
- Be able to do quantitative measurements of blood flow through aortic valve, pulmonary valve.
- Evaluate presence of pulmonary hypertension.
- Recognize presence of hypertrophic cardiomyopathy in infants of diabetic mothers
- know echocardiographic findings of pericardial effusion and early signs of cardiac tamponade
- Be able to suspect presence of CHD.

Basic Point of Care Echocardiography is part of core curriculum during neonatal fellowship at USC Medical Center. The participants are introduced to some elements of this training. However, development of competence to independently obtain quality echocardiograms requires training under supervision in our or any other Neonatal echocardiography laboratory .

## Presented by:

**Division of Neonatology, LAC+USC Medical Center and PIH Health Good Samaritan Hospital, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA**

### Course Presentation Schedule

#### Tuesday, August 13, 2023

08:00	Introductory remarks Rangasamy Ramanathan, MD
08:20	Basic physical principles of ultrasonography: 2D and Color flow Merujan Uzunyan, MD
09:00	Basic physical principles of ultrasonography: M-mode and Doppler Merujan Uzunyan, MD
10:00	Standard echocardiographic views Mahmood "Mac" Ebrahimi, RDCS
11:00	11:00-11:20 Introduction to Simulator 11:25-11:35 Student test for first group 11:40-11:50 Student test for second group
12:00	Lunch
13:00	Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff
17:00	Adjourn

#### Wednesday, August 14, 2023

08:00	Effect of assisted ventilation on cardiovascular function Rangasamy Ramanathan, MD
09:00	Assessment of systolic, diastolic and global cardiac function in Neonates Yogen Singh, MD
10:00	Assessment of aortic, pulmonary and intestinal, renal and cerebral blood flows. Tai-Wei Wu, MD
11:00	Severe myocardial dysfunction, heart failure and shock in term and premature neonates Yogen Singh, MD
12:00	Lunch
13:00	Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff
17:00	Adjourn

#### Thursday, August 15, 2023

08:00	Assessment of pulmonary hypertension in term and preterm neonates Shahab Noori, MD
09:00	Normal and Abnormal transitional circulation in neonates without CHD. Yogen Singh, MD
10:00	Assessment of hemodynamic significance of patent ductus arteriosus in premature neonates Shahab Noori, MD
11:00	Perinatal manifestation of CHD Yogen Singh, MD
12:00	Lunch
13:00	Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff
17:00	Adjourn

#### Friday, August 16, 2023

8:00	Cardiomyopathies Ruben Acherman, MD
8:30	Fetal echocardiography and Doppler Ultrasonography in the diagnosis of Congenital Heart Disease :and non cardiac conditions leading to fetal distress.. Ruben Acherman, MD
10:00	TNE and POCUS guidelines - Developing echocardiography skills and establishing TNE / hemodynamics training program Yogen Singh, MD
11:00	Echo simulation student test 13:00 -13:10 Student test First group 13:15-13:25 Student test Second group
12:00-15:00	Lunch with Faculty and hands on practice

Website for simulator: [www.neochosim.com](http://www.neochosim.com)

