

**Partho P. Sengupta, MBBS, MD, DM, FACC, FASE**  
Chief of Cardiology, Robert Wood Johnson Medical School  
Chief of Cardiology Service Line,  
Robert Wood Johnson University Hospital  
New Brunswick, NJ

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Citizenship: US Citizen

## **EDUCATION**

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7/88 - 12/92 Government Medical College, India MBBS

7/86 - 6/88 Somalwar Junior College, India

## **POSTGRADUATE CLINICAL TRAINING**

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7/07 – 6/10 Mayo Clinic Arizona, Mayo Medical School  
Fellowship, Cardiovascular Medicine

7/05 – 6/07 Mayo Clinic Rochester, Mayo Medical School  
Residency, Internal Medicine

9/04 – 6/05 Research Associate, Echocardiography laboratory  
Mayo Clinic

5/03 – 6/04 Mayo Clinic Rochester, Mayo Medical School  
Echocardiography Fellowship, Cardiovascular

8/00 – 5/03 GB Pant Hospital, Delhi University, India  
Research Associate, Cardiovascular

7/97 – 6/00 All-India Institute of Medical Science, India  
Clinical Fellowship, Cardiovascular  
DM (Cardiovascular Diseases)

12/96 – 5/97 GB Pant Hospital, Delhi University, India  
Senior Resident, Cardiovascular

1/92 – 1/97

Government Medical College, India  
Internship/Residency, Internal Medicine  
MD (Internal Medicine)

## **BOARD CERTIFICATIONS**

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2009-06/2028 National Board of Echocardiography  
2022 (current) American Board of Internal Medicine: Cardiovascular Disease  
2022 (current) American Board of Internal Medicine  
02/2005 Educational Commission for Foreign Medical Graduates: ECFMG Certificate

## **LICENSURE**

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6/30/2023 New Jersey BME # 25MA11055300  
2/28/2023 DEA # FS1050474  
03/2024 ACLS  
03/2024 BLS

## **CURRENT ACADEMIC APPOINTMENTS**

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07/2021 – present Henry Rutgers Professor of Cardiology, Division of Cardiovascular Disease and Hypertension, Rutgers Robert Wood Johnson Medical School (RWJMS)  
07/2021- present Chief of Cardiology, Division of Cardiovascular Disease and Hypertension, Department of Medicine, Rutgers Robert Wood Johnson Medical School (RWJMS)

## **CURRENT HOSPITAL APPOINTMENTS**

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07/2021- present Chief of Cardiology Service Line at Robert Wood Johnson University Hospital, New Brunswick, NJ

## **PREVIOUS APPOINTMENTS**

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06/2019 – 07/2021 The Abnash C. Jain Chair of Cardiology, WVU Heart and Vascular Institute, Morgantown, West Virginia.  
04/2017 – 07/2021 Professor of Medicine, Division of Cardiology, Department of Medicine, West Virginia University Heart and Vascular Institute  
04/2017 – 07/2021 Chief, Division of Cardiology, Department of Medicine, West Virginia University Heart and Vascular Institute  
03/2016 – 03/2017 Professor of Medicine, Zena and Michael A. Wiener Cardiovascular Institute Mount Sinai School of Medicine, New York, NY

- 07/2011 – 03/2017 Associate Professor of Medicine  
Zena and Michael A. Wiener Cardiovascular Institute  
Mount Sinai School of Medicine  
New York, NY
- 07/2011 – 12/2017 Staff Physician, Zena and Michael A. Wiener  
Cardiovascular Institute, Mount Sinai School of  
Medicine, New York, NY
- 07/2011 – 03/2017 Director of Cardiac Ultrasound Research and Core Lab  
Zena and Michael A. Wiener Cardiovascular Institute  
Mount Sinai School of Medicine, New York, NY
- 07/2011 – 03/2017 Director of Interventional Echocardiography  
Zena and Michael A. Wiener Cardiovascular Institute  
Mount Sinai School of Medicine, New York, NY
- 06/2010 – 06/2011 Associate Professor of Medicine  
University of California, Irvine  
Irvine, CA
- 06/2010 – 06/2011 Staff Physician, University of California, Irvine,  
Irvine, CA
- 06/2010 – 06/2011 Director of Noninvasive Cardiology and Cardiac Imaging  
University of California, Irvine, Irvine, CA
- 10/2004 - 06/2010 Assistant Professor of Medicine  
College of Medicine  
Mayo Clinic, MN

## **WORKSHOPS & COURSES**

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- 2017- ongoing Program Director, Recent Advances in Cardiovascular Medicine, Annual WVU CME  
Course, Morgantown, WV
- 2015 – 2017 Program Director, Recent Advances in Echocardiography  
(ASE Endorsed program), Mumbai
- 07/2013-07/2015 Director, Cardiovascular Pathophysiology Course  
Icahn School of Medicine at Mount Sinai, New York, NY
- 2013-2014 Course Director, Icahn School of Medicine at Mount Sinai
- 2013 Complex Coronary Valvular and Vascular Cases  
Structural heart disease symposium, Course Co-director,  
Icahn School of Medicine at Mount Sinai, New York

*Curriculum Vitae – Partho P. Sengupta*

- 2013 Echo New York, Multimodality Imaging New York  
Course Co-editor, Icahn School of Medicine at Mount Sinai, New York
- 2013 World Summit on Echocardiography, Chair  
New Delhi, India
- 2013 2013 Structural Heart/Complex Coronary Symposium  
Co-director, New York, NY
- 2011 International Summit on Imaging and Intervention in Cardiology  
(ISIIC) – Katowice, Poland
- 2001 Echocardiography Workshop  
Course Coordinator  
All India Conference of Association of Physicians of India  
New Delhi, India

**CURRENT HOSPITAL AFFILIATIONS**

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Robert Wood Johnson University Hospital (RWJUH)  
One Robert Wood Johnson Place, East Tower – 8th Floor  
New Brunswick, NJ 08901

Rutgers Robert Wood Johnson Medical School (RWJMS)  
125 Patterson Street  
New Brunswick, NJ 08901

**AWARDS / HONORS**

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- 2023 Gifted Educator Award, American College of Cardiology
- 2021 **Henry Rutgers Professor of Cardiology**, RWJMS, New Brunswick, NJ
- 2020 **Rich Popp Excellence in Teaching Award**, in honor of Richard Popp, MD, recognizing a physician who epitomizes the ideal qualities of a mentor and role model. American Society of Echocardiography, July 2020
- 2019 **Abnash C. Jain Chair of Cardiology**, WVU, Morgantown, WV
- 2017 **Academy of Excellence in Teaching and Learning**, West Virginia University, Morgantown, WV
- 2017 **Inspiration in Medicine**, American Medical Association, Chicago, Illinois
- 2016 **TedMed Speaker**, Palm Springs, California
- 2015 **Top 25 Professors of Sonography**, Medical Technology Schools. March
- 2013 **Honorary Lifetime Membership Award**, British Society of Echocardiography

- 2013 **14th Feigenbaum Lecturership**, Annual Scientific Session, American Society of Echocardiography, July 2013
- 2011 **Dr. Madhukar Deshmukh Young Investigator's Award**- American Association of Cardiologists of Indian Origin
- 2010 **Best Fellow in Training Poster** - American College of Cardiology, Atlanta, GA
- 2009 **ACC Investigator Award** - American College of Cardiology, California Chapter
- 2009 **Mayo Brother's Distinguished Fellowship Award** for Outstanding clinical performance, Humanitarianism and scholarly activities.
- 2007 **Mayo Clinic Outstanding Investigator Award**- Internal Medicine, Mayo Clinic
- 2004 **Winner Finalist, Arthur Weyman Young Investigator Award** sponsored by National Board of Echocardiography-American Society of Echocardiography (ASE) Annual Scientific Sessions, San Diego
- 1997 **Young Investigator Award in Cardiology- D.P. Basu**- Annual Association of Physicians of India Conference, Lucknow
- 1994 **Award- Lt. Mr. G.R. Devaikar Memorial** (For highest percentage of marks in M.B.B.S.)
- 1994 **Award- Mrs. Manormabai Gadre Memorial** (For obtaining highest percentage of marks in final M.B.B.S. examination)
- 1994 **Gold Medal- Mr. Ramkali Antram Bhattacharya** (For obtaining highest percentage of marks in obstetrics and gynecology)
- 1994 **Award- Col. Sir K.V. Kukade Memorial** (For highest percentage of marks in mid-wifery and gynecology)
- 1994 **Gold Medal- Mr. Narayan Sheshadi** (For highest scores in final MBBS university exam)
- 1994 **Gold Medal- Mr. Laxmi Narayan Ratanlal Jaiswal** (For highest percentage of marks amongst male students)
- 1994 **Gold Medal- Dr. Manohar Gangadhar Patwardhan** (For obtaining highest percentage of marks in Internal Medicine)
- 1994 **Gold Medal- Lt. Mahavir Madhavrao Shende** (For highest scores in Final MBBS university exam)
- 1994 **Gold Medal- Rai Bahadur Dr. K.P. Sengupta** (For highest scores in Final MBBS university exam)

- 1989 **Gold Medal- Lt. Dr. P.N. Dubey** (For highest University scores in Anatomy, First MBBS university exam)
- 1987 **State Scholar Recognition**
- 1987 **National Scholar Recognition**

## **HONORS/AWARDS TO FELLOWS/MENTEES**

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Finalist, Arthur Weyman Young Investigator Award, 2022, **Marton Tokodi** (Cardiology Post Doctoral Fellow), Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2022, **Rohan Shah** (Cardiology Post Doctoral Fellow), Annual Scientific Sessions of the American Society of Echocardiography

**Best Abstract**, Top 55 best abstracts in the President's Circle Representation, 2021. **Aishwarya Bandaru** (Research Intern) Annual Scientific Sessions of the American Society of Echocardiography

**Best Abstract**, Top 20 Investigators of the highest-ranking early career researcher, 2021. **Nanda Siva** (Research Fellow) Annual Scientific Sessions of the American Society of Echocardiography.

Finalist, Arthur Weyman Young Investigator Award, 2021, **Quincy Hathaway** (Medical Student) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2020, **Ambarish Pandey** (Assistant Professor) Annual Scientific Sessions of the American Society of Echocardiography

**Winner**, Best Research Poster, 2019 **Sirish Shrestha** (Research Scientist) Annual American College of Cardiology, West Virginia Chapter

**Winner**, Arthur Weyman Young Investigator Award, 2019, **Nobuyuki Kagiya** (Research Fellow) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2018, **Marton Tokodi** (Research Fellow) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2016, **Ines Sheriffi** (Clinical Fellow) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2015, **Sanjeev Bhavnani** (Faculty) Annual Scientific Sessions of the American Society of Echocardiography

**Winner**, Arthur Weyman Young Investigator Award, 2015, **Sukrit Narula** (Medical Student) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2010, **Nupoor Narula** (Medical Student) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, 2010, **Mayank Kansal** (Echo Clinical Fellow) Annual Scientific Sessions of the American Society of Echocardiography

Finalist, Arthur Weyman Young Investigator Award, **Elied, Mackram** (Internal Medicine Resident) 2009 Annual Scientific Sessions of the American Society of Echocardiography

## **PROFESSIONAL ASSOCIATION ACTIVITIES/ LEADERSHIP ROLES**

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### **Association of Professors of Cardiology**

Membership, 06/2022

### **National Institute of Health**

T-32 Grant Reviewer 2018-ongoing

NIH – CTSN Digital Trail Workgroup, 2019

NHLBI – Mentored Patient-Oriented Research Study Section, Standing Member- 2021-ongoing

### **US Food and Drug Administration**

Consultant, Computational Modeling and Trials in Silico

### **American College of Cardiology**

Abstract Captain, Annual Scientific Sessions 2020

Awards Committee, 2018-2020

ACC – NIH – CTSN Digital Trial Workgroup, 2019-ongoing

Associate Editor (Journal of American College of Cardiology: Cardiovascular Imaging)

Section Editor (Journal of American College of Cardiology)

Scientific Abstract Reviewer, ACC Scientific Sessions

Imaging Council Liaison for JACC: CV Imaging

Future of Cardiac Imaging Task Force (2016-2017)

Member at Large, Industry Relation Talk Force, 2019 – onward

### **American Society of Echocardiography**

Industry Relationship Committee, 2018-2020

Chair, Innovation Task Force 2017

ASE Board of Director, 2012-2015

Chair, ASE Innovation Competition, 2016-2017

Chair, Telemedicine and New Technology Task Force, 2014-2015

Scientific Abstract Reviewer, 2010-ongoing

Scientific Session Planning committee, 2016-2017

Finance Committee, 2016-2017

Guidelines Committee Member, Writing Group on LV Mechanics

Editorial Board Member

International task force- Liaison officer for India, 2012-onwards

International Chair, 2013 World Summit of Echocardiography Societies

Program Director, ASE Focus on India, ASE-REAWARDS Study, Jan 2012

Program Director, ASE VISION study, Nov 2013

Program Director, ASE Values Study, Aug 2014

Program Director, ASE Focus on India, Dec 2012

ASE Foundation, Annual Appeal Task Force Member, 2011-2012

ASE Foundation, Annual Appeal Task Force Member, 2012-2013

Industry Round Table Committee Member, 2013-2017

**European Association of Cardiovascular Imaging**

Judges Panel, Young Investigator Awards

Faculty, Annual Scientific Sessions, 2012-2020

**Journal Reviewer**

Acta Cardiologica  
American Journal of Physiology  
American Journal of Cardiology  
Circulation  
Circulation: Cardiovascular Imaging  
Circulation Journal  
Cardiology  
European Heart Journal  
European Heart Journal: Cardiovascular Imaging  
Echocardiography  
Echo: Research and Practice  
Heart  
International Journal of Cardiology  
JAMA Cardiology  
Journal of Engineering in Medicine  
Journal of the American College of Cardiology  
Journal of the American College of Cardiology: Cardiovascular Imaging  
Journal of the American College of Cardiology: Electrophysiology  
Journal of the American College of Cardiology: Cardio-oncology  
Journal of the American College of Cardiology: Case Reports  
Journal of the American Society of Echocardiography  
Journal of the European Association of Echocardiography  
Lancet  
Nature  
Nature Communications  
Nature Reviews in Cardiology  
Nature Machine Intelligence  
Trends in Cardiovascular Medicine

**Assistant Editor**

2014 Journal of American College of Cardiology  
2010-2011 Journal of American College of Cardiology: Cardiovascular Imaging

**Associate Editor**

2012-present Journal of American College of Cardiology: Cardiovascular Imaging

**Section Editor**

2015-present Journal of American College of Cardiology



**Editorial Board Member**

Journal of American Society of Echocardiography  
Journal of European Association of Echocardiography  
Circulation Cardiovascular Imaging  
European Heart Journal: Cardiovascular Imaging  
Recent Patents in Medical Imaging  
Heart  
Echo Research and Practice  
Indian Heart Journal  
Echocardiography Research and Practice  
Indian Journal of Echocardiography

**RESEARCH STUDIES**

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Artificial Intelligence Mobile Health Trial of a Digital Platform to Optimize Guideline Directed Heart Failure Therapy Using Wearable Sensors (AIM POWER)  
2022-Present

**Principal Investigator**

The TROPSENSOR and ECVest: Evaluate the safety and diagnostic/prognostic benefit of the TROPSENSOR and ECVest device in identifying coronary artery disease (CAD).  
2022-Present

**Principal Investigator**

Anticoagulation for New-Onset Post-Operative Atrial Fibrillation after CABG  
CTSN PACes (enrolling, start date 02/2020)

**Sub-Investigator**

Role of the Cardioflux Magnetocardiography System in Predicting Patient Outcomes With Coronary Artery Disease CardioFlux Study – Genetesis (currently enrolling)  
2019-2020

**Principal Investigator**

Validation of echocardiography-based vector flow mapping in cardiac disease states  
Vector Flow Mapping Study – Hitachi Healthcare Americas (currently enrolling)

**Principal Investigator**

Utilization and impact of Echocardiography on a large inpatient sample at West Virginia University Hospitals

Department/Personal – Echo Utilization Study (Chart Review Study)

**Principal Investigator**

Multidimensional Wavelet Analysis of Surface Electrocardiogram for Identifying Subclinical Myocardial Dysfunction

Vector Flow Mapping Study – HeartSciences

2017

**Principal Investigator**

Non-invasive evaluation of left ventricular filling pressures using transthoracic parametric Doppler based assessment of lung Doppler signals

Echosense, Ltd

**Principal Investigator**

Implementation of High Definition Screening Using Handheld Imaging and Digital health Technologies within a Learning Health System to Identify Cardiovascular Disease at the Point-of-care: The ASE-INNOVATE Program

ASE-Choice – American Society of Echocardiography Education and Research Foundation and West Virginia University Heart and Vascular Institute

**Principal Investigator**

The transcatheter, self-expanding AMPLATZER™

Amulet™ LAA Occluder is made of nitinol mesh and a polyester patch. The lobe with stabilizing wires is placed within the left atrial appendage (LAA) and a disc (to cover the LAA orifice) is connected to the lobe by a central waist.

No: SJM-CIP-10114

**Echo Cardiologist**

A Phase 3, Open-Label, Multicentre Study of Flurpiridaz (18F) Injection for Positron Emission Tomography (PET) Imaging for Assessment of Myocardial Perfusion in Patients Referred for Invasive Coronary Angiography Because of Suspected Coronary Artery Disease.

GE-265-303

**Principal Investigator**

A Phase III, Open-Label, Multicenter Trial to Evaluate Ejection Fraction, End-Diastolic and End-Systolic Volumes, by Unenhanced and DEFINITY®-enhanced 2D-Echo and Magnetic Resonance Imaging

DEF-314

**Principal Investigator**

An International, Double-blind, Randomised, Placebo-Controlled Phase III Study to Evaluate the Effect of Dapagliflozin on Reducing CV Death or Worsening Heart Failure in Patients with Heart Failure with Preserved Ejection Fraction (HFpEF) Deliver

**Sub Investigator**

Angiographic and Clinical Evaluation of DEFINITY Enhanced Ultrasound Guided Symptomatic Lower Extremity Peripheral Artery Disease Intervention

Definity

**Sub Investigator**

Amplatzer Amulet Left Atrial Appendage Occluder

No: SJM- CIP- 10114

**Echo Cardiologist**

Clinical Trial to Evaluate the Safety and Effectiveness of Using the Tendyne Mitral Valve System for the Treatment of Symptomatic Mitral Regurgitation

CS0004- P

**Echo Cardiologist**

Expanded Clinical Study of Tendyne Mitral Valve System

CS- 03

**Echo Cardiologist**

05-004355 Blood Flow Sequence by Contrast

Echocardiography

**PI**

06-00876 Automated Functional Imaging vs

Nuclear SPECT Imaging **CI**

06-008978 Echo Contrast Particle Imaging

Velocimetry in Heart Failure Patients Undergoing Cardiac Resynchronization Therapy

**PI**

07-004637 Sengupta/CR5/Left Ventricular

Intracavitary Blood Flow

**PI**

07-007098 Cardiopulmonary Peak O<sub>2</sub>

Consumption in DCMP pt. and its Relation with LV Vortex Flow Time

**PI**

07-007687 Contrast agent imaging M-mode flow patterns: Restrictive vs constrictive cardiac process in a waterfall quantitative display on an Ultrasound system

**CI**

1100-05 Left ventricular Twist Dynamics in Constrictive Pericarditis

**PI**

2186-04 A Phase I, Open-label, Pilot Study to Assess the Safety of Immunoabsorption Using the Fresenius Immunosorba® for Chronic Dilated Cardiomyopathy

Other Study Staff

04/2008 -03/2010 CR5: Characterization of Left

Ventricular Intracavitary Blood Flow Sequence by Echo Contrast Particle Imaging Velocimetry.

Funded by Mayo Protocol.

A25303 Correlation of myocardial function with regional architecture **PI**

IRB 2375-04

Assessment of left ventricular regional endocardial deformation by anatomical M-mode imaging

**PI**

IRB 327-05

Echocardiographic evaluation of patients with acute myocardial infarction following reperfusion

**PI**

A19303 Characterization of acoustic spectra of contrast microbubbles for detection and quantitation of myocardial perfusion

**PI**

A17801 Multiparametric computational Echocardiography

**CI**

A192X01 Post ejection contraction: Pathophysiologic mechanism in chronic ischemia and role in hibernating myocardium

**CI**

A280E01 Diagnosis of cardiac viability by functional ultrasound biplane stress echocardiography

**CI**

17706-02 A Phase II Multicenter, parallel group study of Sonovoue to evaluate the optimal dose, efficacy

**CI**

2288-03 Echocardiographic sub-study for the genetic modulation of left ventricular recovery

**CI**

2288-03

Genetic modulation of LV recovery project

**CI**

## RESEARCH GRANTS

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2022 – 2023	HAD-Kit, a continuous, non-invasive cardiac biomarker / ECG quantification technology for Heart Attack screening and diagnosis (P50MD017356) Principal Investigator (National Institute of Health)
2021-2026	NSF-NRT-HDR: Bridges in Digital Health (#2125872) Co-Principal Investigator (National Science Foundation)
2021-2026	Rutgers-NYU Center for Asian Health Promotion and Equity (#1P50MD017356-01) Co-Principal Investigator (National Institute of Health)
2017-2022	Myovista wavECG Clinical Evaluation (#AWD00009166) Principal Investigator (Heart Test Laboratories)
2019-2023	RII Track 2 FEC Multi-Scale Integrative Approach to Digital Health: Collaborative Research and Education in Smart Health in West Virginia and Arkansas (#1920920) Co-Principal Investigator
2020-2021	West Virginia NIH Clinical and Translational Science Institute Award

- Principal Investigator
- 2019-2022      Role of the Cardioflux Magnetocardiography System in Coronary Artery Disease (Gentesis Ltd.) – Principal Investigator
- 2018-2021      Hitachi Healthcare Investigator Initiated Research Grant  
Principal Investigator
- 2018-2019      ASE Foundation Research Grant (CHOICE)  
Principal Investigator
- 2015-2019      Non-invasive evaluation of cardiopulmonary diseases using transthoracic Doppler based assessment of lung Doppler signals (Echosense Ltd.) –Principal Investigator
- 2017-2020      Non-invasive evaluation of vortex formation (Hitachi Healthcare Ltd.) – Principal Investigator
- 2017-2025      Multidimensional wavelet analysis of Surface Electrocardiogram for Identifying Subclinical Myocardial Dysfunction in Patients at Risk for Coronary Artery Disease (Heart Test Labs.) (#Sengupta)  
Principal Investigator
- 05/2013      Assessment of LV flow vortex formation in patients undergoing Transcatheter aortic valve implantation (Edward Healthcare)  
Principal Investigator
- 12/2012      ASE-VISION study foundation grant (GE Healthcare, Core Sound Imaging Award to ASE)  
Principal Investigator
- 08/2012      Adjunctive Renal Sympathetic Denervation to Modify Hypertension as Upstream Therapy in the Treatment of Atrial Fibrillation (HFIB). A prospective, multi-center, randomized study  
Echo Core Lab Supervisor
- 2012-2016      Forest Research Institute, Effects of Nebivolol on Left Ventricular and Left Atrial Morphodynamics in Adults with Hypertension and Isolated Diastolic  
Principal Investigator
- 01/2012      ASE-REWARD study (GE Healthcare Award to ASE)  
Principal Investigator
- 2008-2008      ASU/Mayo Seed Grant. Computational Echocardiography: Cardiac Efficiency Analysis from Vector Velocity Fields.  
Co-Investigator
- 2005-2006      American Society of Echocardiography. Left Ventricular Twist Dynamics in Constrictive Pericarditis.  
Principal Investigator

- 2001 Foundation of Cardiovascular Sciences Travel Grant.  
Travel Grant
- 2001 Department of Science and Technology Grant, Government of India.  
Travel Grant
- 2001 Council of Scientific and Industrial Research Grant, Government of India.  
Travel Grant

## Scholarly Activity/Publications

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### Publications:

1. Avalon JC, Fuqua J, Deskins S, Miller T, Conte J, Martin D, Marano G, Yanamala N, Mills J, Bianco C, Patel B, Seetharam K, Raylman R, **Sengupta PP**, Hamirani YS. Quantitative single photon emission computed tomography derived standardized uptake values on 99mTc-PYP scan in patients with suspected ATTR cardiac amyloidosis. *Journal of Nuclear Cardiology*. 2023 Feb;30(1):127-139. doi: 10.1007/s12350-022-02988-5. Epub 2022 Jun 2. PMID: 35655113
2. Hayanga HK, Woods KE, Thibault DP, Ellison MB, Boh RN, Raybuck BD, **Sengupta PP**, Badhwar V, Awori Hayanga JW. Anesthetic management for transcatheter aortic valve replacement: A national anesthesia clinical outcomes registry analysis. *Annals of Cardiac Anaesthesia*. 2023 Jan-Mar;26(1):29-35. doi: 10.4103/aca.aca\_311\_20. PMID: 36722585
3. Sengupta PP, Tokodi M., Prosthesis-Patient Mismatch After TAVR: The New Flow of Information. (2022 Dec. 14). 16(1):10-12. doi: 10.1016/j.jcmg.2022.10.013. PMID: 36599556.
4. Sengupta PP, Chandrashekhar Y. Understanding Myocardial Biomechanics Through the Lens of Cardiac Imaging: A Shear Privilege. *JACC Cardiovasc Imaging*. 2022 Dec;15(12):2158-2160. doi: 10.1016/j.jcmg.2022.11.001. PMID: 36481089
5. Hathaway QA, Yanamala N, Siva NK, Adjero DA, Hollander JM, Sengupta PP. Ultrasonic Texture Features for Assessing Cardiac Remodeling and Dysfunction. *J Am Coll Cardiol*. 2022 Dec 6;80(23):2187-2201. doi: 10.1016/j.jacc.2022.09.036. PMID: 36456049.
6. Lin FY, Goebel BP, Lee BC, Lu Y, Baskaran L, Yoon YE, Maliakal GT, Gianni U, Bax AM, Sengupta PP, Slomka PJ, Dey DS, Rozanski A, Han D, Berman DS, Budoff MJ, Miedema MD, Nasir K, Rumberger J, Whelton SP, Blaha MJ, Shaw LJ. Mortality impact of low CAC density predominantly occurs in early atherosclerosis: explainable ML in the CAC consortium. *J Cardiovasc Comput Tomogr*. 2022 Nov 11:S1934-5925(22)00288-X. doi: 10.1016/j.jcct.2022.10.001. Online ahead of print. PMID: 36376147
7. Hathaway QA, Yanamala N, Sengupta PP. Multimodal data for systolic and diastolic blood pressure prediction: The hypertension conscious artificial intelligence. *EBioMedicine*. 2022 Oct;84:104261. doi: 10.1016/j.ebiom.2022.104261. Epub 2022 Sep 13. PMID: 36113186
8. Van Mieghem NM, Deeb GM, Søndergaard L, Grube E, Windecker S, Gada H, Mumtaz M, Olsen PS, Heiser JC, Merhi W, Kleiman NS, Chetcuti SJ, Gleason TG, Lee JS, Cheng W, Makkar RR, Crestanello J, George B, George I, Kodali S, Yakubov SJ, Serruys PW, Lange R, Piazza N, Williams MR, Oh JK, Adams DH, Li S, Reardon MJ; SURTAVI Trial Investigators. Self-expanding Transcatheter vs Surgical Aortic Valve Replacement in Intermediate-Risk Patients: 5-Year

- Outcomes of the SURTAVI Randomized Clinical Trial. (2022 Oct 1) ;7(10):1000-1008. doi: 10.1001/jamacardio.2022.2695.PMID: 36001335
9. Kunovac A, Hathaway QA, Burrage EN, Coblenz T, Kelley EE, Sengupta PP, Hollander JM, Chantler PD. Left Ventricular Segmental Strain Identifies Unique Myocardial Deformation Patterns After Intrinsic and Extrinsic Stressors in Mice. *Ultrasound Med Biol*. 2022 Oct;48(10):2128-2138. doi: 10.1016/j.ultrasmedbio.2022.06.004. Epub 2022 Aug 4.PMID: 35933241
  10. Berber A, Abdelhalim H, Zeeshan S, Vadapalli S, von Oehsen B, Yanamala N, Sengupta P, Ahmed Z. RNA-seq-driven expression analysis to investigate cardiovascular disease genes with associated phenotypes among atrial fibrillation patients. *Clin Transl Med*. 2022 Jul;12(7):e974. doi: 10.1002/ctm2.974.PMID: 35875838
  11. Sengupta, PP., Shreshta, S., Berthon, B., Messas, E., Donal, E., Tison, GH., Min, JK., D'hooge, J., Voigt, J., Dudley, J., Verjans, JW., Shameer, K., Johnson, K., Lovstakken, L., Tabassian, M., Piccirilli, M., Pernet, M., Yanamala, N., Duchateau, N., Kagiya, N., Bernard, O., Slomka, P., Deo, R., Arnaout, R. Proposed Requirements for Cardiovascular Imaging-Related Machine Learning Evaluation (PRIME): A Checklist: Reviewed by the American College of Cardiology Healthcare Innovation Council. *Journal of the American College of Cardiovascular Imaging*. 2020 Sep, 13 (9) 2017–2035.
  12. Avalon JC, Fuqua J, Deskins S, Miller T, Conte J, Martin D, Marano G, Yanamala N, Mills J, Bianco C, Patel B, Seetharam K, Raylman R, Sengupta PP, Hamirani YS. (2022 June). Quantitative single photon emission computed tomography derived standardized uptake values on 99mTc-PYP scan in patients with suspected ATTR cardiac amyloidosis. *Journal of Nuclear Cardiology*. doi: 10.1007/s12350-022-02988-5. PMID: 35655113
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- 52 Sengupta PP, Mohan JC, Mahesh U, Jain V, Arora R, Pandian NG. Quantitative geometric, morphologic and functional analysis of non-compaction of the left ventricle in adults and comparison to idiopathic dilated cardiomyopathy. *J Am Soc Echocardiogr* 2002; 15:525. (Abstract)
- 53 Sengupta PP, Mohan JC, Jain V, Arora R, Nesser J, Pandian NG. Delayed post-systolic left and right ventricular contraction in patients with non-ischemic dilated cardiomyopathy: implications of tissue velocity studies to biventricular pacing. *J Am soc Echocardiogr* 2002; 5:526. (Abstract)
- 54 Sengupta PP, Mehta V, Yusuf J, Mohan JC, Arora R, Kaul UA, Trehan VK, Khandheria BK. Regional left ventricular function in rheumatic mitral stenosis: An ultrasound-based strain and strain rate imaging study. *Indian Heart J* 2002; 54:546. (Abstract)
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- 57 Sengupta PP, Mehta V, Rastogi V, Mohan JC, Arora R. Assessment of regional variations in segmental motion and deformation mechanics of right ventricle by velocity, strain, strain rate imaging. *Indian Heart J* 2002; 54:514- 5. (Abstract)
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- 59 Sengupta PP, Mehta V, Rastogi V, Mohan JC, Arora R, Khandheria B. Regional asynchrony and asynergy are markers of myocardial functional heterogeneity in myopathic ventricles with preserved systolic function: A tissue velocity, tracking, strain and strain rate imaging study. *Indian Heart J* 2002; 54:585-7. (Abstract)
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- 71 Mishra S, Sengupta PP. Occurrence of concomitant coronary artery disease in patients of restrictive heart disease. *Indian Heart J* 1999; 51:700. (Abstract)
- 72 Mishra S, Sengupta PP. Demographic profile and health care utilization in patients of shunt lesions with severe pulmonary artery hypertension. *Indian Heart J* 1999; 51:652. (Abstract)
- 73 Sengupta PP, Saxena A, Rajani M, Manchanda SC. Choice of catheter for crossing the aortic valve in relation to angiographic morphology of the valve in congenital aortic stenosis. *Indian Heart J* 1998; 50:638. (Abstract)
- 74 Sengupta PP, Saxena A, Kumar R, Manchanda SC. Lung perfusion scintigraphy in patients of cyanotic congenital heart disease with reduced pulmonary blood flow: a preliminary study. *Indian Heart J* 1998; 50:664. (Abstract)
- 75 Rammamoorthy S, Sengupta PP, Manchanda SC. Comparison of absolute mitral valve area and indexed mitral valve area as indices for severity of mitral stenosis. *Indian Heart J* 1998; 50:641. (Abstract)
- 76 Sethi KK, Dhal A, Sharma M, Salwan R, Sengupta PP. Long term low amplitude pacing using steroid eluting leads. *Pacing Clin Electrophysiol* 1997; 20:2332.
- 77 Rao H, Sengupta PP, Sethi KK. Longer-term follow-up of atrial and ventricular modes of pacing for sinus node dysfunction without associated tachyarrhythmias. *Indian Heart J* 1997; 49:611. (Abstract)
- 78 Mohan JC, Sengupta PP, Arora R. Left ventricular mid-wall dynamics in mitral stenosis before and after transvenous mitral commissurotomy. *Indian Heart J* 1997; 49:632. (Abstract)
- 79 Mohan JC, Sengupta PP, Arora R. Acute effects of percutaneous transvenous mitral commissurotomy (PTMC) on global right ventricular function in patients with mitral stenosis. *Indian Heart J* 1997; 49:628. (Abstract)
- 80 Sengupta PP, Salkar RG, Salkar HR, Jalgaonkar PD. averaged two-dimensional echocardiography for differentiating acute and healed myocardial infarction. *J Association Physicians of India* 1995; 43:849. (Abstract)
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### **Non-Peer Reviewed Publications**

- 1 Saxena A, Sengupta PP. Balloon dilatation of coarctation of aorta in adults. *Cardiology Today* 2002.
- 2 Sengupta PP, Mishra S, Prabhakaran D. Role of vasodilators in valvular regurgitant lesions. *Cario Update, Delhi* 1998; 2(39-46).
- 3 Sengupta PP, Saxena A. Lipid abnormalities in Indian context. *Cardio Update, Delhi* 1998; 3:10-4.



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- 4 Sengupta PP, Mohan JC. Assessment of right ventricular function. *J Indian Society of Echocardiogr* 1997; 1:18- 21.
- 5 Sengupta PP, Prabhakaran D. Estrogen replacement therapy and coronary artery disease. *Cario Update, Delhi* 1997; 1:18-21.
- 6 Salkar RG, Sengupta PP, Salkar HR. Homocystinuria with superior sagittal sinus thrombosis. An illustrated case report. *The Indian Practitioner* 1996; 199:533-6.
- 7 Sengupta PP, Salkar RG, Salkar HR, Jalgaonkar PD. Dual response of regional wall motion abnormalities for detecting viable myocardium during dobutamine stress echocardiography. *Vidarbha Journal of Cardiology* 1996; 12:19-22.
- 8 Sengupta PP, Jalgaonkar PD, Waghmare. Congenitally corrected transposition of great vessels. Report of two cases. *Journal of Academy of Medical Sciences* 1995; 1:71-4.
- 9 Sengupta PP. Silent myocardial ischemia. *Journal of Academy of Medical Sciences* 1995; 1:9-12.
- 10 Sengupta PP. AIDS and resurgence of Tuberculosis. *Journal of Academy of Medical Sciences* 1994; 1:67-70.
- 11 Sengupta PP. Clinical utility of dynamic tests of pituitary. *Journal of Academy of Medical Sciences* 1994; 1:27- 33.

**BOOKS**

- 2005 Tempe D, Sengupta PP. Atlas of transesophageal echocardiography for cardiac anesthetist. BI Churchill Livingston. UK: Anshan Ltd; 2005.

**BOOK CHAPTERS**

- 2022 Kagiya N, Shrestha S, Sengupta PP. 10 - Future applications of strain imaging. In: Marwick TH, Abraham TP, eds. *ASE's Comprehensive Strain Imaging*. Elsevier; 2022:220-235.
- 2018 Partho P. Sengupta and Bijoy K. Khandheria. *Transesophageal Echocardiography: Principles and Application*
- 2013 Bansal M, Sengupta PP. Newer techniques. In Reich, Fischer (Eds). *Peri-operative Transesophageal Echocardiography. A companion to Kaplan's Cardiac Anesthesia*. Elsevier publications, Philadelphia, USA, p 298-300 (ISBN: 781455707614).
- 2013 Bansal M, Narula J, Sengupta PP. Dimensions and flows. In Reich, Fischer (Eds). *Peri-operative Transesophageal Echocardiography. A companion to Kaplan's Cardiac Anesthesia*. Elsevier publications, Philadelphia, USA, p 72-89 (ISBN: 781455707614).
- 2012 Deshmukh, A., Narula, J., Sengupta PP. *Novel Imaging Strategies for Cardiac Arrhythmias (2012) Cardiac Mapping: Fourth Edition*, pp. 598-611.
- 2012 Amaki, M., Abe, H., Sengupta, PP, *Visualization of blood flow with echocardiography: The future for heart failure diagnosis* *Interventional Cardiology (London)*, 4 (6), pp. 609-611.
- 2007 Sengupta PP, Khandheria BK. Natural history of asymptomatic aortic stenosis. In: Braunwald E. *Harrison's Principle of Internal Medicine*.
- 2004 Sengupta PP, Khandheria BK. Echocardiography in heart failure. In: Nihoyannopoulos P and Kissolo J. *Clinical Echocardiography*.

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- 2004 Sengupta PP, Khandheria BK. Contrast echocardiography for left ventricular opacification. In: Zamarano JL and Garcia Fernandez MA. Contrast Echocardiography in Clinical Practice Milan: Springer-Verlag; p. 105-16
- 2002 Mohan JC, Sengupta PP, Mehta V. Prosthetic valves - Echocardiography update. In: Manoria PC. Valvular Heart Disease Volume I. p. 110-2.
- 2000 Sengupta PP, Mohan JC. Evaluation of prosthetic valve function. In: Cardiological Society of India. Cardiology Update.
- 1999 Talwar KK, Sengupta PP. Management of ventricular tachyarrhythmia. In: Indian College of Cardiology. ICD or Drugs Cardiac Update. p. 244-53.
- 1999 Prabhakaran D, Sengupta PP. Current concepts in obesity. In: Association of India. Medicine Update Volume 9 (Part I). p. 439-50.
- 1997 Sikar RG, Wechalekar AD, Sengupta PP. Paraneoplastic syndromes. In: APICON. Medicine Update, Volume 7. p. 438-50.

## **PRESENTATIONS/LECTURES**

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### **International:**

- 03/2023 “A Novel Breakthrough in Wrist-Worn Transdermal Troponin-I-Sensor Assessment for Acute Myocardial Infarction”, American College of Cardiology Annual Scientific Session, New Orleans, March 6, 2023
- 03/2023 “AI, Holograms, Virtual and Augmented Reality: Are We Asking For Too Much”, American College of Cardiology Annual Scientific Session, New Orleans, March 5, 2023
- 12/2022 “Where is the future? and the role of Artificial Intelligence”
- 12/2022 “Cardiac Imaging in 2040 – a vision and how we get there”. European Association of Cardiovascular Imaging (EACVI), December 8, 2022 (Virtual)
- 11/2022 “AI in Cardiovascular Imaging Beyond Automation” (Virtual), Toronto, Canada
- 08/2022 “Artificial Intelligence to Assess Left Ventricular Systolic Function: Current Situation” & “Artificial Intelligence will change the way we practice cardiology”. ESC Congress 2022, Barcelona (Virtual)
- 07/2022 “AI in Echocardiography”, BrainX Community Live (Virtual)
- 06/2022 "Artificial Intelligence in Cardiac Imaging", University of Padua, School of Cardiology (Fellows' Lecture), Italy, June 22, 2022.
- 06/2022 1<sup>st</sup> International Meeting on Intracardiac Flow Dynamics: The Role of the HyperDoppler Technique, University of Padua, Italy, June 23-24, 2022

- Session II Chair  
‘Applications of intracardiac vortex analysis: state of the art’; June 23
- Session III Chair for Round Table Discussion  
‘Ultrasound evaluation of intracardiac flow dynamics: projects and proposals, June 24
- Presentation: "Pathophysiological and clinical challenges of cardiac flow analysis" June 24

- 05/2022 “Artificial Intelligence in Echocardiography” The Greater Kansas City Echo Society Spring Virtual Symposium University of Kansas Medical Center (Virtual)
- 05/2022 "AI guidance in clinical practice", World Congress of Echocardiography and Allied Techniques (WCE), Adelaide Convention Centre Adelaide, Australia. (Online and In-person).
- 02/2022 “Where is the future? and the role of Artificial Intelligence”, European Association of Cardiovascular Imaging (EACVI) - Live Webinar on Handheld ultrasound: present and future  
Online
- 02/2022 “AI and New Technologies for Screening for Heart Diseases” RWJBH-Chinese Medical Program Webinar (broadcasted to the West coast, Canada, Hong Kong and Taiwan)  
Online
- 12/2019 “Speckle Tracking universal standardization and future clinical perspective.”  
EuroEcho 2019  
London, France
- 12/2019 “Positioning of the topic: Impact of cardiac imaging on the choice surgery vs. TAVI in intermediate risk aortic stenosis.”  
EuroEcho 2019  
London, France
- 12/2019 “Artificial intelligence – Smartphone apps and new technologies.”  
EuroEcho 2019  
London, France
- 12/2019 “High tech echocardiography to address undeserved population: a clinical experience.”  
EuroEcho 2019  
London, France
- 08/2019 “Artificial Intelligence Applications in Echocardiography”  
ESC Congress 2019  
Paris, France
- 08/2019 “A Vision of the Future for Machine Learning in Cardiology”  
ESC Congress 2019  
Paris, France
- 08/2019 “Handheld ultrasound, artificial intelligence and the new age of echocardiography.”

- CSANZ and ANZET Meeting  
Sydney, Australia
- 08/2019 “Imaging: New imaging perspectives on old problems”  
CSANZ and ANZET Meeting  
Sydney, Australia
- 08/2019 “Interventional echo imaging for the aortic and mitral valve: state of the art”  
CSANZ and ANZET Meeting  
Sydney, Australia
- 08/2019 “Stress Echo”  
CSANZ and ANZET Meeting  
Sydney, Australia
- 08/2018 “Echocardiographic predictors of mortality and morbidity in the general population”  
ESC Congress 2018  
Munich, Germany
- 08/2018 “Clinical Impact of Strain Imaging”  
ESC Congress 2018  
Munich, Germany
- 08/2018 “Surgery for combined heart disease”  
ESC Congress 2018  
Munich, Germany
- 03/2018 EuroEcho-Imaging Congress  
“eHealth and mHealth in practice: upcoming technologies”  
Barcelona, Spain
- 03/2018 Euro-Echo- Imaging Congress  
“Virtual Cardiology and Mobile Health”  
Barcelona, Spain
- 02/2018 Leuven Meeting on Myocardial Function Imaging  
“New Technologies for screening and phenotypic assessment of diastolic dysfunction”  
Brussels, Belgium
- 12/2017 EuroEcho-Imaging 2017:  
Remote echocardiography and web-based assessment-the new era  
Lisbon, Portugal
- 12/2017 EuroEcho-Imaging 2017:  
Myocardial fibers and cardiac mechanics  
Lisbon, Portugal
- 12/2017 Cardiological Society of India (CSI) 2017:  
Diagnosing HFpEF-can we simplify it?  
India



- 12/2017                    CSI 2017:  
Structural heart disease intervention-Optimizing outcomes of TAVR:  
Role of imaging,  
India
- 08/2017                    ESC Congress 2017:  
Artificial Intelligence-Smartphone apps and new technologies (for use in clinical  
practice)  
Barcelona, Spain
- 08/2015                    CSANZ 2015 63rd Annual Scientific Meeting of The Cardiac Society  
of Australia & New Zealand.  
• Future of Echocardiography and Emerging Paradigms:  
Are we Going the Way of Robotics and Mechanical Intelligence.  
• Speckle tracking echo: applications & future directions.  
• Echo in remote & disadvantage.  
• Role of Echocardiography in assessing patients undergoing  
transcatheter aortic valve replacement.  
• What's hot in imaging?  
Australia
- 12/2014                    Euro Echo Imaging.  
• Euro Echo Imaging-Basic Approach to Cardiac Mechanics:  
Imaging the Squeeze and the flow redirecting features of the left ventricular;  
From Physiology to Pathology: Subclinical disease and effects  
on left ventricular mechanics  
• Oral Abstract Session: New Insights in Ventricular Function  
• Beyond left Ventricular ejection fraction: tissue Doppler Imaging  
speckle tracking in clinical practice.  
• Valvular Heart Disease: When left ventricular ejection fraction becomes old-fashioned;  
• Young Investigator Award Session: Basic Science; Latest advances  
in Anatomical Intelligence and  
• Peri-interventional Imaging: How Anatomical Intelligence can be applied  
in daily clinical practice-Panel discussion illustrated by clinical cases;  
• Cardiac Mechanics: Cardiac Mechanics: rotation, twist, untwist;  
• Oral Abstract Session: New insights in Ventricular function  
• Case based session: Cases from Outside Europe.  
Vienna Austria.
- 10/2014                    Learning Objectives: How to assess the right heart with  
Echocardiography: The normal Ventricle ESC
- 09/2014                    New techniques in Echocardiography  
Speckle tracking echocardiography: Principles and application;  
Future of echocardiography: Emerging Paradigms.  
Buenos Aires (Argentina)
- 05/2014                    19th World Congress of Echocardiography and Allied Techniques  
(Sibui, Romania).  
• Cardiac Muscle Mechanics: Newer Applications

- Cardiac Vortex Imaging Novel Pathophysiological Insights

- 12/2013 European Society of Cardiology-Istanbul, Turkey  
3D Strain: What 3 D strain is? Different approaches to measure myocardial deformation in 3D.  
Rotation, twisting and torsion: what does it mean and what can we learn from it?
- 08/2013 Myocardial Fiber Architecture-from anatomy to in vivo imaging.  
European Society of Cardiology Conference:  
(Amsterdam Netherlands)
- 10/2012 CT Surgery Grand Rounds: Structure and Function of the Left Ventricle:  
A Changing Paradigm
- 09/2012 ISIIC (Poland)  
What is new in the assessment of myocardial function?
- 08/2012 Echo Nagpur 2012 (India)  
  
Chamber Quantification: Techniques and Interpretation  
Quantifying the Left Heart (LV and LA): Case Studies Mitral Regurgitation:  
Functional vs Ischemic vs Degenerative  
  
Interpreting cardiac function and Contractility: Interpreting the Heart in motion  
  
Live Demonstration of 3D TEE-GE HealthCare Congenital Heart Diseases Exotica  
  
Cardiac Restriction or Constriction: Still a challenge  
  
Cases Illustrating Echo-guided Interventions in the Cath Lab  
  
Interesting cases from the faculty
- 08/2011 Pericardial diseases: Echocardiography  
Annual Scientific Sessions, European Society of Cardiology  
Paris, France
- 06/2011 Cardiovascular Physiology and Cardiac Flow  
Faculty of Engineering, University of Cagliari, Cagliari (Italy)  
Euromech Colloquium
- 06/2011 Bubble: what are they and how do they help?  
Annual Scientific Sessions of the American Society of echocardiography  
Montreal, Canada
- 06/2011 Contrast Applications in the Echo Lab: LVEF, Masses, Doppler  
and Beyond Annual Scientific Sessions of the American Society  
of Echocardiography Montreal, Canada

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- 06/2011            Physiologic Basis of Vortex Flow Imaging  
Annual Scientific Sessions of the American Society of echocardiography  
Montreal, Canada
- 06/2011            Multiple faculty presentations  
Echocardiography Today and tomorrow, St Wolfgang, Austria
- 09/2010            Multiple Faculty Presentations: Echo Magpur 2010  
Nagpur, India
- 07/2010            Diastolic Heart Failure Indo-American Metabolic Meeting  
Beijing, China
- 07/2010            Systolic Heart Failure Indo-American Metabolic Meeting  
Beijing, China
- 10/2009            Myocardial Mechanics: New Insights from Speckle  
Tracking Annual Scientific Sessions Portuguese Society  
of Echocardiography Tomar, Portugal
- 06/2009            Case Presentations Echocardiography Today and  
Tomorrow 2009, St. Wolfgang, Austria
- 06/2009            LV form and function Echocardiography Today and Tomorrow 2009  
St. Wolfgang, Austria
- 06/2009            LV strain, twist and torsion  
Echocardiography Today and Tomorrow 2009 St.  
Wolfgang, Austria
- 06/2009            Workshop: Speckle tracking strain  
Echocardiography Today and Tomorrow 2009 St.  
Wolfgang, Austria
- 03/2009            Filling Pressure/ Mechanics: ACC Integrated Imaging 2009  
Annual Scientific Sessions, American College of Cardiology
- 09/2008            Left ventricular muscle and fluid mechanics:  
Novel applications in cardiovascular ultrasound imaging  
7th Annual Conference for Advanced Echocardiography  
Osaka, Japan
- 09/2008            Left ventricle: Form follows Function Annual Scientific Sessions  
Japan College of Cardiology  
Tokyo, Japan
- 06/2008            Workshop on Myocardial Strain  
Annual Scientific Sessions, American Society of Echocardiography  
Toronto, Ontario, Canada
- 03/2007            Illustrating How to Incorporate Echo Data in the AS

Structured Faculty Session, Annual Scientific Session of the American College of Cardiology

03/2005 Illustrating How to Incorporate Echo Data in the Myocardial Infarction Patient after Perfusion  
Structured Faculty Session, Annual Scientific Sessions of the American College of Cardiology

12/2004 Genesis of Waveforms in Doppler Myocardial Imaging, Spotlight Sessions, Annual Scientific Sessions of European Society of Echocardiography, Athens, Greece

02/2001 Live Case Demonstration: Normal Echocardiographic Approach  
Annual Conference of Indian Academy of Echocardiography Calcutta, India

02/2001 Controversy: Constrictive Pericarditis vs Restrictive Cardiomyopathy: Echocardiography is the Diagnostic Test  
Annual Conference of Indian Academy of Echocardiography Calcutta, India

2000 Diagnosis of Constrictive Pericarditis  
APICON 2000  
New Delhi, India

**National:**

12/2022 "How Can Artificial Intelligence be used To Improve Efficiency and Accuracy in Echocardiography?" Deborah Heart and Lung Center and Cardiovascular Institute of Philadelphia's Role of Cardiovascular Imaging in Women 9th Annual CME program, Philadelphia, PA

10/2022 "Speaker: Advanced Diastology: How can new technology assist us?" 39th Annual Echocardiography and Structural Heart Symposium, October 27-28, 2022, Miami, Florida

06/2022 "Peer Review – Journals: AI reporting requirements" Session: *Human Infrastructure*, 2022 NHLBI Workshop on Artificial Intelligence in Cardiovascular Imaging: Translating Science to Patient Care, June 27-28, 2022 (Virtual)

06/2022 "Point of Care Ultrasound", Conference of the American Society of Echocardiography 2022, Seattle, Washington DC

04/2022 "Speaker: What's new, what's on the horizon for POCUS - Targeted Echo leveraging POCUS", American College of Cardiology Conference 2022, Washington DC

03/2022 "Learning Outcomes Research in Cardiology Without Supervision", Beth Israel Deaconess Medical Centre, Smith Center Research Seminar Boston, Massachusetts (Online)

- 02/2022 “Synthetic Wisdom: Redefining the Taxonomy of diastolic dysfunction”, Brigham and Women’s Health Cardiovascular Imaging Rounds (online)  
Boston, Massachusetts
- 02/2022 “The Role of AI in Imaging in Heart Failure and Beyond”, Technologies and Heart Failure Therapeutics (THT) Conference 2022.  
New York, NY & Online
- 07/2021 “AI-Based Network Tomography for Understanding Phenotypic Presentations in Aortic Stenosis Print Session View Session” Disruptive Emerging Concepts | Use of AI-Based Technologies in Heart Valve Disease Diagnosis  
TVT 2021: The Structural Heart Summit  
Miami, FL
- 07/2021 Workshop on AI and Data Science in Smart Health.  
“Topological Data Analysis for Understanding New Taxonomy of Cardiovascular Diseases”  
Morgantown, WV
- 03/2020 “Estimating LV Filling Pressures with Doppler Echo and Hemodynamics”  
22nd Valve Disease, Structural Interventions, and Diastology/Imaging Summit  
Hollywood, Florida
- 03/2020 “Artificial Intelligence: Is this Going to Help the Clinician?”  
22nd Valve Disease, Structural Interventions, and Diastology/Imaging Summit  
Hollywood, Florida
- 02/2020 Assessment of Cardiac Mechanics: Fundamentals & Clinical Application  
Cardiology Grand Rounds  
Morgantown, WV
- 02/2020 “Basic Strain Imaging”  
State of the Art Echocardiography  
Phoenix, AR
- 02/2020 “Robotic Echocardiography: Artificial Intelligence and Machine Learning”  
State of the Art Echocardiography  
Phoenix, AR
- 02/2020 “Degenerated Bio Prostheses, Valve-in-Valve: What Echocardiographers Should Look For”  
State of the Art Echocardiography  
Phoenix, AR
- 02/2020 “Stress Cardiomyopathy: Variants As Seen on Echo”  
State of the Art Echocardiography  
Phoenix, AR
- 02/2020 “Right Ventricular Strain: Cases to Illustrate How”  
State of the Art Echocardiography  
Phoenix, AR

- 02/2020 “Basic Myocardial Strain Imaging”  
State of the Art Echocardiography  
Phoenix, AR
- 02/2020 “Pulmonary Embolism”  
State of the Art Echocardiography  
Phoenix, AR
- 11/2019 “Assessment of LV Diastolic Dysfunction”  
Cardiology Grand Rounds  
Morgantown, WV
- 11/2019 “Panel Discussion on the future of cardiology in US”  
2<sup>nd</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 11/2019 “Use of digital technology for understanding valvular heart disease.”  
2<sup>nd</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 11/2019 “Stump the experts: 10 Rapid fire cases for rural Appalachia”  
2<sup>nd</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 11/2019 “Technology enabled care in rural Appalachia”  
2<sup>nd</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 11/2019 “Assessment of LV Diastolic Dysfunction”  
Cardiology Grand Rounds  
Morgantown, WV
- 10/2019 “Machine Learning in Echo: Ready for Prime Time?”  
Science in the Age of Experience  
Boston, MA
- 10/2019 “Panel Discussion: What to Do After Borderline Coronary CTA?”  
Science in the Age of Experience  
Boston, MA
- 10/2019 “Artificial Intelligence-Future Implications for Cardiac Imaging?”  
Henry Ford Grand Rounds  
Detroit, MI
- 07/2019 “AI in Cardiac Imaging Part 1: Echocardiography and Nuclear Cardiology”  
Current Applications and Future of Artificial Intelligence in Cardiology  
San Francisco, CA

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- 07/2019 “Medical Decision Making and Synthetic Wisdom”  
Cardiology/Medicine Grand Rounds  
Morgantown, WV
- 06/2019 “Artificial Intelligence and Echo: A Perfect Marriage”  
American Society Echo Conference  
Portland, OR
- 06/2019 “Strain for Function: Where Are We Headed? (New Technologies)”  
American Society Echo Conference  
Portland, OR
- 06/2019 “Harnessing Big Echo Data: Novel Methods”  
American Society Echo Conference  
Portland, OR
- 06/2019 “Session II: Cardiovascular Imaging, Cognitive Computing and Natural Language Processing”  
AIMed Cardiology Conference  
Chicago, IL
- 06/2019 “Open Forum: AI in Medicine for Cardiology; Current State of the Art and How to Get Started and Future”  
AIMed Cardiology Conference  
Chicago, IL
- 05/2019 “Machine Learning and Artificial Intelligence in Cardiovascular Medicine”  
EPIC-SEC Conference  
Atlanta, GA
- 02/2019 “Constriction vs. Restriction”  
Cardiology Grand Rounds  
Morgantown, WV
- 12/2018 “Will Artificial Intelligence replace the diagnosing physician?”  
1<sup>st</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 12/2018 “Recent Advances in Noninvasive assessment of Cardiac Function”  
1<sup>st</sup> Annual Advances in Cardiovascular Medicine Conference  
Morgantown, WV
- 08/2018 “Research”  
Fellows Lecture  
Morgantown, WV
- 07/2018 “Transthoracic Echocardiography” & “Transesophageal Echocardiography”  
Fellows Lecture  
Morgantown, WV
- 06/2018 “Role of Artificial Intelligence and Telemedicine in Perioperative Imaging”



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ASE Scientific Sessions  
Nashville, TN

- 06/2018 “Machine Learning and Image Interpretation”  
ASE Scientific Sessions  
Nashville, TN
- 06/2018 ACC Tech Symposium  
“Machine Learning and Imaging”  
Santa Monica, California
- 05/2018 “Pericardial Diseases”  
WVU Echo Imaging Conference  
Morgantown, WV
- 04/2018 Einstein Medical Center  
Cardiology Grand Rounds  
“mHealth & Artificial Intelligence: The Brave New World in Non-Invasive Cardiology”  
Philadelphia, PA
- 4/2018 “Aortic Stenosis in Pregnancy”  
WVU Cardiology Grand Rounds  
Morgantown, WV
- 04/2018 “Interventional Echocardiography”  
WVU Echo Imaging Conference  
Morgantown, WV
- 04/2018 “Restrictive/Constrictive”  
WVU Echo Imaging Conference  
Morgantown, WV
- 03/2018 ACC Conference Scientific Sessions 2018  
“Artificial Intelligence & Cardiovascular Medicine: Mutualism or Parasitism?”  
Orlando, FL
- 03/2018 ACC Conference Scientific Sessions 2018  
“Imaging Assessment of Pulmonary Embolism, Pulmonary Hypertension”  
Orlando, FL
- 02/2018 37<sup>th</sup> Annual Cardiovascular Conference  
“Non-Invasive Testing for Valvular Heart Disease”  
Snowshoe, WV
- 02/2018 37<sup>th</sup> Annual Cardiovascular Conference  
“Non-Invasive Testing for CAD post PCI and CABG; Stress; Echo; Nuclear”  
Snowshoe, WV
- 02/2018 Leuven Meeting on Myocardial Function Imaging  
“New Technologies for Screening and Phenotypic assessment of diastolic dysfunction”

Brussels, Belgium

- 1/2018 “Left Ventricular Anatomy and Function”  
WVU Cardiology Grand Rounds  
Morgantown, WV
- 12/2017 “State of HVI Non-Invasive Imaging Labs”  
WVU Cardiology Echo Conference; WVU School of Medicine  
Morgantown, WV
- 11/2017 American Heart Association: Scientific Sessions 2017  
Disruptive Solutions (Part 1): Artificial Intelligence  
Anaheim, CA
- 09/2017 “Mitral Valve Regurgitation”  
WVU Cardiology Echo Conference; WVU School of Medicine  
Morgantown, WV
- 09/2017 “Mitral Stenosis”  
WVU Cardiology Echo Conference; WVU School of Medicine  
Morgantown, WV
- 09/2017 Synthetic Wisdom: mHealth and AI for Consultative Cardiology  
Twenty-first Annual New York Cardiac Center Lecture  
The Cornell Club, New York, NY
- 09/2017 Pacific NW Cardiovascular Summit:  
Multimodality imaging in structural heart disease  
Portland, OR
- 07/2017 Multimodality Imaging in TAVR:  
Echo-guided TAVR: Pre, During, and Post-implantation Assessment  
SCCT 12<sup>th</sup> Annual Scientific Meeting  
Washington, DC
- 06/2017 Outpatient Lecture for Fellows at the Cardiology Grand Rounds  
WVU School of Medicine  
Morgantown, WV
- 06/2017 Cardiac Imaging Grand Rounds: Echo/TEE.  
WVU School of Medicine  
Morgantown, WV
- 06/2017 IM Residents Noon Lecture: Use of Technology in Bedside Clinical Diagnosis  
Morgantown, WV
- 06/2017 American Society of Echocardiography Scientific Sessions 2017  
From Bench to Bedside- Machine Learning Approaches for Mining Speckle  
Tracking Big Data  
Baltimore, MD

- 06/2017 American Society of Echocardiography Science Sessions 2017:  
ASE Innovation Chair Address, Echovation 2017  
Baltimore, MD
- 06/2017 American Society of Echocardiography Scientific Sessions 2017  
The Leading Edge- Where will we be in 5 years?  
Machine Learning and Robotic Echo?  
Baltimore, MD
- 05/2017 The Living Heart Project:  
The Heart has its Reasons  
Washington, DC
- 05/2017 Live Structural Heart Cases: MitraClip,  
Mount Sinai Structural Heart Sessions  
New York, NY
- 04/2017 “Introduction to Imaging”  
WVU Cardiology Grand Rounds; WVU School of Medicine  
Morgantown, WV
- 04/2017 AMA 2017 Inspiration in Medicine Plenary Speech:  
What if advancement in visualization technology  
could transform patient care?  
Chicago, IL
- 03/2017 ACC Scientific Sessions 2017: 3D Printing and Holographic Images:  
Is the Future Here?  
Washington, DC
- 03/2017 ACC Scientific Sessions 2017: Concordance of Conventional 2D-Doppler  
Versus Speckle Tracking Echocardiography-Based Classification  
of Left Ventricular Diastolic Function  
Washington, DC
- 03/2017 ACC Scientific Sessions 2017: Functional Tricuspid Regurgitation  
Washington, DC
- 03/2017 European Society of Cardiology  
European Heart House Spring Summit Key Note:  
“Cardiology of Tomorrow-Virtual cardiology and mHealth”
- 03/2016 Visiting Professor, Cleveland Clinic, Ohio
- 03/2016 Grand Rounds, University of California  
•Are we going the way of Robotics and mechanical intelligence  
San Francisco, CA
- 03/2016 Grand Rounds, Washington Heart Center  
•The Future of Echocardiography: What Should We Expect in 2025?

Washington, DC

- 11/2015      AHA Scientific Session  
•The Future of Clinical Cardiology: What Should We Expect in 2025?  
Orlando, FL
- 10/2015      15th Annual Echo of NY. Crown Plaza  
•Diastology: New Guidelines  
•Diseases of the Pericardium and Restrictive Cardiomyopathy  
•Principles of Strain and Clinical Uses  
•Echo for TAVR and Mitral Clip  
•Moderators: 3D and 4D Echo Image Acquisition,  
•Cropping and Display: Case Studies  
New York, NY
- 09/2015      Sight & Sound of Echocardiography, Sheraton Hotel  
•Constrictive Pericarditis, slam dunk and not so easy cases to highlight each  
New York, NY
- 09/2015      Northwestern 37th Annual Echo Conference.  
• Strain-not to stressful  
• Twist and shout  
• Panel Discussion (cases)  
Chicago, IL
- 03/2015      Cardiology 64th Annual Scientific Session.  
American College of Poster Moderator /Discussant- Multimodality  
Imaging for Prognosis in Aortic Stenosis.  
San Diego, CA
- 01/2015      UMASS Memorial Medical School.  
• Noninvasive Assessment of Cardiac Structure and Function:  
Are we On-target to Meet Today' Challenges?  
Worcester, MA
- 10/2014      Third Annual Symposium. National Doral Resort,  
• Echocardiography Symposium – Thirty-third Annual Symposium:  
Role of Echocardiography in Assessing Patients Undergoing Transcatheter  
Aortic Valve Replacement Trump  
• Differential Diagnosis of Restrictive Cardiomyopathy versus Constrictive Pericarditis  
• Challenging Cases: Testing Your Skills-Faculty and Audience Participation  
• Future of Echocardiography and Emerging  
Paradigms: Are we Going the Way of Robotics and Mechanical Intelligence  
Miami, Florida
- 10/2014      44<sup>th</sup> Annual Cardiology Teaching Day: Mitral regurgitation  
And Aortic Stenosis with insights into TAVR.  
Poughkeepsie, New York.
- 10/2014      Echo NY, Mount Sinai Hospital, NYC  
• Diastolic Dysfunction: Pitfalls and Pearls.

- Echo NY, Mount Sinai Hospital, NYC Disease of the Pericardium and Restrictive Cardiomyopathy.
  - Role of Echo for TAVR.
  - Image Acquisition, Cropping and Display
- 07/2014 Noninvasive Assessment of Cardiac Structure, Mayo Clinic, Rochester, MN. Are we On-Target to Meet Today's Challenges?
- 06/2014 25th Annual Scientific Session, Portland, OR
- Early Diagnosis of Disease by Myocardial Deformation
  - Strain in Hypertension Disease and HCM
- 06/2014 2014 Complex Coronary, Valvular & Vascular Cases Symposium-Mount Sinai Hospital (NY, NY) Live Cases
- 02/2014 27th Annual State of the Art Echocardiography, Scottsdale AZ
- Wild Wild West, Cases from the Echo Corral
  - 2D and 3D Imaging of Functional and Ischemic Mitral Regurgitation.
  - Demystifying Strain Imaging
- 01/2014 The Accelerated Future of Echo Cardiology.  
Mount Sinai Medical Center (New York, New York)
- 12/2013 Assessment of Subclinical Cardiovascular Disease Using Cardiac Ultrasound– Emerging Paradigms. The University of Texas MD Anderson Center (Houston Texas)
- 11/2013 Echocardiography: Clinical Application of Myocardial Strain Imaging- American Heart Association (Dallas, Texas)
- 07/2013 14th Feigenbaum lecturer: Intelligent Platforms for Disease Assessment: Novel Approaches in Functional Echocardiography. Annual Scientific Session, American Society of Echocardiography (Minneapolis)
- 07/2013 Nitty Gritty of Cardiac Mechanics: Ischemic Heart Disease. Annual Scientific Session, American Society of Echocardiography
- 06/2013 Live cases, Course Co-director. 2013 Structural Heart / Complex Coronary Symposium Agenda. Mount Sinai Medical Center (New York)
- 05/2013 Workshop on Myocardial Mechanics 101: Understanding gaps and applying standards. Sights and Sounds of Echocardiography in the Big Apple (New York)
- 05/2013 Constrictive pericarditis: pathognomonic echo/doppler features. Do I need more? CT/MRI? Sights and Sounds of Echocardiography in the Big Apple (New York)
- 02/2013 American Society of Echocardiography's 26th Annual State-of-the-Art Echocardiography Conference (Scottsdale, AZ)



- 11/2012 American Heart Association (Los Angeles)
- 06/2012 23rd Annual Scientific Session of the American Society of Echo  
(National Harbor, MD)  
Quantifying Regional Myocardial Function: New ASE/EAE Recommendations  
(Joint EAE Session)- Chair  
All You Wanted to Know About Myocardial Mechanics- Chair
- 05/2012 Sights & Sounds of Echocardiography in the Heart of the Big Apple  
(New York)
- Myocardial Mechanics 101: Understanding, gaps and applying standards
- Learn how to acquire data on different ultrasound machines  
Learn how to analyze the data
- Constrictive Pericarditis: Pathognomonic Echo/Doppler Features.  
Do I Need More? CT/MRI? (Chair/Moderator)
- 03/2012 American College of Cardiology (Chicago)
- 02/2012 State of the Art Echocardiography (Scottsdale)
- 02/2011 24th Annual State-of-the-art Echocardiography  
Scottsdale, Arizona  
Myocardial Mechanics 101: Strain, Strain Rate and Speckle Tracking  
Myocardial Mechanics 101: twist and torsion Tissue Doppler and Strain Imaging:  
Why? How? Case studies in infective endocarditis  
Contemporary assessment of pericardial constriction:  
A practical guide for comprehensive assessment
- 03/2010 FIT Sessions: Best Poster  
Annual Scientific Sessions of the American College of  
Cardiology Atlanta, Georgia
- 11/2009 Novel Imaging Strategies for Predicting Remodeling and Evolution  
of Heart Failure Annual Scientific Sessions of the American Heart Association  
Orlando, Florida
- 06/2009 Myocardial Strain A to Z: Preclinical cardiomyopathy  
Annual Scientific Sessions American Society of Echocardiography  
Washington, DC
- 05/2009 Twist, Torsion, Vortex, Simplifying Terminologies,  
Sights and Sounds of Echocardiography  
New York, New York
- 02/2009 Vortex Imaging: Newer Concept with Emerging Clinical  
Applications, Echocardiography today and tomorrow  
Phoenix, Arizona

- 01/2009            Cardiac Dysfunction: Early Detection New Insights from Vortex Imaging  
Phoenix, Arizona
- 11/2008            Simplifying the Terminology. Twist, Torsion, Vortex Formation Time  
Chicago, Illinois
- 11/2008            Imaging to Vortex. What Is the “Vortex”? Should We Evaluate Myocardial Mechanics or Flow or Both?  
Chicago, Illinois
- 11/2008            Myocardial Form Follows Function: New Concepts for Quantification of Myocardial Function  
6th Annual Echocardiography from Pictures to Information  
Phoenix, Arizona
- 09/2008            Case-Based Introduction to Myocardial Mechanics and Concepts of Motion, Strain, Rotation, Torsion  
John Hopkins, Baltimore, Maryland
- 11/2007            Filling Pressures in ADHF-Beyond Biomarkers iMAX  
Orlando, Florida
- 09/2007            Myocardial Strain, Velocity, Torsion by Speckle Tracking – Workshop  
6th Annual Echocardiography from Pictures to Information  
Phoenix, Arizona
- 05/2007            Vortex Imaging: A new frontier  
Sedona, Arizona
- 10/2006            Myocardial Form Follows Function-Implication for the Imager  
5th Annual Echocardiography from Pictures to Information  
Phoenix, Arizona
- 03/2006            There is a Twist to the Descent  
E3-Essential Echocardiography with Experts - ASE  
Atlanta, Georgia
- 10/2005            It Does Not Pump, It Does Not Squeeze, What Does It Do?  
4th Annual Echocardiography from Pictures to Information  
Phoenix, Arizona
- 11/2004            Understanding the Function of the Myocardium. Physiologic Basis for 'Squiggles'  
2nd Annual Echocardiography from Pictures to Information  
Phoenix, Arizona
- 06/2001            Tropical Echocardiography: Interesting Cases  
New England Medical Center  
Boston, Massachusetts

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06/2001 Percutaneous Mitral Commissurotomy: Single Center Experience  
New England Medical Center  
Boston, Massachusetts

**Regional:**

04/2022 “Understanding Heart Failure Through the Lens of Artificial Intelligence”, Saint Peters University Hospital Department of Medicine Grand Rounds  
New Brunswick, NJ

09/2021 “Role of AI for Echocardiographic Assessment of Aortic Stenosis” Understanding use of supervised & unsupervised techniques for assessing AS severity, Understanding application of AI approaches for screening AS  
Morristown Medical Center - Cardiovascular Grand Rounds, Teleconference

09/2021 "Future of Cardiovascular Imaging: Will Artificial Intelligence Replace Us?"  
European Society of Cardiology Digital Summit 2021 - # 105  
Sophia Antipolis, FR

09/2021 “Artificial Intelligence and the Art of Medicine” Growth of AI technologies in clinical medicine and the impact of AI on medical decision making.  
Penn Medicine Princeton Medical Center  
Princeton, NJ

**Departmental/Local:**

01/2023 “AI and Digital Transformation of Cardiology”, Newark Beth Israel Medical Center Grand Rounds (Virtual)

12/2022 “Echocardiography in Structural Heart Procedures” RWJBH Structural Heart Education Day, December 10, 2022

03/2022 "Precision Phenotyping of Heart Failure", RWJMS Division of Cardiovascular Disease & Hypertension Cardiology Grand Rounds,  
New Brunswick, NJ (Online)

02/2022 "AI and the Art of Medicine", Robert Wood Johnson Medical School, Department of Medicine Grand Rounds Presentation  
New Brunswick, NJ

11/2021 “Of that Waltz in my Heart” Robert Wood Johnson Medical School Department of Medicine Grand Rounds Presentation  
New Brunswick, NJ

**Patents Awarded**

Method for imaging intracavitary blood flow patterns (US 8,328,724 B2) Coinventors: **Sengupta, Partho P.**; Belohlavek, Marek; and Khandheria, Bijoy K.

## **US Patent Filed**

- Methods and apparatus for categorization of the diastolic dysfunction. WO2017205836
- Cardiac Ultrasonic Fingerprinting: An Approach for High-throughput Myocardial Feature Phenotyping

## **TEACHING**

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2003 – Present Inpatient, Consultation, and Graphics Rotations as well as Non-Invasive Cardiology Call Schedule and Clinical Teaching all in conjunction with fellows of the cardiovascular disease and Cardiology Fellowship Programs of WVU School of Medicine.

## **Research Mentorship**

2022-present Marton Tokodi (Post-Doc Research Fellow), Rutgers Robert Wood Johnson Medical School

2022 - present Ankush Jamthikar, (Post-Doc Research Fellow), Rutgers Robert Wood Johnson Medical School

2021-2022 Rohan Shah (Post-Doc Research Fellow), Rutgers Robert Wood Johnson Medical School

2019 – present Quincy Hathaway, (Medical Student), West Virginia University

2017-2018 Marton Tokodi, Description: (Post-Doc Research Scholar), WVU

2018-2019 Jung Soo Cho, Description: (Post-Doc Research Scholar), WVU

2018-2020 Nobuyuki Kagiya, (Post-Doc Research Scholar), WVU

2018-2020 Sirish Shrestha: (Post-Doc Research Scholar), WVU

2018-2020 Marco Piccirilli: (Post-Doc Research Scholar), WVU

2014-2016 Ines Sheriffi- Description: Cardiology Fellow

2015-2017 Alaa Omar (Post-Doc Research Fellow)- Description: Mount Sinai Hospital

2014-2015 Sharath Vallabhajosyula (Coordinator)- Description: Icahn School of Medicine

2013-2015 Brandon Wiley (Cardiology Fellow)- Description: Mount Sinai Hospital

2013-2015 Sukrit Narula (Research Student)- Description: Icahn School of Medicine

2012-2014 Chan Seok Park (Research Fellow)- Description: Icahn School of Medicine

2012-2014 Karen Modesto (Post-Doc)- Description: Icahn School of Medicine

2011-2014 Makoto Amaki (Visiting Clinician)- Description: Icahn School of Medicine

2011-2012 Giuseppe Caracciolo (Post-Doc)- Description: Icahn School of Medicine

2011-2012 Ayume Nakabo (Visiting Clinician)- Description: Icahn School of Medicine

2011-2012 Georg Goliash (Visiting Clinician)- Description: Icahn School of Medicine

2011-2012 Daniela Borges (Visiting Clinician)- Description: Icahn School of Medicine

2010-2011 Caleb Thompson (Instructor, Cardiology)- Description: University of California, Irvine

2010-2011 Timothy Gong (Internal Medicine Resident)- Description: University of California, Irvine

2009-2010 Haruhiko Abe (Research Fellow)- Description: Mayo Clinic Arizona, University of California, Irvine

2009-2010 Haruhiko Abe (Research fellow)- Description: Mayo Clinic Arizona

2009-2010 Mayank kansal (Echo Clinical Fellow)- Description: Mayo Clinic Arizona

2009–2010 Nupoor Narula (Medical Student)- Description: Mayo Clinic Arizona

2009–2010 Raina Roy (Clinical Fellow)- Description: Mayo Clinic Arizona

2009–2010 Nisha Bhatia (Clinical Fellow)- Description: Mayo Clinic Arizona

2008-2009 Arredondo, Michael (Internal Medicine Resident)- Description: Mayo Clinic Arizona

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2008–2009 Buetler, David (Medical Student)- Description: Mayo Clinic Arizona  
2008–2009 Caracciolo, Giuseppe (Research Fellow)- Description: Mayo Clinic Arizona  
2008–2009 Geyer, Holly (Internal Medicine Resident)- Description: Mayo Clinic Arizona  
2007-2009 Elied, Mackram (Internal Medicine Resident) Current Status: Chief Medical Resident, Mayo Clinic Arizona  
2007-2008 Joo Cho, Eun (Resident)- Description: Mayo Clinic Arizona  
2005-2007 Krishnamoorthy, V.K. (Research Fellow)- Description: Mayo Clinic Rochester

**Consulting/Entrepreneurship/Advisory Roles**

2017-ongoing Consultant: HeartSciences  
2017-ongoing Consultant: Ultromics  
2015-2017 Consultant: Kencor Health  
2015-2017 Consultant: Hitachi Aloka Medical Systems  
2012-ongoing Founder Member: TruVision LLC, Rhode Island  
2012-2015 Advisor: Tele HealthRobotics LLC  
2012-2015 Advisor: Tele Health Now LLC  
2010-ongoing Founder Member: Foundation-I4 (International Innovations in Imaging and Interventions, Nonprofit organization  
2015-2016 Consultant: GE Healthcare  
2013-2015 Consultant: Edward Lifesciences  
2012-2015 Strategic Advisor: Saffron Intel Technologies Inc  
2012-2014 Chief Medical Advisor: Medical Intelligence LLC  
2010 Chief Advisor: National Science Foundation (NSF) SBIR Phase I Study, Interactive Flow Studies Corporation