SMRA 2022

www.society4MRA.org

34th Annual International Conference

Solving Clinical Problems

with Human Creativity & Machine Learning

Meeting Location

UCLA Meyer and Renee Luskin Conference Center

425 Westwood Plaza, Los Angeles, CA 90095

Main Conference

Tuesday, August 23 - Friday, August 26

President

Dr. Chun Yuan

Chair of Program Committee

Dr. Debiao Li & Dr. Paul Finn

Cedars Sinai

UCLA

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PROGRAM AT A GLANCE

Tuesday, August 23

Welcome -- 08:00 - 08:30 AM

Moderator: Chun Yuan, PhD

Plenary Session I: Current State of MRA and CMR -- 08:30 - 10:00 AM

Moderators: J. Paul Finn, MD, Gerhard Laub, PhD

Break: 10:00 - 10:15 AM

Scientific Session I: Head and Neck MRA -- 10:15 - 11:51 AM

Moderators: Laura Eisenmenger, MD, Qin Qin, PhD

Lunch Buffet: 12:00 - 01:00 PM. Centennial Terrace (3rd Floor, UCLA Luskin). Lunch tickets will be provided.

Plenary Session II: New Horizons -- 01:00 - 02:50

Moderators: Martin Prince, MD, PhD, Debiao Li, PhD, Chun Yuan, PhD

Break: 02:50 - 03:00 PM

Scientific Session II: Vessel Wall MRI -- 03:00 - 04:53 PM

Moderators: Mahmud Mossa-Basha, MD, Ye Qiao, PhD

Social Evening Event: Welcome Reception -- 06:30 - 09:00 PM

Where: 1st floor - LUSKIN COURTYARD SOUTH

Address: UCLA Luskin Convention Center

Cured meat and cheeses appetizers

Wednesday, August 24

Plenary Session III: Artificial Intelligence in MRA and CMR -- 08:00 - 10:00 AM

Moderators: Tim Leiner, MD, PhD, Niranjan Balu, MBBS, PhD, Giles Roditi, MD

Break: 10:00 - 10:15 AM

Scientific Session III: Quantitative Flow MRI -- 10:15 - 11:53 AM

Moderators: Charles Dumoulin, PhD, Susanne Schnell, PhD

Lunch Buffet: 12:00 - 01:00 PM. Centennial Terrace (3rd Floor, UCLA Luskin). Lunch tickets will be provided.

Plenary Session IV: Tailoring MRA for women and underserved groups/diseases -- 1:00-2:30 PM

Moderators: Ashley Prosper, MD, Dana Peters, PhD

Break: 02:30 - 02:45 PM

Scientific Session IV: Thoracic and Cardiac MR -- 02:45 - 05:01 PM

Moderators: Kim-Lien Nguyen, MD, Graham Wright, PhD

Social Evening Event: UCLA Luskin Dinner -- 06:30 - 09:00 PM

Where: LUSKIN – 3rd floor OUTDOOR CENTENNIAL TERRACE

Address: UCLA Luskin Convention Center

Buffet – Mediterranean Grill

No cost to delegates – included in the registration fee

Informal Gathering after dinner -- 09:00 PM

9:00 pm – 13-minute Walk to Broxton Brewery: 1099 Westwood Blvd, Los Angeles, CA 90024

For a Casual Social Event – Cash Bar

PROGRAM AT A GLANCE

Thursday, August 25

Plenary Session V: Venous Imaging -- 08:00 - 09:30 AM

Moderators: Stefan Ruehm, MD, PhD, Jeffrey Maki, MD, PhD

Break: 09:30 - 09:45 AM

Scientific Session V: Coronary/peripheral/abdominal MRA/Cardiac MRI -- 09:45 - 12:12 PM

Moderators: Rene Botnar, PhD, Mitsue Miyazaki, PhD

Lunch Buffet: 12:00 - 01:00 PM. Centennial Terrace (3rd Floor, UCLA Luskin). Lunch tickets will be provided.

Plenary Session VI: Industry -- 01:00 - 02:20 PM

Moderators: Paul Finn, MD, Charles Dumoulin, PhD

Break: 02:20 - 02:35 PM

Scientific Session VI: Technical and clinical challenges -- 02:35 - 05:00 PM

Moderators: Anthony Christodoulou, PhD, Kim-Lien Nguyen, MD

Social Evening Event: Dinner - Fowler Museum on UCLA Campus -- 06:30 - 09:00 PM

Delegates walk (5-minute walk) to Museum on campus: Address: 308 Charles E Young Dr N,LA

No cost to delegates – included in the registration fee

07:00 PM Guests Arrive | Tray Passed Appetizers - Courtyard

08:00 PM Guests Invited to the Terrace

08:30 PM Dinner Begins

09:30 PM Dessert

11:00 PM Event Ends

Friday, August 26

Plenary Session VII: Career Development -- 08:00 - 10:00 AM

Moderators: Yin Guo, MD, PhD, Calder Sheagren, PhD, Nan Wang, PhD, Suvai Gunasekaran, PhD

Break: 10:00 - 10:15 AM

Plenary Session VIII: Multicenter Studies -- 10:15 - 11:18 AM

Moderators: David Saloner, PhD, Elizabeth Hecht, MD

Closing Session I: Future of MRA/CMR -- 11:18 - 12:13 PM

Moderators: Richard Frayne, PhD, Debiao Li, PhD, J. Paul Finn, MD

Closing Session II: Award Presentations & Announcement of 2023 Meeting -- 12:13 - 12:30 PM

- Presentation of Potchen and Passariello Awards, Giles Roditi, MD (President of SMRA 2021)
- AI challenge awards, Chun Yuan, PhD (President of SMRA 2022)
- Announcement of 2023 Meeting: Xihai Zhao, MD, President of SMRA 2023, Hideki Ota, MD, Organizer of SMRA 2023
- Closing Remarks (Chun Yuan, PhD; J. Paul Finn, MD; Debiao Li, PhD)

WELCOME LETTER

Welcome to SMRA 2022 - from our President - Chun Yuan

As the SMRA President, I am delighted that we are returning to our in-person conference this year. It goes without saying that COVID remains impactful to conference planning, particularly in the areas of travel and safety for our delegates. Despite the foreseen complexities, our goal from day 1 was to host a world-class, in-person meeting while remaining cognizant and observant of the current state of affairs. We have had the benefit of watching how other conferences handle these rough waters and I have even attended a few recently. I cannot overstate how absolutely refreshing it is to interact with colleagues and friends in person again. For this reason, I am very excited to announce our current registration numbers project the same attendance as our conference 2 years ago in Nantes, France, prior to COVID. It is clear I am not the only one who recognizes the importance of face-to-face collaboration and, more importantly, the serendipitous conversations that occur at in-person meetings.

The SMRA board has worked diligently all year to provide support to the 2022 Scientific Co-Chairs (Dr. Debiao Li and Dr. Paul Finn) to ensure we have a successful scientific program. Special thanks to the outstanding Program Chairs: Anthony Christodoulou & Kim-Lien Nguyen and the Early Career Committee Chairs: Nan Wang and Maria Aristova.

Introduction of our Incoming President – Xihai Zhao

I would like to introduce our new incoming President Xihai Zhao from Tsinghua University in Beijing. Xihai, unfortunately, cannot attend this year's conference due to the strict COVID travel restrictions in Beijing. Xihai has been a very active board member for the last few years and will easily step into the role of President.

A few words from Xihai: As the incoming president, it is my great honor to work with all of you in the community of SMRA to promote the innovation, translation and application of MRA techniques for improving health care. The events of SMRA annual conference provide the experts and trainees with the opportunities of communication and collaboration indeed. After the virtual events from 2020 to 2021 during COVID pandemic, it is very exciting that we will return to face-to-face conference at Los Angeles in this year. The co-chairs of the annual conference of SMRA 2022 of Dr. Debiao Li and Dr. Paul Finn made great efforts to organize this scientific conference. I would encourage you to participant in this impressive event. Unfortunately, I cannot be there due to the COVID travel restrictions.

As for next year, I look forward to meeting everyone in the fall of 2023 in beautiful Sendai, Japan.

Warm regards,

Chun Yuan, President, SMRA

Xihai Zhao, Incoming President, Fall 2022

SMRA COMMITTEES

Executive Committee

President
- **Chun Yuan,** University of Utah, University of Washington

President Elect
- **Xihai Zhao,** Tsinghua University

Secretary
- **Charles (Chuck) Dumoulin,** PhD - Cincinnati Children's Hospital Medical Center

Treasurer
- **Michael Markl,** Northwestern University

Anthony Christodoulou, Cedars-Sinai Medical Center

Manuela Aschauer, Medical University of Graz

Aleksandra Radjenovic, University of Glasgow

Giles Roditi, University of Glasglow

Monica Sigovan, Université Claude-Bernard Lyon 1

Richard Frayne, University of Calgary

Program Committee

Chairs
- **Debiao Li**, Cedars-Sinai Medical Center
- **Paul Finn**, UCLA

Abstract Chair
- **Anthony Christodoulou**, Cedars-Sinai Medical Center

Program Committee (in alphabetical order)
- **Maria Aristova**, Northwestern University
- **Rene Botnar**, King's College London
- **Huijun Chen**, Tsinghua University
- **Anthony Christodoulou**, Cedars-Sinai Medical Center
- **Damini Dey**, Cedars-Sinai Medical Center
- **Paul Finn**, UCLA
- **Debiao Li**, Cedars-Sinai Medical Center
- **Michael Markl**, Northwestern University
- **Mahmud Mossa-Basha**, University of North Carolina at Chapel-Hill
- **Kim-Lien Nguyen**, UCLA
- **Hideki Ota**, Tohoku University Hospital
- **Aleksandra Radjenovic**, University of Glasgow
- **Giles Roditi**, University of Glasgow
- **Nan Wang**, Stanford University

SMRA COMMITTEES

- **Qi Yang**, Chaoyang Hospital
- **Chun Yuan**, University of Utah, University of Washington
- **Xihai Zhao**, Tsinghua University

Early Career Committee (ECC)

- **Nan Wang**, Chair
- **Maria Aristova**, Co-Chair
- **Carson Hoffman**, Member
- **Trisha Roy**, Member
- **Matthew Lanier**, Member
- **Matthew Alexander**, Member
- **Mohammed Elbaz**, Member
- **David Marlevi**, Member
- **Yin Guo**, Member
- **Liliana Ma**, Member
- **Calder Sheagren**, Member
- **Giles Roditi**, Board Member
- **Manuela Aschauer**, Board Member
- **Xihai Zhao**, Board Member

Award Committee

- **Giles Roditi, MD**, Chair, University of Glasgow
- **Manuela Aschauer**, Medical University of Graz
- **Elizabeth Hecht**, MD, Weill Cornell
- **Hideki Ota**, Tohoku University Hospital
- **Dana Peters**, PhD, Yale
- **David Saloner**, PhD, UCSF

SMRA Secretariat

- **Janette Wallace**, Board Secretariat & Conference Manager
- **Johanne Langford**, Conference Coordinator
- **Anna Van Vliet**, Society & Conference Assistant
- **Jessica Guillemette**, Conference Assistant

Administrative Assistance:

- **Kelli DeJohn**, Cedars-Sinai Medical Center
- **Joceline Mota**, Cedars-Sinai Medical Center

Volunteers

- **Tianle Cao**, Cedars-Sinai Medical Center
- **Zengtian Deng**, Cedars-Sinai Medical Center
- **Garima Diwan**, Cedars-Sinai Medical Center
- **Chang Gao**, UCLA
- **Kosta Gjorgjievski**, Cedars-Sinai Medical Center
- **Zheyuan Hu**, Cedars-Sinai Medical Center
- **Hsu-Lei Lee**, Cedars-Sinai Medical Center

SMRA COMMITTEES

- **Zhengyang Ming**, UCLA
- **Shihan Qiu**, Cedars-Sinai Medical Center
- **Haoran Sun**, Cedars-Sinai Medical Center
- **Chaowei Wu**, Cedars-Sinai Medical Center
- **Kaiyu Zhang**, University of Washington
- **Zixuan Zhao**, UCLA
- **Arutyun Pogosyan**, UCLA
- **Sunny Huang**, Cedars-Sinai Medical Center
- **Ma Sen**, Q Bio
- **Vincent Mao**, GE

ABSTRACT REVIEWERS

Matthew Alexander, University of Utah
Maria Aristova, Northwestern University
Ryan Avery, Northwestern University
Niranjan Balu, University of Washington
Huijun Chen, Tsinghua University
Anthony Christodoulou, Cedars-Sinai Medical Center
Charles Dumoulin, Cincinnati Children's Hospital Medical Center
Robert Edelman, NorthShore University HealthSystem
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Yibin Xie, Cedars-Sinai Medical Center
Chun Yuan, University of Utah, University of Washington
Xihai Zhao, Tsinghua University

SCIENTIFIC PROGRAM

Tuesday, August 23

Welcome

Time: 8:00-8:30 AM - Tuesday, August 23

Moderator: **Chun Yuan**, PhD, University of Utah, University of Washington

- **Chun Yuan**, PhD, University of Utah, University of Washington, President, SMRA
- **John Mazziotta**, MD, PhD, Vice Chancellor, UCLA Health Sciences and CEO, UCLA Health
- **Jeffrey Golden**, MD, Vice Dean of Research and Graduate Education, Director of the Burns and Allen Research Institute, Cedars-Sinai Medical Center
- **J. Paul Finn**, MD, UCLA, Meeting Co-Chair
- **Debiao Li**, PhD, Cedars-Sinai Medical Center, Meeting Co-Chair

Plenary Session I: Current State of MRA and CMR

Time: 8:30 - 10:00 AM - Tuesday, August 23

Moderators: **J. Paul Finn**, MD, UCLA

Gerhard Laub, PhD, Dr. Laub Consulting LLC

Time	Topic
8:30 - 8:45	Trends in Utilization of MRA and CTA**: James Goldfarb** , PhD, St. Francis Hospital, Roslyn, NY
8:45 - 9:00	Non-Invasive Angiography - Trends in MRI and CT Share over a Decade and then Pandemic in Scotland**: Giles Roditi**, MD, University of Glasgow, UK
9:00 - 9:15	When and Why I Choose CTA over MRA**: Geoffrey Rubin**, MD, University of Arizona
9:15 - 9:30	When and Why I Choose MRA over CTA**: Martin Prince**, MD, PhD, Cornell University
9:30 - 9:45	Trends in CMR: Highlights of SCMR 2022**: Michael Salerno**, MD, Stanford University
9:45 - 10:00	Panel Discussion**:** All speakers

10:00-10:15 AM Break

Scientific Session I: Head and Neck MRA

Time: 10:15 - 11:51 AM - Tuesday, August 23

Moderators: **Laura Eisenmenger**, MD, University of Wisconsin

Qin Qin, PhD, Johns Hopkins University

Time	Topic
10:15 - 10:27	MRA Techniques and Their Role in Stroke Imaging**: Hediyeh Baradaranj**, MD, University of Utah
10:27 - 10:39	Fast MR Imaging in the Stroke Patients: Integration into Clinical Decision Making**: Kambiz Nael**, MD, UCLA
10:39 - 10:51	Advances in Carotid MR Imaging: Promising Techniques for Clinical Translation**: David Saloner**, PhD, UCSF

10:51-11:51 AM Abstract presentations (Oral: 8 min; Power pitch: 2.5 min)

SCIENTIFIC PROGRAM

Tuesday, August 23

Orals

1. Risk of Recurrent Cerebral Infarction in Stroke Patients with Intracranial Atherosclerotic Disease, **Ye Qiao** (Johns Hopkins University).
2. MRA/MRI of Morphology and Function in Intracranial Aneurysms of the Posterior Circulation, **David Saloner** (UCSF).
3. Deep Learning Intracranial Aneurysm Detection on 3D TOF-MRA, **Sinead Culleton** (University of Utah).
4. Association of Combining Characteristics of Intracranial Atherosclerotic Disease and Cerebral Small Vessel Disease with Acute Ischemic Stroke in Symptomatic Patients: A Magnetic Resonance Imaging Study, **Miaoxin Yu** (Capital Medical University).
5. A Software Platform for the Combined Analysis of Intracranial Blood Flow, Diffusion and Perfusion, **Patrick Winter** (University of Greifswald).

Pitches

1. Intracranial Aneurysm Segmentation from Highly Imbalanced 3D TOF-MRA Images using Evolving Hybrid Focal loss-based Deep Learning, **Maysam Orouskhani** (University of Washington).
2. Associations Between Cerebral Blood Flow and Progression of White Matter Hyperintensity in Community-Dwelling Adults: A Longitudinal Cohort Study, **Hualu Han** (Tsinghua University).
3. Discrimination of Dolichoectasia and Atherosclerosis by MRA Tortuosity Metric Measurements in a Population-based Study, **Shang Zhou** (Johns Hopkins University).
4. Automatic Centerline Extraction of Vessel Branch Based on Point Detection Model, **Wei Qiu** (Tsinghua University).
5. Rapid 3D Head-Neck MRA using Velocity-Selective Pulse Train and Spiral Acquisition, **Dan Zhu** (Kennedy Krieger Institute).
6. Quantification of Post-Surgical Hemodynamic Changes in Pediatric Brain Arteriovenous Malformation Using 4D-Flow Magnetic Resonance Imaging, **Alireza Sojoudi** (UCSF).
7. Optimization of 4D Flow MRI Spatial Resolution using a Patient-Specific Phantom Model of a Carotid Web, **Retta El Sayed** (Emory University).
8. Image Processing Framework for Categorization of Intracerebral Hemorrhage Age Features, **Thomas Lilieholm** (University of Wisconsin–Madison).

12:30 - 1:00 PM, Lunch Discussion on Career Development and Diversity in Odyssey Room

SCIENTIFIC PROGRAM

Tuesday, August 23

Plenary Session II: New Horizons

Time: 1:00 - 2:50 PM - Tuesday, August 23

Moderators: **Martin Prince**, MD, PhD, Cornell University
Debiao Li, PhD, Cedars-Sinai Medical Center
Chun Yuan, PhD, University of Utah, University of Washington

Time	Topic
1:00 - 1:20	Evolution of MRA and Non-contrast MRA: **Robert Edelman**, MD, PhD, Northshore University HealthSystem (Martin Prince Lecture)
1:20 - 1:35	Continuous Quantitative Multi-contrast CMR: **Anthony Christodoulou**, PhD, Cedars-Sinai Medical Center
1:35 - 1:50	4D Flow and MRA: **Michael Markl**, PhD, Northwestern University
1:50 - 2:05	Intracranial and extracranial vessel wall MRI utilization trends: **Mahmud Mossa-Basha**, MD, University of Washington
2:05 - 2:20	Low field cardiovascular MR: **Krishna S. Nayak**, PhD, University of Southern California
2:20 - 2:35	Multimodality Plaque Imaging (MRA + PET): **Pamela Woodard**, MD, Washington University
2:35 - 2:50	Panel Discussion: All speakers

2:50-3:00 PM Break

Scientific Session II: Vessel Wall MRI

Time: 3:00 - 4:53 PM- Tuesday, August 23

Moderators: **Mahmud Mossa-Basha**, MD, University of Washington
Ye Qiao, PhD, Johns Hopkins University

Time	Topic
3:00 - 3:12	Quantitative MRI for Atherosclerotic Plaque: **Maria Altbach**, PhD, University of Arizona
3:12 - 3:24	Clinical Carotid Plaque Imaging: **Kevin DeMarco**, MD, Walter Reed National Military Medical Center
3:24 - 3:36	The Value of MR Vessel Wall Imaging in Cryptogenic Stroke: **Ajay Gupta**, MD, Cornell University
3:36 - 3:48	Multi-vascular Bed MR Vessel Wall Imaging in MI patients: **Janet Wei**, MD, Cedars-Sinai Medical Center

3:48 - 4:53 PM Abstract presentations (Oral: 8 min, power pitch: 2.5 min)

SCIENTIFIC PROGRAM

Tuesday, August 23

Orals

1. In Vivo T2* Mapping of Intracranial Atherosclerotic Plaque Distinguishes Symptom-Producing Plaques: A 7T MRI Study, **Ziming Xu** (Tsinghua University).
2. Comparison of Carotid Atherosclerosis Plaque Characteristics Between Elderly Men and Women Using Magnetic Resonance Vessel Wall, **Lichen Zhang** (The Fifth Medical Center of Chinese PLA General Hospital).
3. Simultaneous 3D Aortic Lumen and Vessel Wall Imaging with iT2prep-BOOST, **Camila Munoz** (King's College London).
4. Imaging Ascending Thoracic Aortic Aneurysm Wall Stretch: A Comparison to Uniaxial Mechanical Testing, **Huiming Dong** (UCSF)
5. Fusion of Ferumoxytol Enhanced MRA with Non-contrast CT: Filling in the Missing Pieces, **Takegawa Yoshida** (UCLA Department of Radiology).

Pitches

1. Identification of Intracranial Plaque Features associated with Recurrent Stroke: A Multi-modality Imaging Study using CT and Vessel Wall MRI, **Lingling Wang** (Renji Hospital)
2. Vasa Vasorum of Proximal Cerebral Arteries Mimic Intracranial Vasculitis, **Thorsten A. Bley** (University of Wuerzburg)
3. Predictors of Progression in Intraplaque Hemorrhage Volume in Patients with Carotid Atherosclerosis: A Serial Magnetic Resonance Imaging Study, **Mingming Lu** (Chinese PLA general hospital)
4. Carotid Atherosclerotic Vulnerable Plaque Characteristics on Magnetic Resonance Imaging: Effective Predictors for Silent Stroke after Carotid Endarterectomy, **Ran Huo** (Peking University Third Hospital)
5. The Relationship of Chronic Carotid Artery Occlusion and Recurrent Stroke Risk: A Carotid MR-VWI study, **Jin Zhang** (Renji Hospital)
6. Added Value of Intracranial Vessel Wall Magnetic Resonance Imaging Across Stenosing Vasculopathies on a Per-Patient Basis, **Nadin Mohamed Zanaty** (Zagazig University)
7. Accuracy of Characterizing Carotid Vulnerable Atherosclerotic Plaque by 3D MR Vessel Wall Imaging: A Histological Validation Study, **Chenlin Du** (Tsinghua University)
8. Associations of Morphology of Lenticulostriate Arteries and Plaque Characteristics with Single Subcortical Infarction: A High-resolution Vessel Wall Imaging Study, **Jin Li** (Beijing Chaoyang Hospital, Capital Medical University)
9. Semi-automatic Normalization and Segmentation of Contrast Enhancement in Intracranial Atherosclerotic Vessel Wall Imaging, **Yin Guo** (University of Washington)
10. Carotid Artery Perivascular Adipose Tissue Quantified by MR Imaging: A Potential Indicator for Vulnerable Atherosclerotic Plaques, **Shuwan Yu** (Tsinghua University)

SCIENTIFIC PROGRAM

Wednesday, August 24

Plenary Session III: Artificial Intelligence in MRA and CMR

Time: 8:00 - 10:00 AM - Wednesday, August 24

Moderators: **Tim Leiner**, MD, PhD, Mayo Clinic
Niranjan Balu, MD, PhD, University of Washington
Giles Roditi, MD, University of Glasgow

8:00 - 9:00 AM	AI Grand Challenge: Plaque Characterization (via Zoom)
08:00 - 08:05	Introduction: **Huijun Chen**, PhD, Tsinghua University, China, **Niranjan Balu**, MD, PhD, University of Washington
08:05 - 08:41	Presentations by six finalists (6 min each)
	• NWPU-SAIIP: **Shishuai Hu**
	• BELL: **Jonghun Kim**
	• 9yeah: **Inye Na**
	• mrga: **Haining Wei**
	• Lucas Gago: **Lucas Gago**
	• The D Lab: **Zohaib Salahuddin**
08:41 - 08:46	Presentation by sponsor TS Imaging: **Huiyu Qiao**, PhD
08:46 - 09:00	Discussions
09:00 - 09:15	AI in CTA: **Damini Dey**, PhD, Cedars-Sinai Medical Center
09:15 - 09:30	AI in CMR: **Tim Leiner**, MD, PhD, Mayo Clinic, Rochester, MN
09:30 - 09:45	AI in CMR Fingerprinting: **Jesse Hamilton**, PhD, University of Michigan
09:45 - 10:00	Panel Discussion: All speakers

10:00-10:15 AM Break

Scientific Session III: Quantitative Flow MRI

Time: 10:15 - 11:53 AM - Wednesday, August 24

Moderators: **Charles Dumoulin**, PhD, Cincinnati Children's Hospital
Susanne Schnell, PhD, University of Greifswald

Time	Topic
10:15 - 10:27	Quantitative Flow Imaging: Clinical Applications and Unmet Needs: **Thekla Oechtering** (UW Madison, WI, USA)
10:27 - 10:39	Quantitative Flow Imaging: State-of-the-art and Recent Advances in Quantitative Flow Imaging: **Sergio Uribe Arancibia** (Pontificia Universidad Católica de Chile, Santiago, Chile)

10:39 - 11:53 AM Abstract presentations (Oral: 8 min; Power Pitch: 2.5 min)

SCIENTIFIC PROGRAM

Wednesday, August 24

Orals

1. Cardiovascular Risk Factors Associated with Blood Flow Characteristics Derived from 4D-flow MRI of the Left Atrium and Left Atrial Appendage: The Multi-Ethnic Study of Atherosclerosis, **Maurice Pradella** (Northwestern University)
2. Baseline 4D flow MRI-derived in Vivo Hemodynamic Parameters Stratify Descending Aortic Dissection Patients with Enlarging Aortas, **Stanley Chu** (Northwestern University)
3. Optimization of Complex-Difference Learning for Reconstructing Highly-Accelerated Real-Time Phase Contrast MRI with Radial k-space Sampling, **Huili Yang** (Northwestern University)
4. Flow Displacement and Wall Shear Stress in Individuals with Mild-to-Moderate Aortic Dilation and Tricuspid Aortic Valves, **Chiara Trenti** (Linköping Universitet)
5. Deep-Learning Derived Systolic 3D Aortic Hemodynamics from Aortic Geometry, **Haben Berhane** (Northwestern University)
6. Impact of Flow Entrainment on Mitral Regurgitation Flow Quantification Using 4D flow MRI, **Jeesoo Lee** (Northwestern University)
7. True Lumen 4D Flow MRI-derived Pulse Wave Velocity in Type B Aortic Dissection is Associated with Progressive Aortic Dilatation, **Anthony Maroun** (Northwestern University)

Pitches

1. Intra-cardiac Kinetic Energy and Ventricular Flow Analysis in Bicuspid Aortic Valve Disease: Impact on Left Ventricular Function, Dilation Severity, and Surgical Outcome, **Julio Garcia** (University of Calgary)
2. Hemodynamic Evaluation of Transverse Venous Sinus in patients with Idiopathic Intracranial Hypertension: A Preliminary 7-T 4D Flow MRI Study, **Zhiye Li** (Beijing Tiantan Hospital, Capital Medical University)
3. Helicity of Ascending Arterial Flow in Patients With Hypertrophic Cardiomyopathy, **Yuka Otaki** (Sakakibara Heart Institute)
4. The Value of Preoperative PC-MRI in Predicting the Clinical Outcome of Moyamoya disease after Encephalo-Duro-Arterial Synangiosis (EDAS) Surgery, **Shitong Liu** (Chinese PLA General Hospital)
5. Blood Flow Dynamics of the Main Pulmonary Artery in Repaired Tetralogy of Fallot using 4D-flow MR Angiography, **Akio Inage** (Japanese Red Cross Medical Center)
6. Automatic 4D Flow MRI Segmentation of Thoracic Vessels using the Standardized Difference of Means Velocity, **Sean Rothenberger** (Purdue University)
7. Quantitative Time-of-Flight (qTOF) Brain MRA Velocimetry using Deep Machine Learning: Initial Experience, **Ioannis Koktzoglou** (NorthShore University HealthSystem)

12:15-1:00 PM Lunch

SCIENTIFIC PROGRAM

Wednesday, August 24

Plenary Session IV: Tailoring MRA for women and underserved groups/diseases

Time: 1:00 - 2:30 PM- Wednesday, August 24

Moderators: **Ashley Prosper**, MD, UCLA
Dana Peters, PhD, Yale

Time	Topic
1:00 - 1:15	Cardiovascular Disease in Women: **Janet Wei**, MD, Cedar-Sinai Medical Center
1:15 - 1:30	CMR in Women and the Renally Impaired Patient: **Kim-Lien Nguyen** , MD, UCLA and VA Greater Los Angeles Healthcare System
1:30 - 1:45	Sex Differences in the Prevalence, Treatment, and Outcomes of Peripheral Vascular Disease: **Peter F. Lawrence**, MD, UCLA
1:45 - 2:00	Cardiac MRI in COVID-19: **Alan C Kwan**, MD, Cedars-Sinai Medical Center
2:00 - 2:15	Cerebral Small Vessel Disease in Latinx and African Americans: **Danny Wang,** PhD, University of Southern California, USA)
2:15 - 2:30	Panel Discussion

2:30-2:45 PM Break

Scientific Session IV: Thoracic and Cardiac MR

Time: 2:45 - 5:01 PM- Wednesday, August 24

Moderators: **Kim-Lien Nguyen**, MD, UCLA and VA Greater Los Angeles Healthcare System
Graham Wright, PhD, University of Toronto

Time	Topic
2:45 - 2:57	What the CHD Surgeon Needs from Advanced Imaging: **Glen Van Arsdell**, MD, UCLA
2:57 - 3:09	Free Running 5D CMR: **Ruud van Heeswijk**, PhD, University of Lausanne, Switzerland
3:09 - 3:21	Technical Advances in CMR: A Perspective from China. **Peng Hu**, PhD, ShanghaiTech University (virtual)
3:21 - 3:33	Multi-dimensional CMR in Pediatric CHD: Clinical Experience: **Shi-Joon Yoo**, MD, Hospital for Sick Children, Toronto (virtual)
3:33 - 3:45	Breath-held Gated MRA: How Long Does the Breath-hold Need to be?: **Gerhard Laub**, PhD, Dr. Laub Consulting LLC

3:45 - 5:01 PM Abstract presentations (Oral: 8 min; Power Pitch: 2.5 min)

SCIENTIFIC PROGRAM

Wednesday, August 24

Orals

1. 2.5D Flow MRI of Tricuspid Valvular Flow: An Accurate Automated Valve-Following Phase-Contrast Approach, **Jérôme Lamy** (Yale)
2. Comprehensive Imaging of Fontan and Glenn Shunts in Adult Congenital Heart Disease Patients using Ferumoxytol-Enhanced MR Angiography, **Gentian Lluri** (Ahmanson/UCLA Adult Congenital Heart Disease Center)
3. Translatability of Fully Automated Deep Learning 3D Segmentation of CE-MRA Left Atrial Structures of AF Patients Across Two Sites, **Justin J. Baraboo** (Northwestern)
4. 4-Dimensional CMR and Echocardiography in Pediatric Congenital Heart Disease - Segmental Sequential Analysis and Pre-Surgical Planning, **Takegawa Yoshida** (UCLA)
5. Pediatric BAV Flow Abnormalities Detected by 4D Flow MRI and Seismocardiography, **Ethan Johnson** (Northwestern university)
6. Five-Dimensional Respiratory-Motion Resolved Volumetric Lung Imaging for Fractional Ventilation and T1 Mapping Using MR Multitasking, **Chaowei Wu** (Cedars-Sinai Medical Center)

Pitches

1. Accelerated Whole-Heart Free-Breathing CMRA in 3 min in Patients with Congenital Heart Disease, **Anastasia Fotaki** (King's College London)
2. Impact of Pulmonary Artery Flow Distribution on Fontan Hemodynamics and Flow Energetics, **Elizabeth Weiss** (Northwestern University)
3. On the Effects of Contrast Agents in Free-Running Whole-Heart 5D Flow Imaging, **Mariana B.L. Falcão** (University Hospital (CHUV) and University of Lausanne (UNIL))
4. Hemodynamic Evaluation of Type B Aortic Dissection with Compressed Sensing Accelerated Single and Dual-Venc 4D Flow MRI, **Ozden Kilinc** (Northwestern University)
5. Exploration of Age Related Hemodynamic Changes Using an Atlas Based Analysis of 4D Flow MRI. A Preliminary Study, **Elodie Piot** (CREATIS, Universite Lyon 1)
6. Contrast-Enhanced CT Radiomics Improves the Prediction of Abdominal Aortic Aneurysm Progression, **Yan Wang** (UCSF)
7. Evaluation of Aortic Stent Endoleaks Using Ferumoxytol Enhanced MR Angiography, **Sipan Mathevosian** (UCLA)
8. Pulmonary Vasculature of Healthy and Post-COVID Subjects using Free-Breathing Time-SLIP 3D UTE, **Vadim Malis** (UC San Diego)
9. Dual MR Cardiolymphangiography in Congenital Heart Disease - Initial Experience, **Ashley E Prosper** (UCLA)
10. Motion-resolved motion-corrected reconstruction for ferumoxytol-enhanced free-running whole-heart MRI, **Ludovica Romanin** (Siemens Healthcare)
11. Chronic Thromboembolic Pulmonary Hypertension (CTEPH) patients show reduced right ventricular myocardial perfusion reserve (MPR), **Lexiaozi Fan** (Northwestern University)

SCIENTIFIC PROGRAM

Thursday, August 25

Plenary Session V: Venous Imaging

Time: 8:00 - 9:30 AM - Thursday, August 25

Moderators: **Stefan Ruehm**, MD, PhD, UCLA

Jeffrey Maki, MD, PhD, University of Colorado

Time	Topic
8:00 - 8:15	What the Venous Interventionist needs from Pre-Procedural Imaging: **Adam Plotnik**, MD, UCLA
8:15 - 8:30	Venous Imaging with Ferumoxytol: **J. Paul Finn**, MD, UCLA
8:30 - 8:45	Venous MR Imaging: Clinical experience in China: **Qi Yang** (virtual)
8:45 - 9:00	From MRA to QSM and Back: **Yi Wang**, PhD, Cornell University, NY
9:00 - 9:15	Flow-suppressed Thrombus Imaging: **Zhaoyang Fan**, PhD, University of Southern California
9:15 - 9:30	Panel Discussion

9:30-9:45 AM Break

Scientific Session V: Coronary/peripheral/abdominal MRA/Cardiac MRI

Time: 9:45 - 12:12 PM - Thursday, August 25

Moderators: **Rene Botnar**, PhD, King's College, London, UK

Mitsue Miyazaki, PhD, University of California San Diego

Time	Topic
09:45 - 09:57	Coronary MRA Techniques: **Claudia Prieto**, PhD, King's College London, UK
09:57 - 10:09	Coronary Plaque Imaging: **Yibin Xie**, PhD, Cedars-Sinai Medical Center
10:09 - 10:21	Coronary MRA: clinical applications: **Hajime Sakuma**, MD, PhD, Mie University, Japan
10:21 - 10:33	Peripheral Non-contrast MRA: **Mitsue Miyazaki**, PhD, University of California San Diego

10:33 - 12:12 PM Abstract Presentations (Oral: 8 min; Power pitch: 2.5 min)

MRA Orals

1. Micro-Vascularity of the Feet and Toes Using Non-Contrast MRI, **Won C Bae** (University of California, San Diego)
2. Using Multi-contrast MRI Histology to Characterize Plaque Composition in PAD for Endovascular Treatment Planning, **Kayla Wilhoit** (Houston Methodist Research Institute)
3. Visualization of the Entire Portal and Hepatic Venous Systems in a Single Acquisition with Ferumoxytol-Enhanced MRA, **Krishan R Arora** (UCLA)
4. Retrospective Quantification of Clinical Multi-phasic DCE-MRI using a Pharmacokinetics-Informed Neural Network, **Chaowei Wu** (Cedars-Sinai Medical Center)

SCIENTIFIC PROGRAM

Thursday, August 25

MRA Pitches

1. Multi-slice Saturated Multi-delay Arterial Spin Labeling (MS-SAMURAI) Technique for Multiparametric Kidney MRI, **Zihan Ning** (Tsinghua University)
2. Dynamic Assessment of Regional Peripheral Perfusion and Phosphocreatine with 1H MRI in Diabetes and Peripheral Arterial Disease, **Jie Zheng** (Washington University in St Louis)
3. Screening for Polyvascular Diseases in ApoE-deficient Dogs and Diabetes Patients Using Ferumoxytol-Enhanced MR Angiography, **Yuehong Liu** (Beijing Chaoyang Hospital, Capital Medical University)
4. Using Quantitative MRI to Characterize Acute and Chronic DVT Clot Tissue at 9.4T, **Caroline D Jordan** (EnMed, Texas A&M University)
5. Calibration of Plaque to Myocardium Ratio in T1-weighted Coronary Plaque Imaging, **Meng Lu** (Cedars-Sinai Medical Center)
6. Contrast Enhanced MRV in the Evaluation of Cryptogenic Stroke using Gadobenate Dimeglumine, **Larry A. Kramer** (UTHSC-Houston)

Cardiac Orals

1. Free-breathing, Non-ECG, Simultaneous Myocardial T1, T2, T2*, and Fat-fraction Mapping with Motion-resolved Cardiovascular Magnetic Resonance Multitasking, **Tianle Cao** (Cedars-Sinai Medical Center)
2. Accelerated Wideband Cardiac Stress Perfusion MRI Produces Clinically Acceptable Image Quality in Patients with a Cardiac Implantable Electronic Device, **Daniel Kim** (Northwestern University)
3. Adiabatic Spin-Lock Preparations for Robust in-Vivo Myocardial T1ρ-Mapping at 3T, **Chiara Coletti** (TU Delft)
4. All-in-one CMR Multitasking with Joint Reconstruction of Pre- and Post-Contrast Images, **Xianglun Mao** (GE Healthcare)

Cardiac Pitches

1. Image Contrast and Left Atrial Fibrosis from Late Gadolinium Enhancement are Influenced by the Balanced Steady-State Free Precession Flip Angle, **Suvai Gunasekaran** (Northwestern University)
2. 5D-GRASP Whole-Heart Imaging with Ferumoxytol Detects Variation of LVEF during Respiration, **Yitong Yang** (Emory University)
3. Fractional Myocardial Blood Volume Estimation using Ferumoxytol-Enhanced Magnetic Resonance Imaging: Early Findings in Healthy Human Subjects, **Xinyi Li** (UCLA)
4. A Minimal Cardiac MRI Protocol for Catheter Ablation Planning in Patients with Cardiac Implantable Electronic Devices, **Calder D Sheagren,** PhD (University of Toronto)
5. Volumetric Multi-Contrast Dark Blood Cardiac MRI using Readout Balanced SSFP, **Robert R Edelman** (NorthShore University HealthSystem)
6. Non-rigid Motion-compensated Whole-heart 18F-FDG PET and 3D T2 mapping in a Hybrid PET- MR system, **Alina Schneider** (King's College London)
7. Bringing the Spotlight Back to Segmental Strain: Identifying Reproducible Segments for Left Ventricular Strain Evaluation, **Siva P Sreedhar** (Northwestern University)
8. Towards Reproducible Myocardial ASL: T1 and Flip Angle Corrected Reconstruction for Mitigating Sequence Parameter Related Variability, **Masa Bozic-Iven** (Heidelberg University)

12:15 - 1:00 PM Lunch

SCIENTIFIC PROGRAM

Thursday, August 25

Plenary Session VI: Industry

Time: 1:00 - 2:20 PM - Thursday, August 25

Moderators: **Paul Finn**, MD, UCLA

Charles Dumoulin, PhD, Cincinnati Children's Hospital

Time	Topic
01:00 - 01:12	Bayer: Cardiac MR for CAD Using a Standard Dose of Gadavist (gadobutrol): **Raymond Kwong**, MD, Harvard Medical School
01:12 - 01:24	Bracco: Everything you Ever Wanted to know about how Gadolinium Behaves with Respect to Contrast Enhanced MRA: **Jeffrey Maki**, MD, PhD, University of Colorado
01:24 - 01:36	Philips: Recent Advances in Cardiovascular MR: **Jihye Jang**, PhD, Philips MR Clinical Scientist
01:36 - 01:48	Siemens: Cutting-edge MRA: What's New at Siemens Healthineers: **Karl Kunze**, PhD, Siemens Healthineers
01:48 - 02:00	United Imaging: Expanding Equal Access to Cardiovascular MR: **Abram Voorhees**, PhD, Vice-President, Computed Tomography and Magnetic Resonance, United Imaging

2:00 - 2:20 PM Panel Discussion: Speakers and Participants from Industry, **Geoff Rubin**, MD, University of Arizona.

2:20-2:35 PM Break

Scientific Session VI: Technical and Clinical challenges

Time: 2:35 - 5:00 PM - Thursday, August 25

Moderators: **Rene Botnar**, PhD, King's College London

Mahmud Mossa-Basha, MD, University of North Carolina at Chapel Hill

• Physicist panel members for MRA/vessel wall/MRV image artifacts: **Anthony Christodoulou**, PhD, Cedars-Sinai Medical Center; **Dana Peters**, PhD, Yale University; **Zhaoyang Fan**, PhD, USC; **Chengcheng Zhu**, PhD, University of Washington; **David Saloner**, PhD, UCSF

• Clinician panel members for MRA/vessel wall/MRV image artifacts: **Scott McNally**, MD, PhD, University of Utah; **Laura Eisenmenger**, MD, University of Wisconsin-Madison; **Elizabeth Hecht**, MD, Weill Cornell; **Arash Bedayat**, MD, UCLA

4:13-05:00 PM **Abstract Presentations** (Oral: 8 min; power pitch: 2.5 min)

Moderators: **Anthony Christodoulou**, PhD, Cedars-Sinai Medical Center

Kim-Lien Nguyen, UCLA and VA Greater Los Angeles Health System

SCIENTIFIC PROGRAM

Thursday, August 25

Orals

1. A Randomized Controlled Trial of Statins to Reduce Inflammation in Unruptured Cerebral Aneurysms Using High Resolution Vessel Wall MRI, **Chengcheng Zhu** (University of Washington)
2. Noise Reduction in Magnetic Resonance Fluid Dynamics Using Deep Learning, **Miku Nakashima** (Nagoya University)
3. Deep-MyoSeg: Deep Learning-based Approach for Myocardium Segmentation in Clinical T1-MOLLI and T2-bSSFP Maps, **Roman Jakubicek** (Brno University of Technology)
4. Conditional Invertible Neural Network for Rapid Dictionary and Parameter Map Generation for Cardiac Magnetic Resonance Fingerprinting, **Thomas J Fletcher** (King's College London)

Pitches

1. In Vitro Relaxometry Comparison of Three USPIO Agents for Magnetic Resonance Imaging at 3.0T, **Zhengyang Ming** (UCLA)
2. Differentiation of Benign and Malignant Breast Cancer Lesions Based on DCE-MRI Voxel-By-Voxel Time-Intensity Curve Profile Ratios, **Bingyu Yao** (Shenzhen Institutes of Advanced Technology)
3. AI-Assisted Online Reconstruction for CMR Multitasking, **Zihao Chen** (Cedars-Sinai Medical Center)
4. An Interleaved 2D GRE MRA Sequence to Image Utero-Placental and Fetal Vasculature, **Karthikeyan Subramanian**
5. Fully Automated Myocardial Segmentation of 3D Multiparametric T1 and T2 Maps Using an Attention Fully Convolutional Neural Network, **Carlos Velasco** (King's College London)
6. T1 Map Estimation of Carotid Plaque with Machine Learning in Clinical Sequences, **Jeff Snyder** (University of Alberta)

SCIENTIFIC PROGRAM

Friday, August 26

Plenary Session VII: Career Development

Time: 8:00 - 10:00 AM - Friday, August 26

Moderators: **Yin Guo**, PhD Candidate, University of Washington
Calder Sheagren, PhD Candidate, University of Toronto
Nan Wang, PhD, Stanford University
Suvai Gunasekaran, PhD, Northwestern University

Time	Topic
08:00 - 08:10	Starting your First Grant: **Chengcheng Zhu**, PhD (University of Washington)
08:10 - 08:20	Journey in Clinical Training: **Laura Eisenmenger**, MD (University of Wisconsin-Madison)
08:20 - 08:30	Discussion
08:30 - 08:35	Mentor/mentee: Research and Clinical: **Claudia Prieto**, PhD / **Anastasia Fotaki**, MD (King's College London)
08:35 - 08:40	Mentor/mentee: Transition into an Independent Researcher: **Danny JJ Wang**, PhD & **Xingfeng Shao**, PhD (University of Southern California)
08:40 - 09:00	Discussion
09:00 - 09:05	Break
09:05 - 09:17	Time Management: **Michael Markl**, PhD (Northwestern University)
09:17 - 09:29	Building Up Your Long-Term Career: **Stephen Riederer**, PhD (Mayo Clinic)
09:29 - 09:35	Testimonial to a Leader in MRA: **Stephen Riederer**, PhD (Mayo Clinic)
09:35 - 10:00	Fireside chat with **Dr. Riederer**, **Dr. Markl**, and **Charles Mistretta** (University of Wisconsin-Madison)

10:00 - 10:15 AM Break

Plenary Session VIII: Multicenter Studies

Time: 10:15 - 11:18 AM - Friday, August 26

Moderators: **David Saloner**, PhD, UCSF
Elizabeth Hecht, MD, Weill Cornell Medical School

Time	Topic
10:15 - 10:27	The Multicenter Stress CMR Perfusion Imaging in the United States (SPINS) Study of the SCMR Registry: **Raymond Kwong**, MD, Harvard Medical School
10:27 - 10:39	SCOTHEART 1 and 2 - What We Learned and What is Next: **Michelle Williams**, MD, University of Edinburgh, UK (virtual)
10:39 - 10:51	Experience with Multicenter Carotid Plaque Imaging NIH Grant: **Dennis Parker**, PhD, University of Utah
10:51 - 11:03	Multicenter Trial and Current Needs on Plaque Imaging: **Luca Saba**, PhD, University of Cagliari, Italy (virtual)

11:03 - 11:18 AM Panel Discussion: All speakers

SCIENTIFIC PROGRAM

Friday, August 26

Closing Session: Future of MRA/CMR, Award Presentations, and Announcement of 2023 Meeting

Time: 11:18 - 12:30 PM - Friday, August 26

Moderators: **Richard Frayne**, PhD, University of Calgary
Debiao Li, PhD, Cedars-Sinai Medical System
J. Paul Finn, MD, UCLA

Time	Topic
11:18 - 11:33	**Roderic I Pettigrew**, MD, PhD, Texas A&M University and Houston Methodist Hospital (Sadamoto Lecture)
11:33 - 11:43	Next Generation 7T Brain Scanner Combining High Performance Gradients and 128 Channel Receiver System: **David Feinberg**, MD, PhD, UC Berkeley
11:43 - 11:53	A New Paradigm in Magnetic Field Shimming: **Hui Han**, PhD, Cedars-Sinai Medical Center
11:53 - 12:03	MRI in Cardiac Electrophysiology: Promises Fulfilled and Opportunities for The Future: **Noel Boyle**, MD, PhD, UCLA
12:03 - 12:13	Future of CMR: **Karen Ordovas**, MD, MAS, University of Washington (virtual)

12:13 - 12:30 PM **Awards**

- Presentation of Potchen and Passariello Awards, **Giles Roditi**, MD, University of Glasgow, UK
- AI Challenge Awards, **Chun Yuan**, PhD, University of Utah, University of Washington
- Announcement of 2023 Meeting
  - **Xihai Zhao**, MD, Tsinghua University, President of SMRA 2023
  - **Hideki Ota**, MD, Tohoku University Hospital, Organizer of SMRA 2023
- Closing Remarks (**Chun Yuan**, PhD; **Paul Finn**, MD; **Debiao Li**, PhD)

Title / First Author / Affiliation

Cerebral Microbleeds (CMBs) automatic detection system based on the “Deep Learning”, **Pingping Fan** (Beijing Tiantan Hospital)

Non-Contrast Carotid 3D TOF and Time-SLIP bSSFP with centric ky-kz k space trajectory, **Vadim Malis** (UCSD)

Usefulness of Arterial Spin Labeling MR Angiography for Follow-Up after endovascular treatment for unruptured intracranial aneurysm in comparison with Time-of-Flight MRA, **Yiping Zhang** (Beijing Neurosurgical Institute)

Multi-delay multi-parametric arterial spin-labeled perfusion MRI in Moyamoya disease- Comparison with dynamic susceptibility contrast enhanced perfusion imaging, **Hongtao Zhang** (the Fifth Medical Centre of Chinese PLA General Hospital)

Evaluated the Relationships between Posterior cerebral artery Geometry and Atherosclerotic Disease Based on High-resolution Magnetic Resonance Vessel Wall Imaging, **Lijuan Zheng** (Fujian Medical University)

Combination of irregular pulsation and wall enhancement increased the accuracy in identifying symptomatic status in unruptured intracranial aneurysms, **Xiao Li** (Shanghai Jiaotong University)

An assessment on the incremental value of 3D high-resolution MRI to identify culprit plaques in the nonstenotic intracranial artery, **Xia Tian** (Changhai Hospital)

An assessment on the incremental value of 3D high-resolution MRI in evaluating ESUS caused by non stenotic intracranial atherosclerosis, **Xia Tian** (Changhai Hospital)

An assessment on the incremental value of 3D high-resolution MRI in evaluating the risk of recurrence of ischemic stroke caused by non stenotic intracranial atherosclerosis, **Xia Tian** (Changhai Hospital)

Diabetes and carotid plaque characteristics were independently associated with larger symptomatic WMHs volume, **Beibei Sun** (Shanghai Jiaotong University

Endovascularly treated aneurysm vessel wall MRI characteristics: association with symptomatic vasospasm and delayed cerebral infarction, **Mehmet Aksakal** (University of Washington)

SYNGO.VIA versus SYNGO.PLAZA regarding aortic diameters after therapy of aortic dissections, **Manuela Aschauer** (Medical University of Graz)

Peripheral MR Lymphangiography: Integration into Clinical Workflow in a Hybrid MR-US Procedural Suite, **Scott Thompson** (Mayo Clinic)

Imaging Of Venous Thrombosis with Ferumoxytol Enhanced Magnetic Resonance Angiography, **Sipan Mathevosian** (UCLA)

SMRA Carotid Artery Vessel Wall Segmentation Challenge

In partnership with MICCAI, the Grand Challenge for this year was to automatically segment the lumen and outer wall boundaries of black-blood 3D carotid vessel wall MRI (from the 3D-VISTA sequence) and detect the atherosclerotic lesions.
The official website of the challenge is *https://vessel-wall-segmentation-2022.grand-challenge.org/.*

Grand Challenge Committee

Organizer

- **Huijun Chen**, PhD, Tsinghua University, Beijing, China
- **Xihai Zhao**, PhD, Tsinghua University, Beijing, China
- **Huilin Zhao**, MD, Renji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.
- **Niranjan Balu**, PhD, University of Washington, Seattle, USA
- **Chun Yuan**, PhD, University of Utah, University of Washington, USA

Judges

- **Niranjan Balu**, PhD, University of Washington, Seattle, USA
- **Dongxiang Xu**, PhD, University of Washington, Seattle, USA
- **Huilin Zhao**, MD, Renji Hospital, School of Medicine, Shanghai Jiao Tong University, Shanghai, China.
- **Huiyu Qiao**, PhD, TSimaging Healthcare, Beijing, China.
- **Zhongzhao Teng**, PhD, University of Cambridge, Cambridge, UK

Prizes

The Society of Magnetic Resonance Angiography (SMRA) is providing three cash awards to the top three teams. The award is sponsored by TS Imaging. Award amounts will be as follows: **First place: $4000; Second place: $1500; Third place: $500**.

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SOCIAL EVENING EVENTS

Tuesday, August 23rd to Thursday, August 25, 2022

Tuesday, August 23, 2022 – Welcome Reception

- Where: 1st Floor - **LUSKIN COURTYARD SOUTH**
  Address: UCLA Luskin Convention Center
- 6:30 PM – 9:00 PM
- Cured Meat and cheeses Appetizers

Wednesday, August 24, 2022 – UCLA Luskin Dinner

- Where: LUSKIN – 3rd Floor **OUTDOOR CENTENNIAL TERRACE**
  Address: UCLA Luskin Convention Center
- 6:30 pm to 9:00 pm
- Buffet – Mediterranean Grill
- No Cost to Delegates – Included in the Registration Fee

Informal Gathering after Dinner

- 9:00 PM – 13-minute Walk to Broxton Brewery: 1099 Westwood Blvd, Los Angeles, CA 90024
- For a Casual Social Event – Cash Bar

Thursday, August 25, 2022 - Dinner - Fowler Museum on UCLA Campus

- Delegates walk (5-minute walk) to Museum on campus: Address: 308 Charles E Young Dr N, LA
- 7:00 PM Guests Arrive | Tray Passes Appetizers - Courtyard
- 8:00 PM Guests Invited to the Terrace
- 8:30 PM Dinner Begins
- 9:30 PM Dessert
- 11:00 PM Event Ends

No Cost to Delegates – Included in the Registration Fee

Janette Wallace, Conference Manager & **Anna Van Vliet**, Conference Coordinator
Society for Magnetic Resonance Angiography (SMRA 2022 Conference)
Janette Mobile – 519-860-3207 Anna – 519-870-1154

GUEST / SPOUSAL PROGRAM

Day 1, Tuesday, Aug 23: Huntington Library, Art Museum, Botanical Gardens

- 9:00 AM – LYFT Pick up from UCLA Conference Centre to Huntington Library by 10:30 AM.
  Located at: 1151 Oxford Rd, San Marino, CA – Phone 626-405-2100, https://www.huntington.org/visit
- 3:00 PM – LYFT Return from Huntington Library to UCLA.

Day 2, Wednesday, Aug 24: The Academy Museum of Motion Pictures

- 9:00 AM- LYFT Pick up from UCLA Conference Centre to Academy Museum of Motion Pictures.
  Located at: 6067 Wilshire Boulevard, Los Angeles, CA
- You must go to the website in advance to book tickets-:
  https://www.academymuseum.org/en/?ref=oscars.org
- 3:00 PM - LYFT Return from Museum to UCLA

Day 3, Thursday, Aug 25: Getty Museum and Getty Villa

- 9:00 AM - LYFT Pick up from UCLA Conference Centre to Getty Museum (Opens at 10:00 AM)
  Located at: 1200 Getty Center Dr, Los Angeles, CA
- Lunch – at Getty Museum. – Delegates Purchase their own Lunch.
- 1:00 PM – LYFT pick up to go to Getty Villa (16 minute drive)
  Located at: 17985 Pacific Coast Hwy, Pacific Palisades, CA
- 3:00 PM - LYFT Return from Getty Villa to UCLA.

Day 4, Friday, Aug 26: Santa Monica Pier and Surrounding Area

- 9:00 AM - LYFT pick up at UCLA Conference Centre to Santa Monica Pier.
  Located at: 200 Santa Monica Pier, Santa Monica, CA 90401-3126
- Take a Walk Down the Pier, Snap Some Beautiful Photos, Enjoy the Sunshine! (Duration: 1 hour)
- Take LYFT to The Original Farmers Market
  Located at: 6333 W 3rd St Fairfax Ave, Los Angeles, CA 90036-3109
- Enjoy a Lunch Break at the Famous Hollywood Farmers Market. Lunch to be Purchased Separately from your Choice of Vendor. (Duration: 1 hour)
- 1:00 PM - LYFT back to UCLA Conference Centre

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The Society for Magnetic Resonance Angiography would like to express its sincere gratitude to all 2022 sponsors, without whom this year's event would genuinely not have been possible.

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LIFE FROM INSIDE

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MEETING ENDORSEMENT

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The principle international, independent organization committed to the future development of CMR through education, quality control, research, and training.

scmr.org

The Medical Image Computing and Computer Assisted Intervention Society (MICCAI)

The Medical Image Computing and Computer Assisted Intervention Society (the MICCAI Society) is dedicated to the promotion, preservation and facilitation of research, education and practice in the field of medical image computing and computer assisted medical interventions including biomedical imaging and medical robotics.

miccai.org

The Travel Awards for SMRA 2022 are Sponsored by: Martin Prince Foundation

Support for SMRA Trainee Travel Awards
NIBIB R13HL154799 (PIs: Debiao Li and Paul Finn)

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Thank you for their contributions.

CPD CREDITS

Overall Learning Objectives

By the end of this program, participants will :

• Understand the strengths, weaknesses, and place of MRA in current clinical practice relative to other modalities.
• Recognize the magnetic resonance angiography research being conducted by trainees, including fellows, residents, and graduate students.
• Be able to identify opportunities for collaboration between fellows, residents, graduate students, technologists, imaging physicians, and imaging scientists to improve patient outcomes.
• Appraise and discuss the scientific presentations with respect to imaging technologies and clinical applications.
• Have gained insight into the future prospects of MRA vascular research and academic career progression.
• Be able to identify emerging fields in Medical Imaging and consider their impact on clinical practice.
• Understand the roles and impact of Artificial Intelligence in vascular imaging.
• Incorporate updated tips and protocols into their clinical practice.

With these stated Learning Objectives then under the RCR scheme, attendance at the full program would be awarded 7 credits for each Tuesday, Wednesday and Thursday then 4 credits for Friday - a total of 25 CME/CPD credits.

Announcement of 2023 Meeting - Sendai, Japan