

The 2<sup>nd</sup> Annual ISNVD Scientific Meeting  
*Orlando, Florida USA*  
18-22 February 2012



*Hilton Orlando*  
*6001 Destination Parkway*  
*Orlando, Florida 32819*  
*USA*

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**ISNVD**  
International Society for  
Neurovascular Disease

**Conference Chair**  
Robert Zivadinov, MD, PhD  
President of ISNVD  
Professor of Neurology, University of Buffalo

**Annual Meeting and Workshop Committee Chairmen**  
E. Mark Haacke, PhD and Michael D. Dake, MD



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## LETTER FROM THE PRESIDENT

It is with great pleasure that I invite you to the 2<sup>nd</sup> International Society for Neurovascular Disease (ISNVD) Annual Scientific Meeting which will take place in Orlando, FL. The ISNVD is a recently formed non-profit professional association devoted to furthering the development of research for neurovascular related diseases, with a strong focus on the venous vascular component. In line with the ISNVD mission, the scientific program of the meeting is designed to advance knowledge in understanding of venous involvement in a number of inflammatory and neurodegenerative central nervous system diseases. Registration is open to both members and non-members. The Society invites Basic Scientists, Neurologists, Interventional Radiologists, Vascular Surgeons, Neurosurgeons, Neuropathologists, Physicists and Vascular Technologists to participate. We also welcome individuals in these categories to become members of the Society by visiting our official website ([www.isnvd.org](http://www.isnvd.org)). Becoming a member of the Society entitles an individual to several advantages, including a discounted registration fee, the right to attend workshops, receive periodic newsletters, and contribute individually to the scientific and organizational direction of the Society.

The 2<sup>nd</sup> ISNVD Annual Scientific Meeting builds on the fundamentals of the 1<sup>st</sup> meeting held last year in Bologna, Italy. Since then, the field has progressed significantly. Almost weekly, several new peer-reviewed papers appear on PubMed about venous vascular involvement in patients with inflammatory and neurodegenerative disorders and in healthy individuals. More than 50 faculty from around the world have been carefully chosen to deliver the main lectures during the 5 days of the scientific meeting. Each of them is an expert in his/her field. I would like to thank in particular E. Mark Haacke and Michael D. Dake, the Annual Meeting and Workshop Committee Chairmen for playing a pivotal role in selecting these exemplary scholars.

The standards for establishing diagnostic modalities for detection of venous abnormalities are still largely lacking. In this sense, the ISNVD is taking a leading role. Already at the 1<sup>st</sup> meeting last year in Bologna, Italy, a consensus conference was held on ultrasound screening for chronic cerebrospinal venous insufficiency (CCSVI). In Orlando, much more emphasis is being given to reaching a consensus in non-invasive and invasive imaging of extra- and intra-cranial venous abnormalities. On Saturday, February 18th, two Consensus Workshops sessions have been organized on vascular imaging of CCSVI. Applying current knowledge as well as advances made in the last year, one will revise the ultrasound consensus and the other will focus on MRI. These will be followed by a Consensus Breakout session on Sunday, February 19th, that will establish standards for ultrasound, MRI and catheter venography, as well as intraluminal ultrasound imaging. This session will be followed by another session that will integrate these various imaging modalities in order to create a set of multi-modal imaging standards.



The official part of the meeting will start on Sunday, February 19th with the awards session introduced by Prof. Paolo Zamboni followed by the Keynote speaker, Prof. Michael Chopp, an authority in the neurovascular field. Fifteen scientific sessions are planned to meet the continuing medical education (CME) objectives of the meeting. Three scientific sessions are planned on understanding abnormal venous flow in neurodegenerative diseases. The official program of these presentations is focused on better understanding venous involvement in neurological disorders, the effect of hemodynamics on endothelium adhesion and permeability, the role of venous abnormalities in multiple sclerosis, Parkinson's disease, Alzheimer's disease, Sturge-Weber syndrome, normal pressure hydrocephalus and aging. The session on perfusion, hypoxia, ischemia and reperfusion will play a key role in better understanding the physiological role of the capillary bed and what can lead to its malfunction. Dr. Alexander from Louisiana State University will present data on some first endothelial model experiments in relation to CCSVI. Building on these fundamentals, experts from around the world will discuss the role of iron in neurodegenerative and vascular diseases.

The meeting as a whole will primarily focus on advancing understanding of the recently described condition called CCSVI and its relationship to multiple sclerosis, other neurologic disorders and aging. A great amount of fresh and original information will be presented on this condition. Included are 5 scientific sessions on CCSVI that will further discuss the role of imaging techniques, diagnostic guidelines and standard consensuses to be used for diagnosing CCSVI. Of particular interest is the session reporting first postmortem study results that assessed jugular and azygos venous pathology. Dr. Fox from the Cleveland Clinic will present some of his recent findings. Basic scientific and hemodynamic contributions, lectures and abstracts on the CCSVI hypothesis are sure to generate a significant level of interest among the participants. In particular, the session about computational fluid dynamics and measuring flow is aimed at attracting most of the conference attendees. For the first time, a more structured approach is planned to meet the continuous medical educational (CME) goals of the meeting. This approach will describe methodological considerations about performing clinical trials and measuring related treatment outcomes in neurological disorders, with particular emphasis on multiple sclerosis. It is to be noted that one of the primary goals of the Society is to encourage safe and ethical approaches in designing new clinical trials that will investigate this important part of the puzzle. Two scientific sessions are planned to report currently ongoing trials in CCSVI as well as those that have recently concluded.

The selected Abstracts have been incorporated into the Scientific sessions where they fit most appropriately. These represent the opportunity to feature the highest quality work.



Finally, Orlando itself offers many leisure and entertainment opportunities for participants and their families. The most well known theme parks located there are Walt Disney World, Universal Orlando, SeaWorld and Legoland. Orlando also offers a variety of unique experiences, such as flying through a swamp on an airboat or getting up close with wildlife at Gatorland. Cultural options in the Orlando area offer a mix of traditional and modern options and include several museums of art, sculpture gardens, performing arts center, philharmonic orchestra and regional history center.

I hope that, based on the remarkably high level of scientific fundamentals that grounded the first Annual Scientific Meeting, you will be able to join us in Orlando, FL from February 18-22, 2012. I look forward to welcoming you personally.

Sincerely,



Robert Zivadinov, MD, PhD  
*President, ISNVD*



E. Mark Haacke, PhD  
*Annual Meeting and Workshop Committee Chairmen*



Michael D. Dake, MD



## CME ACCREDITATION

### **Program Overview**

The International Society for Neurovascular Disease (ISNVD) is proud to present its 2<sup>nd</sup> Annual Meeting. The 5 day meeting will feature thirteen scientific sessions and four consensus workshops are planned to meet the continuing medical education (CME) objectives of the meeting. Included are five specialized scientific sessions on abnormal flow in neurodegenerative diseases. The official program of these presentations is focused on better understanding the venous involvement in neurological disorders, the effect of hemodynamics on endothelium adhesion and permeability, the role of venous abnormalities in multiple sclerosis, Parkinson's disease, Alzheimer's disease, Sturge-Weber syndrome, normal pressure hydrocephalus and aging. The session on perfusion, hypoxia, ischemia and reperfusion will play a key role in better understanding the physiological role of the capillary bed and what can lead to its malfunction. Building on these fundamentals, experts from around the world will discuss the role of iron in neurodegenerative and vascular diseases.

The meeting as a whole will primarily focus on advancing understanding of the recently described condition called CCSVI and its relationship to multiple sclerosis, other neurologic disorders and aging. A great amount of fresh and original information will be presented on this condition. Included are 5 scientific sessions on CCSVI that will further discuss the role of imaging techniques, diagnostic guidelines and standard consensuses to be used for diagnosing CCSVI. Of particular interest is the session reporting first postmortem study results that assessed jugular and azygos venous pathology. Basic scientific and hemodynamic contributions, lectures and abstracts on the CCSVI hypothesis are sure to generate a significant level of interest among the participants. In particular, the session about computational fluid dynamics and measuring flow is aimed at attracting most of the conference attendees. For the first time, a more structured approach is planned to meet the continuous medical educational (CME) goals of the meeting. This approach will describe methodological considerations about performing clinical trials and measuring related treatment outcomes in neurological disorders, with particular emphasis on multiple sclerosis. It is to be noted that one of the primary goals of the Society is to encourage safe and ethical approaches in designing new clinical trials that will investigate this important part of the puzzle. Two scientific sessions are planned to report currently ongoing trials in CCSVI as well as those that have recently concluded.

### **Target Audience**

This CME activity is intended to educate Interventional Radiologists, Neurologists, Neurosurgeons, Physicists and Vascular Surgeons, as well as fellows, residents, doctoral and post-doctoral students in these fields and MR Technologists.



## Learning Objectives

After participating in this program, the attendees should, at the completion of this meeting be able to:

- Describe most relevant risk factors for endothelial damage
- Discuss how vascular breakdown leads to disease
- Describe various MRI and ultrasound techniques and their uses for diagnosis of CCSVI
- Describe how catheter venography, intraluminal ultrasound, computerized tomography and optical coherence tomography help/affect patient treatment
- Assess the connection between immunology and abnormal vasculature
- Assess mechanisms that are linked to iron deposition in neurological disorders
- Describe new treatments already available and potential new therapies as well as future guidelines for treatment

*No special educational preparation is required for this CME activity.*

## CME Accreditation

This program has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for CME (ACCME) through joint sponsorship with the University at Buffalo School of Medicine and Biomedical Sciences and the International Society for Neurovascular Disease.

The University at Buffalo (UB) is accredited by the ACCME to sponsor CME for physicians.

The UB School of Medicine & Biomedical Sciences designates this live activity for a maximum of **30.0 AMA PRA Category 1 Credit(s)™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



## INVITED SPEAKERS

J. Steven Alexander, PhD – USA

Michael Arata, MD – USA\*

Bulent Arslan, MD – USA\*

Raj Attariwala, MD, PhD – CANADA\*

Ralph H. B. Benedict, PhD – USA

Randall Benson, MD – USA

Jack S. Burks, MD – USA\*

Michael Chopp, PhD – USA

Chih-Ping Chung, MD, PhD – TAIWAN

William Code, MD – CANADA\*

Matteo Coen, MD – SWITZERLAND

James R. Connor, PhD – USA

John P. Cooke, MD, PhD – USA

Patricia K. Coyle, MD – USA

Michael D. Dake, MD – USA\*

Vida Demarin, MD, PhD – CROATIA

Diana Driscoll, OD – USA

Kirsty Duncan, PhD – CANADA\*

Timothy Q. Duong, PhD – USA

Eric Feigenbutz, RVT – USA\*

Robert Fox, MD – USA

Yulin Ge, MD – USA

Donato Gemmati, PhD – ITALY

E. Mark Haacke, PhD – USA\*

Ziv J. Haskal, MD – USA

J. Joseph Hewett, MD – USA\*

Richard Hoge, PhD – CANADA

Han-Hwa Hu, MD – TAIWAN

David Hubbard, MD – USA\*

Csaba Juhasz, MD, PhD – USA

Nicholas Kipshidze, MD, PhD – USA

Stanley Krolczyk, DO – USA\*

Angela Lagace, RVT – CANADA\*

Nikolaos Liasis, MD, PhD – GREECE

Michael Markl, PhD – USA

Karen Marr, RVT – USA

James F. McGuckin, MD – USA

Erica Menegatti, PhD – ITALY

Sandra Morovic, MD, PhD – ITALY-CROATIA

Andrew Nicolaides, PhD – UK

Gerald A. Niedzwiecki, MD – USA\*

Donald J. Ponec, MD – USA

Seshadri Raju, MD – USA

Stefan Ropele, PhD – AUSTRIA

Fabrizio Salvi, MD – ITALY

Franz Schelling, MD – AUSTRIA

Salvatore Sclafani, MD – USA\*

Adnan H. Siddiqui, MD, PhD – USA

Marian Simka, MD, PhD – POLAND

Daniel Simon, MD – USA\*

Trevor W. Tucker, PhD – CANADA

Kamil Ugurbil, PhD – USA

Bianca Weinstock-Guttman, MD – USA

David Williams, DDS – CANADA\*

H. Charles Woodfield, RPh, DC – USA\*

Paolo Zamboni, MD – ITALY \*

Robert Zivadinov, MD, PhD – USA\*

(\*) – MS Patient Day Speaker



## COMMITTEES

### Executive Committee

<b>President</b>	Robert Zivadinov
<b>President Elect</b>	Marian Simka
<b>Vice President</b>	E. Mark Haacke
<b>Secretary</b>	Mark Godley
<b>Treasurer</b>	David Hubbard
<b>Chairperson</b>	E. Mark Haacke
<b>Chairperson</b>	Michael D. Dake
<b>Journal Editor</b>	Stefano Bastianello
<b>Past President</b>	Paolo Zamboni

### Board Members (Chairs of other Committees) are as follows:

<b>Finance Committee</b>	David Hubbard
<b>Nominating Committee</b>	Salvatore Sclafani
<b>Annual Meeting Program Committee</b>	E. Mark Haacke / Michael D. Dake
<b>Awards Committee</b>	Paolo Zamboni
<b>Publications Committee</b>	Adnan H. Siddiqui / Stefano Bastianello
<b>Workshop Committee</b>	E. Mark Haacke / Mark Godley
<b>Education Committee</b>	Franz Schelling
<b>Governance Committee</b>	Paolo Zamboni / J. Joseph Hewett
<b>Section and Affiliations Committee</b>	Zahid Latif / Nikolaos Liasis
<b>Safety Committee</b>	Kenneth Mandato
<b>Public Relations Committee</b>	Sandy McDonald / Thomas Gilhooly



## ANNUAL MEETING - OVERVIEW

### Saturday, February 18, 2012

9:00AM	4:30PM	MS Patient Day
5:00PM	6:30PM	MS Patient Day Attendees President's Reception
1:00PM	3:10PM	Consensus Workshop on Vascular Imaging in CCSVI: Ultrasound Session
3:40PM	5:20PM	Consensus Workshop on Vascular Imaging in CCSVI: MR Imaging Session

### Sunday, February 19, 2012

8:30AM	10:00AM	Consensus Breakout Session
10:30AM	12:00PM	Multi-Modal Imaging in CCSVI (Integrating Multi-Modal Imaging Standard)
<b>1:00PM</b>	<b>2:30PM</b>	<b>Official Opening of the 2<sup>nd</sup> Annual Scientific Meeting</b>
3:00PM	4:30PM	Abnormal Venous Flow and Neurodegenerative Disease: Part 1
4:30PM	5:00PM	Abnormal Vasculature in Neurological Disease Panel Discussion
5:00PM	7:00PM	Evening Reception

### Monday, February 20, 2012

8:30AM	9:50AM	Perfusion, Hypoxia, Ischemia, Reperfusion
10:30AM	11:55AM	Abnormal Venous Flow and Neurodegenerative Disease: Part 2
1:00PM	2:30PM	CCSVI Introduction: Part 1
3:00PM	4:25PM	CCSVI Consensus Guidelines for Diagnosis: Part 2
4:30PM	5:00PM	Abnormal Vasculature in Neurological Disease Panel Discussion

### Tuesday, February 21, 2012

8:30AM	10:00AM	Abnormal Venous Flow and Neurodegenerative Disease: Part 3
10:30AM	11:55AM	Iron and its Role In Neurovascular Diseases
1:00PM	2:45PM	CCSVI Computational Fluid Dynamics and Measuring Flow: Part 3
3:30PM	4:40PM	Abnormal Vasculature in Neurodegenerative Disease: Part 4—Eye and Optic Nerve
4:40PM	5:10PM	Abnormal Vasculature in Neurodegenerative Disease Panel Discussion

### Wednesday, February 22, 2012

8:30AM	9:50AM	CCSVI Clinical Trials Methodological Considerations: Part 4
10:30AM	12:00PM	Treatment: Abnormal Venous Vasculature in Other Diseases
1:00PM	2:25PM	Abstract Presentations and Abstract Awards
3:00PM	4:45PM	CCSVI Clinical Trials Outcomes: Part 5
4:45PM	5:00PM	Closing Session: Passing of the Gavel



## MS PATIENT DAY PROGRAM

### SATURDAY – FEBRUARY 18, 2012

<b>9:00am-11:30am</b>	<b>CCSVI Overview</b>
9:00am-9:45am	Registration and Coffee
9:45am-10:00am	Opening Remarks – CCSVI Perspective ( <i>Robert Zivadinov, USA</i> )
10:00am-10:15am	History of the first CCSVI patients and long term follow-up ( <i>Paolo Zamboni, ITALY</i> )
10:15am-10:30am	Overview of CCSVI ( <i>William Code, CANADA</i> )
10:30am-10:45am	Establishing CCSVI Protocols: MRI ( <i>E. Mark Haacke, USA</i> )
10:45am-11:00am	Establishing CCSVI Protocols: Ultrasound ( <i>Angela Lagace, CANADA</i> )
11:00am-11:15am	Treatment and Outcomes ( <i>Gerald A. Niedzwiecki, USA</i> )
11:15am-11:30am	Treatment and Follow-up ( <i>J. Joseph Hewett, USA</i> )
<b>11:30am-12:00pm</b>	<b>Debates (Moderator: Salvatore Sclafani)</b>
11:30am-11:45am	"It's all about the valves" PRO – <i>Michael Arata</i> / CON – <i>Bulent Arslan</i>
11:45am-12:00pm	"Is ultrasound an adequate pre-op evaluation for CCSVI?" PRO - <i>Eric Feigenbutz</i> / CON - <i>Raj Attariwala</i>
<b>12:00pm-1:00pm</b>	<b>Lunch with the doctors</b>
<b>1:00pm-2:30pm</b>	<b>CCSVI: Multi-disciplined Considerations</b>
1:00pm-1:10pm	2009 to 2012 – What have we learned? ( <i>Michael D. Dake, USA</i> )
1:10pm-1:20pm	MS Neurologist looks at CCSVI ( <i>Stanley Krolczyk, USA</i> )
1:20pm-1:30pm	Neurologist's conversation ( <i>Stanley Krolczyk, USA &amp; David Hubbard, USA</i> )
1:30pm-1:45pm	Dental health and vascular healing ( <i>David Williams, CANADA</i> )
1:45pm-2:00pm	Atlas instability and CCSVI ( <i>H. Charles Woodfield, USA</i> )
2:00pm-2:10pm	Managing thrombosis ( <i>Daniel Simon, USA</i> )
2:10pm-2:20pm	Collaborative research and healthcare reform ( <i>Jack Burks, USA</i> )
2:20pm-2:30pm	Fighting for clinical trials in Canada ( <i>Kirsty Duncan, CANADA</i> )
<b>2:30pm-4:30pm</b>	<b>Doctors' Roundtable Discussion and Q &amp; A (Moderator: Michael D. Dake)</b>
2:30pm-3:30pm	Panelists: <i>David Hubbard, USA; Bulent Arslan, USA; William Code, CANADA; David Williams, CANADA; H. Charles Woodfield, USA; Stanley Krolczyk, USA; Salvatore Sclafani, USA</i>
3:30pm-4:30pm	Break and Private Conversations
<b>5:00pm-6:30pm</b>	<b>ISNVD President's Reception (Sponsored by the Buffalo Neuroimaging Analysis Center)</b>



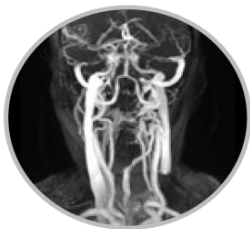
## WORKSHOP ON VASCULAR IMAGING

### SATURDAY – FEBRUARY 18, 2012

<b>1:00pm–3:10pm</b>	<b>Consensus Workshop on Vascular Imaging in CCSVI: Ultrasound Session</b> <i>(Moderators: Ziv J. Haskal and Paolo Zamboni)</i> <b>CME (2.00 credits)</b>
1:00pm-1:10pm	Welcome ( <i>Robert Zivadinov, USA</i> )
1:10pm-1:30pm	Consensus on US CCSVI screening criteria ( <i>Sandra Morovic, ITALY-CROATIA</i> )
1:30pm-1:50pm	B-mode abnormalities and wall stenosis in the natural history of MS ( <i>Karen Marr, USA</i> )
1:50pm-2:10pm	The diagnostic value of CCSVI criteria ( <i>Angela Lagace, CANADA</i> )
2:10pm-2:30pm	Does thoracic pump influence cerebral venous return? ( <i>Erica Menegatti, ITALY</i> )
2:30pm-2:50pm	A prospective study comparing ultrasound and angiography ( <i>Marian Simka, POLAND</i> )
2:50pm-3:10pm	A Hemodynamic Model for Quantification of Cerebral Venous Return ( <i>Sandra Morovic, ITALY-CROATIA</i> )
<b>3:10pm-3:40pm</b>	<b>Coffee Break</b>
<b>3:40pm–5:20pm</b>	<b>Consensus Workshop on Vascular Imaging in CCSVI: MR Imaging Session</b> <i>(Moderators: Michael D. Dake and E. Mark Haacke)</i> <b>CME (2.00 credits)</b>
3:40pm-4:00pm	Magnetic resonance imaging CCSVI protocol ( <i>J. Joseph Hewett, USA</i> )
4:00pm-4:20pm	Morphological MRV multimodal studies in CCSVI ( <i>Robert Zivadinov, USA</i> )
4:20pm-4:40pm	Flow quantification ( <i>Michael D. Dake, USA</i> )
4:40pm-5:00pm	MS, MRI database ( <i>E. Mark Haacke, USA</i> )
5:00pm-5:20pm	Multimodality comparison and jugular entrapment syndrome ( <i>Paolo Zamboni, ITALY</i> )

**Congratulations to  
Franz Schelling, MD  
for being awarded the  
ISNVD Gold Medal for  
the year 2012!**





## CONSENSUS ON IMAGING & TREATMENT PROTOCOLS

### SUNDAY – FEBRUARY 19, 2012

<b>8:30am–10:00am</b>	<b>3 Parallel Consensus Breakout Sessions (MRI, Catheter and US)</b> <i>(Moderators: Raj Attariwala and Salvatore Sclafani)</i> <b>CME (1.50 credits)</b>
8:30am-10:00am	Establishing an MRI CCSVI protocol <i>(Moderator: Raj Attariwala, CANADA)</i>
8:30am-10:00am	Establishing Catheter venography and IVUS imaging standards <i>(Salvatore Sclafani, USA)</i>
8:30am-10:00am	Establishing US imaging standards <i>(Nikolaos Liasis, GREECE)</i>
<b>10:00am-10:30am</b>	<b>Coffee Break</b>
<b>10:30am–12:00pm</b>	<b>Multi-Modal Imaging in CCSVI (Integrating Imaging Standards)</b> <i>(Moderators: Adnan H. Siddiqui and Marian Simka)</i> <b>CME (1.50 credits)</b>
10:30am-10:50am	Summary of the consensus on an MRI CCSVI protocol <i>(Raj Attariwala, CANADA)</i>
10:50am-11:10am	Summary of the consensus on catheter venography and IVUS <i>(Salvatore Sclafani, USA)</i>
11:10am-11:30am	Summary of the consensus on US imaging standards <i>(Nikolaos Liasis, GREECE)</i>
11:30am-11:45am	Advancing a CCSVI Research Agenda Focused on Care <i>(Kirsty Duncan, CANADA)</i>
11:45am-12:00pm	Bringing neurologists into the CCSVI arena - <i>(Jack Burks, USA)</i>
<b>12:00pm-1:00pm</b>	<b>Lunch</b>



## SUNDAY – FEBRUARY 19, 2012

### OFFICIAL OPENING OF THE 2<sup>ND</sup> ANNUAL SCIENTIFIC MEETING

<b>1:00pm–2:30pm</b>	<b>Opening of the ISNVD Annual Scientific Meeting</b> <i>(Moderators: Michael D. Dake and E. Mark Haacke)</i> <b>CME (1.75 credits)</b>
1:00pm-1:15pm	Welcome ( <i>Robert Zivadinov, USA</i> )
1:15pm-1:20pm	Introduction of keynote speaker ( <i>E. Mark Haacke, USA</i> )
1:20pm-2:00pm	Keynote Speaker: Remodeling the Brain after Stroke and Neural Injury ( <i>Michael Chopp, USA</i> )
2:00pm-2:05pm	Introduction to Paolo Zamboni ( <i>Michael D. Dake, USA</i> )
2:05pm-2:10pm	Gold Medal Award ( <i>Paolo Zamboni, ITALY</i> )
2:10pm-2:30pm	ISNVD Gold Medal Award Winner - Franz Schelling, MD ( <i>AUSTRIA</i> ) "CCSVI in MS: Weighing the Findings"
<b>2:30pm-3:00pm</b>	<b>Coffee Break</b>
<b>3:00pm–4:30pm</b>	<b>Abnormal Venous Flow and Neurodegenerative Disease: Part 1</b> <i>(Moderator: Ziv J. Haskal)</i> <b>CME (1.00 credit)</b>
3:00pm-3:30pm	Keynote Speaker: Venous outflow abnormalities in neurological disease ( <i>Han-Hwa Hu, TAIWAN</i> )
3:30pm-4:00pm	Venous involvement in neurological disorders ( <i>Robert Zivadinov, USA</i> )
4:00pm-4:30pm	Effects of hemodynamics on endothelium adhesion and permeability ( <i>John P. Cooke, USA</i> )
<b>4:30pm–5:00pm</b>	<b>Abnormal Vasculature in Neurological Disease Panel Discussion</b>
4:30pm-5:00pm	Panelists: M. Chopp (USA), J. P. Cooke (USA), H-H. Hu (TAIWAN), P. Zamboni (ITALY) and R. Zivadinov (USA)
<b>5:00pm–7:00pm</b>	<b>Evening Reception</b>
5:00pm-7:00pm	Hors D'Oeuvres and Welcome by Robert Zivadinov (USA) & Paolo Zamboni (ITALY)



## MONDAY – FEBRUARY 20, 2012

<b>8:30am–9:50am</b>	<b>Perfusion, Hypoxia, Ischemia, Reperfusion</b> <b>(Moderators: Yulin Ge and David Hubbard)</b> <b>CME (1.50 credits)</b>
8:30am-8:50am	Stroke and Brain Perfusion - Review lecture ( <i>Vida Demarin, CROATIA</i> )
8:50am-9:10am	Technology Insights of Oxygen Metabolic Abnormalities in MS ( <i>Yulin Ge, USA</i> )
9:10am-9:30am	Perfusion changes in CCSVI ( <i>Robert Zivadinov, USA</i> )
9:30am-9:50am	fMRI BOLD and ASL perfusion before and after venoplasty ( <i>David Hubbard, USA</i> )
<b>9:50am-10:30am</b>	<b>Coffee Break and Poster Presentations</b>
<b>10:30am–11:55am</b>	<b>Abnormal Venous Flow and Neurodegenerative Disease: Part 2</b> <b>(Moderators: Han-Hwa Hu and Fabrizio Salvi)</b> <b>CME (1.50 credits)</b>
10:30am-10:50am	Changes in venous anatomy associated with sustained venous insufficiency in Sturge-Weber disease ( <i>Csaba Juhasz, USA</i> )
10:50am-11:10am	Venous and CSF flow in brain parenchyma of MS patients ( <i>Robert Zivadinov, USA</i> )
11:10am-11:30am	Normal pressure hydrocephalus and CCSVI ( <i>Fabrizio Salvi, ITALY</i> )
11:30am-11:35am	ABSTRACT "Evaluation of Cerebrospinal Fluid Flow in Multiple Sclerosis Patients using Phase Contrast MRI" ( <i>Marcella Lagana, ITALY</i> )
11:35am-11:40am	ABSTRACT "A lumped-parameter model for the study of cerebrospinal venous flow" ( <i>Stefania Marcotti, ITALY</i> )
11:40am-11:55am	Cranial Instability and CCSVI ( <i>David Williams, CANADA</i> )
<b>11:55am-1:00pm</b>	<b>Lunch</b>



## MONDAY – FEBRUARY 20, 2012

<b>1:00pm–2:30pm</b>	<b>CCSVI Introduction: Part 1</b> <i>(Moderators: Robert Fox and Andrew Nicolaidis)</i> <b>CME (1.50 credits)</b>
1:00pm-1:20pm	Historical overview of CCSVI ( <i>Paolo Zamboni, Italy</i> )
1:20pm-1:40pm	Postmortem assessment of jugular and azygos vein pathology ( <i>Robert Fox, USA</i> )
1:40pm-2:00pm	Multiple sclerosis and cerebral endothelial dysfunction ( <i>J. Steven Alexander, USA</i> )
2:00pm-2:15pm	SVC Syndrome: Does it teach us about CCSVI? ( <i>Ziv J. Haskal, USA</i> )
2:15pm-2:30pm	Asymptomatic carotid stenosis and risk stratification ( <i>Andrew Nicolaidis, UK</i> )
<b>2:30pm-3:00pm</b>	<b>Coffee Break and Poster Presentations</b>
<b>3:00pm–4:25pm</b>	<b>CCSVI Consensus Guidelines for Diagnosis: Part 2</b> <i>(Moderators: Salvatore Sclafani and Adnan H. Siddiqui)</i> <b>CME (1.50 credits)</b>
3:00pm-3:20pm	Ultrasound consensus ( <i>Angela Lagace, CANADA</i> )
3:20pm-3:40pm	MRV consensus ( <i>E. Mark Haacke, USA</i> )
3:40pm-4:00pm	Catheter venography consensus ( <i>Marian Simka, POLAND</i> )
4:00pm-4:20pm	IVUS consensus ( <i>Adnan H. Siddiqui, USA</i> )
4:20pm-4:25pm	ABSTRACT "Consensus on Ultrasound Chronic Cerebrospinal Venous Insufficiency Screening Criteria" ( <i>Sandra Morovic, ITALY-CROATIA</i> )
<b>4:30pm–5:00pm</b>	<b>Abnormal Vasculature in Neurological Disease Panel Discussion</b> <b>CME (1.00 credit)</b>
4:30pm-5:00pm	Panelists: E.M. Haacke (USA), A. Lagace (CANADA), M. Simka (POLAND), and A.H. Siddiqui (USA)



## TUESDAY – FEBRUARY 21, 2012

<b>8:30am–10:00am</b>	<b>Abnormal Venous Flow and Neurodegenerative Disease: Part 3</b> <b>(Moderators: Richard Hoge and Kamil Ugurbil)</b> <b>CME (1.50 credits)</b>
8:30am-9:00am	Keynote Speaker: The effects of jugular venous reflux in aging. (Chih-Ping Chung, TAIWAN)
9:00am-9:20am	Flow effects and brain function in aging (Richard Hoge, CANADA)
9:20am-9:40am	High resolution imaging of the brain's vasculature (E. Mark Haacke, USA)
9:40am-10:00am	Neurovascular coupling and cerebral vascular organization (Kamil Ugurbil, USA)
<b>10:00am-10:30am</b>	<b>Coffee Break and Poster Presentations</b>
<b>10:30am–11:55am</b>	<b>Iron and its role In Neurovascular Diseases</b> <b>(Moderators: E. Mark Haacke and Stefan Ropele)</b> <b>CME (1.50 credits)</b>
10:30am-11:00am	Keynote Speaker: The role of brain iron in neurovascular disease. (James R. Connor, USA)
11:00am-11:20am	Hepcidin and Ferroportin Genetic Variants in MS susceptibility and progression (Donato Gemmati, ITALY)
11:20am-11:40am	Iron in MS: Insights from MRI (Stefan Ropele, AUSTRIA)
11:40am-11:45am	ABSTRACT "Assessing Abnormal Iron Content in Deep Gray Matter of Patients with Multiple Sclerosis versus Healthy Subjects" (Charbel Habib, USA)
11:45am-11:50am	ABSTRACT "Iron deposition in clinically isolated syndrome" (Jesper Hegemeier, USA)
11:50am-11:55am	ABSTRACT "Iron deposition and disability in MS" (Robert Zivadinov, USA)
<b>11:55am-1:00pm</b>	<b>Lunch</b>



## TUESDAY – FEBRUARY 21, 2012

<b>1:00pm–2:45pm</b>	<b>CCSVI Computational Fluid Dynamics and Measuring Flow: Part 3</b> (Moderator: <i>Michael Markl</i> ) <b>CME (1.50 credits)</b>
1:00pm-1:30pm	Keynote Speaker: The future of 4D imaging of flow. ( <i>Michael Markl, USA</i> )
1:30pm-1:55pm	Flow characteristics in a study of 300 MS patients ( <i>E. Mark Haacke, USA</i> )
1:55pm-2:20pm	Postural control of cerebral venous return in normal and CCSVI subjects ( <i>Paolo Zamboni, ITALY</i> )
2:20pm-2:45pm	A Physics Link Between Cerebral Venous Reflux and Venous Hypertension, Hypoxia and Scleroses ( <i>Trevor Tucker, CANADA</i> )
<b>2:45pm-3:30pm</b>	<b>Coffee Break and Poster Presentations</b>
<b>3:30pm–4:40pm</b>	<b>Abnormal Vasculature in Neurodegenerative Disease: Part 4 Eye / Optic Nerve</b> (Moderator: <i>Marian Simka</i> ) <b>CME (1.50 credits)</b>
3:30pm-4:00pm	Keynote Speaker: Investigating the vasculature of the eye. ( <i>Timothy Q. Duong, USA</i> )
4:00pm-4:20pm	Retinal abnormalities in multiple sclerosis patients with associated chronic cerebrospinal venous insufficiency ( <i>Marian Simka, POLAND</i> )
4:20pm-4:40pm	CCSVI – The Eyes Have It ( <i>Diana Driscoll, USA</i> )
<b>4:40pm–5:10pm</b>	<b>Abnormal Vasculature in Neurodegenerative Disease Panel Discussion</b> <b>CME (1.00 credit)</b>
4:40pm-5:10pm	Panelists: T.Q. Duong (USA), M. Simka (POLAND), D. Driscoll (USA)



## WEDNESDAY – FEBRUARY 22, 2012

<b>8:30am–9:50am</b>	<b>CCSVI Clinical Trials Methodological Considerations: Part 4</b> <i>(Moderators: Patricia Coyle and Bianca Weinstock-Guttman)</i> <b>CME (1.50 credits)</b>
8:30am-8:50am	Disability related outcomes in MS <i>(Patricia Coyle, USA)</i>
8:50am-9:10am	MRI outcomes in MS <i>(Robert Zivadinov, USA)</i>
9:10am-9:30am	Cognitive outcomes in MS <i>(Ralph Benedict, USA)</i>
9:30am-9:50am	CCSVI interdisciplinary approach <i>(Bianca Weinstock-Guttman, USA)</i>
<b>9:50am-10:30am</b>	<b>Coffee Break and Poster Presentations</b>
<b>10:30am–12:00pm</b>	<b>Treatment of other venous diseases: Abnormal vasculature: Part 5</b> <i>(Moderators: Bulent Arslan and J. Joseph Hewett)</i> <b>CME (1.50 credits)</b>
10:30am-10:50am	Lessons from endovascular management of lower extremity venous obstruction <i>(Seshadri Raju, USA)</i>
10:50am-11:10am	Consequences of venous obstruction involving other vascular beds <i>(Salvatore Sclafani, USA)</i>
11:10am-11:30am	Occlusion, recanalization and thrombolysis <i>(Bulent Arslan, USA)</i>
11:30am-11:45am	Idiopathic intracranial hypertension: similarities & differences with CCSVI <i>(Randall Benson, USA)</i>
11:45am-12:00pm	Endovascular treatment of MS: current treatment strategies and future developments <i>(Nicholas Kipshidze, USA)</i>
<b>12:00pm-1:00pm</b>	<b>Lunch</b>



## WEDNESDAY – FEBRUARY 22, 2012

<b>1:00pm–2:25pm</b>	<b>Abstract Presentations and Abstract Awards</b> <i>(Moderators: Michael D. Dake and Paolo Zamboni)</i> <b>CME (1.75 credits)</b>
1:00pm-1:20pm	Recanalization of the jugular vein and CCSVI ( <i>James F. McGuckin, USA</i> )
1:20pm-1:40pm	CCSVI in MS is Characterized by Altered Collagen Expression in Draining Veins in the Brain ( <i>Matteo Coen, SWITZERLAND</i> )
1:40pm-1:45pm	ABSTRACT "Quality of Life Changes After Endovascular Treatment for CCSVI in Patients with MS" ( <i>Kenneth Mandato, USA</i> )
1:45pm-1:50pm	ABSTRACT "The Role of Doppler Ultrasound in the Diagnosis of Chronic Cerebrospinal Venous Insufficiency (CCSVI) in Patients with Multiple Sclerosis" ( <i>Kenneth Mandato, USA</i> )
1:50pm-1:55pm	ABSTRACT "Internal jugular vein valve morphology in patients with CCSVI; angiographic findings and schematic demonstrations" ( <i>Mamoon Al-Omari, JORDAN</i> )
1:55pm-2:00pm	ABSTRACT "Enhanced imaging of simultaneous TOF-MRA & SWI" ( <i>Yongquan Ye, USA</i> )
2:00pm-2:05pm	ABSTRACT "The Cerebral Perfusion Patterns of Patients with Multiple Sclerosis (MS) using MRI" ( <i>Yi Zhong, USA</i> )
2:05pm-2:10pm	ABSTRACT "Flow through the internal jugular vein is reduced for multiple sclerosis patients with stenoses compared to those without observed by MRI" ( <i>Wei Feng, USA</i> )
2:10pm-2:15pm	ABSTRACT "Intravascular Ultrasound for detection of azygous and internal jugular vein (IJV) abnormalities as part of the PREMise (Prospective Randomized Endovascular Therapy in Multiple Sclerosis) study" ( <i>Yuval Karmon, USA</i> )
2:15pm-2:20pm	ABSTRACT "Measurement of Azygos venous blood flow in patients with Multiple Sclerosis using MRI" ( <i>Aisha Tai, USA</i> )
2:20pm-2:25pm	ABSTRACT "Prevalence of Chronic Cerebrospinal Vascular Insufficiency (CCSVI) in patients with multiple sclerosis and healthy controls: a systematic review of the literature and meta-analysis" ( <i>Andrew Dueck, CANADA</i> )
<b>2:25pm-3:00pm</b>	<b>Coffee Break and Poster Presentations</b>



## WEDNESDAY – FEBRUARY 22, 2012

<b>3:00pm–4:45pm</b>	<b>CCSVI Clinical Trials Outcomes: Part 5</b> <b>(Moderators: Marian Simka and Robert Zivadinov)</b> <b>CME (1.50 credits)</b>
3:00pm-3:20pm	Is CCSVI a disease? (Robert Zivadinov, USA)
3:20pm-3:40pm	Design of randomized, placebo-controlled endovascular trials in MS (Adnan H. Siddiqui, USA)
3:40pm-4:00pm	A national approach to gather prospective data for MS outcomes (Donald J. Ponec, USA and David Hubbard, USA)
4:00pm-4:20pm	A CCSVI Clinical Trial Design from a Neurologist's Perspective (Jack Burks, USA)
4:20pm-4:40pm	BRAVE Dreams (Paolo Zamboni, ITALY)
4:40pm-4:45pm	Abstracts awards (Paolo Zamboni, ITALY)
<b>4:45pm–5:00pm</b>	<b>Closing Session: Passing of the Gavel</b>
4:45pm-5:00pm	Robert Zivadinov, President 2011-2012 to Marian Simka, President 2012-2013



## ANNUAL MEETING REGISTRATION FORM

### STEP 1: MEETING BADGE INFORMATION

M.D.  M.D. Candidate  Ph.D.  Ph.D. Candidate  Prof.  R.T.  Other  
 Male  Female

Family Name: \_\_\_\_\_ First/Given Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_

Institution: \_\_\_\_\_ City: \_\_\_\_\_ State/Province: \_\_\_\_\_ ZIP/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

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Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Is this new contact information:  Yes  No

### STEP 3: STUDENT VERIFICATION (\*required for all students, post docs, and technologists who are registering as non-members)

Supervisor's Name: \_\_\_\_\_ Institution Name: \_\_\_\_\_  
Supervisor's Phone: \_\_\_\_\_ Supervisor's Email: \_\_\_\_\_

### STEP 4: ATTENDANCE INFORMATION

I have a disability & require assistance /  Send me an invitation letter for the purpose of obtaining a visa.

### STEP 5: PROGRAM OPTIONS AND FEES (All Fees are in USD)

ADVANCE REGISTRATION			Student/Postdoc/Associates		Technologist / Resident	Technologist / Resident
	Program Options Please check the program you are planning to attend:	ISNVD Member Fee	ISNVD Non-Member Fee	ISNVD Student Member Fee	Student Non-Member Fee* *Supervisor's info required	Member Fee * *Supervisor's info required
ISNVD Annual Meeting 18-22 February 2012	\$500	\$600	\$200	\$300	\$200	\$300

### ONSITE REGISTRATION

ISNVD Annual Meeting 18-22 February 2012	\$600	\$700	\$250	\$350	\$250	\$350
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### STEP 6: PAYMENT OPTIONS (FEES ARE SHOWN IN USD)

- Check enclosed (personal, bank, institution) made payable to:  
ISNVD  
Attn: David Hubbard, MD  
10065 Old Grove Rd, Ste 103, San Diego, CA 92131 USA
- Online Registration & Payment via PayPal: <http://isnvd.org/index.php?site=registrationannual#content>

**Refunds/Cancellations:** A refund of the registration fee minus handling charges (25%) will be refunded provided a written request on or before 4 February 2012.



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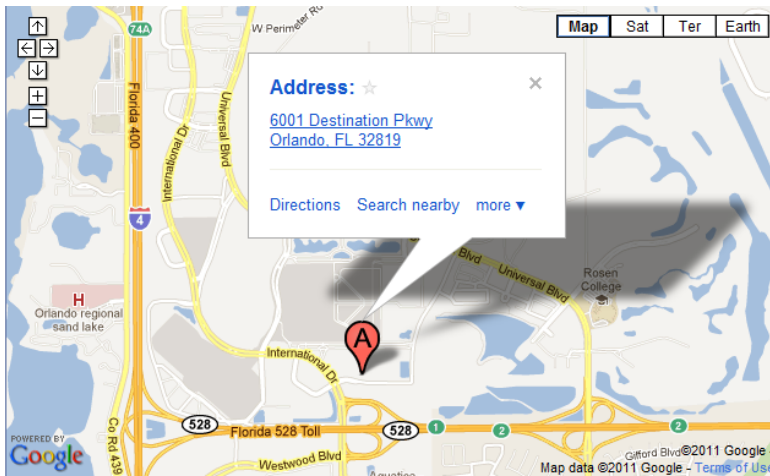
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#### **From Airport:**

Depart airport on Airport Blvd.

Take SR 528 (Toll Road) West  
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Merge onto SR-528 E.

Take exit 1 for International Drive.

Keep right at the fork, follow signs  
for Conv. Center / Wet'n Wild and  
merge left onto International Drive.

Turn right at Destination Parkway.

#### **From the Florida Turnpike:**

Take exit for Orlando I-4, head  
West.

Take exit 72 for SR-528-TOLL E  
toward Int'l Airport/Cape  
Canaveral/Sea World/  
International Drive.

Take exit 1 for International  
Drive.

Keep right at the fork, follow  
signs for Conv. Center / Wet'n  
Wild and merge left onto  
International Drive.

Turn right at Destination  
Parkway.



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Boasting a modern design to accommodate both the most active visitors or people in search of some quality R&R, the Hilton Orlando features a comprehensive 15,000 square-foot Spa and Fitness Center, two resort pools, a lazy river, nine-hole executive golf course, a jogging track, and basketball, tennis, and bocce ball courts. Seven creative dining options provide fresh and creative cuisine.

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## ORAL ABSTRACTS

### Monday, February 20, 2012

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
157	Evaluation of cerebrospinal fluid flow in multiple sclerosis patients using phase contrast MRI	<i>Marcella Lagana</i>	11:30am-11:35am
133	A lumped-parameter model for the study of cerebrospinal venous flow	<i>Stefania Marcotti</i>	11:35am-11:40am
122	Consensus on ultrasound chronic cerebrospinal venous insufficiency screening criteria	<i>Sandra Morovic</i>	4:20pm-4:25pm

### Tuesday, February 21, 2012

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
124	Assessing Abnormal Iron Content in Deep Gray Matter of Patients with Multiple Sclerosis versus Healthy Subjects	<i>Charbel Habib</i>	11:40am-11:45am
139	Iron deposition in clinically isolated syndrome	<i>Jesper Hegemeier</i>	11:45am-11:50am
143	Iron deposition and disability in MS	<i>Robert Zivadinov</i>	11:50am-11:55am

### Wednesday, February 22, 2012

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
91	Quality of Life Changes After Endovascular Treatment for CCSVI in Patients with MS	<i>Kenneth Mandato</i>	1:40pm-1:45pm
92	The Role of Doppler Ultrasound in the Diagnosis of Chronic Cerebrospinal Venous Insufficiency (CCSVI) in Patients with Multiple Sclerosis	<i>Kenneth Mandato</i>	1:45pm-1:50pm
112	Internal jugular vein valve morphology in the patients with CCSVI; angiographic findings and schematic demonstrations	<i>Mamoon Al-Omari</i>	1:50pm-1:55pm
132	Enhanced imaging of simultaneous TOF-MRA and SWI	<i>Yongquan Ye</i>	1:55pm-2:00pm
134	The Cerebral Perfusion Patterns of Patients with Multiple Sclerosis (MS) using MRI	<i>Yi Zhong</i>	2:00pm-2:05pm
167	Flow through Internal jugular vein is reduced for multiple sclerosis patients with stenoses compared to those without observed by MRI	<i>Wei Feng</i>	2:05pm-2:10pm
165	Intravascular Ultrasound for detection of Azygous and Internal Jugular vein (IJV) abnormalities as part of the PREMise (Prospective Randomized Endovascular therapy in Multiple Sclerosis) study	<i>Yuval Karmon</i>	2:10pm-2:15pm
166	Measurement of Azygos venous blood flow in patients with Multiple Sclerosis using MRI	<i>Aisha Tai</i>	2:15pm-2:20pm
113	Prevalence of Chronic Cerebrospinal Vascular Insufficiency (CCSVI) in patients with multiple sclerosis and healthy controls: a systematic review of the literature and metaanalysis	<i>Andrew Dueck</i>	2:25pm-2:25pm



## POSTER ABSTRACTS

### Monday, February 20, 2012

#### 10:05am – 10:20am

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
129	Does Thoracic pump influence blood flow velocity in cerebral veins?	<i>Erica Menegatti</i>	10:05am-10:10am
119	Azygos compression and effect of respiratory cycle during CCSVI Venography	<i>Michael A. Arata</i>	10:10am-10:15am
141	Multimodal imaging approach sclerosis for screening of chronic cerebrospinal venous insufficiency in patients with multiple	<i>Kresimir Dolic</i>	10:15am-10:20am

#### 2:35pm – 2:55pm

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
140	Iron deposition in pediatric multiple sclerosis patients	<i>Jesper Hegemeier</i>	2:35pm-2:40pm
142	Iron deposition in multiple sclerosis lesions	<i>Jesper Hegemeier</i>	2:40pm-2:45pm
125	Mathematical model for the hemodynamics of extracranial veins: effect of posture and respiratory maneuver	<i>Lucas O. Mueller</i>	2:45pm-2:50pm
114	Interventionalist Documentation of Fluoroscopy Time in Venous Angioplasty for CCSVI Reports Correlated With Lower Fluoroscopy Times	<i>Nina Grewal</i>	2:50pm-2:55pm

### Tuesday, February 21, 2012

#### 10:05am – 10:25am

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
158	Cardiac effects in the multiple sclerosis patient – implications for avoidance of restenosis after CCSVI angioplasty	<i>Diana Driscoll</i>	10:05am-10:10am
137	Venous Angioplasty In Multiple Sclerosis: Long Term Clinical Outcome Of A Cohort Of Relapsing-Remitting Patients	<i>Fabrizio Salvi</i>	10:10am-10:15am
147	Acetazolamide as a medical treatment option for patients with neurodegenerative disease in conjunction with or independent of, angioplasty for Chronic	<i>Diana Driscoll</i>	10:15am-10:20am
121	Evaluation of muscle metabolism in multiple sclerosis: A near infrared spectroscopy-based approach	<i>Anna Maria Malagoni</i>	10:20am-10:25am

#### 2:55pm – 3:20pm

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
130	A model of filtration and transport of solutes across the Blood Brain Barrier	<i>Laura Facchini</i>	3:05pm-3:10pm
97	Endovascular management of CCSVI: Single Center Experience	<i>Hector Ferral</i>	3:10pm-3:15pm
95	Removal of the obstructions in the extracranial venous pathway improves the clinical disability in multiple sclerosis	<i>Miro Denislic</i>	3:15pm-3:20pm
115	Quality of Life Improvement after Endovascular Treatment of Chronic Cerebrospinal Venous Insufficiency	<i>Nina Grewal</i>	3:20pm-3:25pm



## POSTER ABSTRACTS

**Wednesday, February 22, 2012**

**10:05am – 10:25am**

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
131	Improvement of chronic fatigue after endovascular treatment for chronic cerebrospinal venous insufficiency in the patients with multiple sclerosis	<i>Marian Simka</i>	10:05am–10:10am
126	Treatment Outcomes for CCSVI in the UK	<i>Barun Majumber</i>	10:10am–10:15am
94	Findings on Venography in MS Patients Undergoing an Evaluation for CCSVI: Correlation with MS Subtype and the Presence of Visual Symptoms at the Time	<i>Kenneth Mandato</i>	10:15 am–10:20am
117	Adverse Post CCSVI Treatment Outcome - A Case Report - What We Can Learn	<i>Raj Attariwala</i>	10:20am–10:25am

**2:35 pm – 2:55 pm**

<i>ID</i>	<i>Title</i>	<i>First Author</i>	<i>Time</i>
154	Vascular fundus changes observed in patients with high probability of CCSVI (Chronic Cerebrospinal Venous Insufficiency)	<i>Diana Driscoll</i>	2:35pm–2:40pm
155	Does metal-induced hypersensitivity, a risk factor for venous stenosis and restenosis, contribute to brain and venous abnormalities in multiple sclerosis sufferers?	<i>Vera Stejskal</i>	2:40pm–2:45pm
168	Bruxism and Temporal Bone Hypermobility in Patients with Multiple Sclerosis	<i>David Williams</i>	2:45pm–2:50pm
167	Flow through Internal jugular vein is reduced for multiple sclerosis patients with stenoses compared to those without observed by MRI	<i>Zhen Wu</i>	2:50pm–2:55pm



## MISSION STATEMENT

The International Society for NeuroVascular Disease is a non-profit professional association devoted to furthering the development of research for neurovascular related diseases – including CCSVI. The society will hold annual scientific meetings and sponsor educational and scientific workshops. Target medical groups include, but are not limited to, Vascular Surgeons, Interventional Radiologists, Neurologists, Neurosurgeons, Physicists, and Technologists.

The purposes of the International Society for Neurovascular Disease (ISNVD) are:

1. to promote communication, research, development, applications, and the availability of information on neurovascular and related neurodegenerative diseases such as multiple sclerosis internationally;
2. to develop and provide channels and facilities for continuing education and communication in the field, to publish and assist in the publishing of journals and other publications in the field;
3. to provide information and advice on those aspects of public policy which are concerned with neurovascular disease and other related topics, and otherwise to perform charitable, scientific and educational functions with respect to studying such diseases in terms of research and treatment;
4. to work with or for, and to co-operate with local, regional and national governments and governmental and private agencies, organizations, firms and institutions in efforts to accomplish one or more of the above purposes and
5. to ensure that scientists and clinicians working in the field have equal and fair opportunities to contribute to it.

## ANNUAL MEETING CHAIRMEN

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Robert Zivadinov, MD, PhD

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