

# *Scientific program*



# ISPNI

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International Society of  
Peripheral Neurophysiological Imaging

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8th Annual Meeting  
Trieste | Italy

***19 - 21 September 2019***



## *Welcome to Trieste*

*We wish you a warm welcome to the city of Trieste!*

*Trieste is not the typical Italian city you may expect to see: many different cultures, religions, languages and traditions are the special "ingredients" of the exclusive melting pot that will frame your stay in this city!*

*Western, Eastern and Central European heritage find here a balanced equilibrium where each community, living side by side, was able to leave a permanent sign within the international soul of Trieste.*

*Its baricentric location has always made Trieste a strategic European city, even in the scientific world: in 2020 the city will host the European Open Science Forum and ISPNI 8th annual meeting is one of the pro-ESOF events, proving its relevance within the world of the scientific research.*

*Our annual meeting represents an important moment for the neurological sciences, given its high-level international faculty presenting innovations and new approaches for diagnosis and management of pathologies of the peripheral nerve.*

*Ultrasound of peripheral nerve is an innovative method in this field: it increases the knowledge of pathological mechanisms and opens to new prospectives in clinical management. The neuroimaging with ultrasounds and magnetic resonance imaging of inflammatory and post traumatic nerve diseases is becoming mandatory for the right diagnosis. The translational method to combine clinical neurophysiology and ultrasounds is quite revolutionary to all operators in this field.*

*For those participants approaching for the first time this method, a basic course followed by a practical hands-on session is envisaged just before the main conference, so that everyone can fully take advantage of this 3-day conference!*

*We wish to all of you a productive conference and, above all, professional improvement!*

*Paolo Manganotti*

*Lisa Hobson-Webb*

*Luca Padua*

*Simon Podnar*



prof. Paolo  
MANGANOTTI  
Trieste, ITALY



prof. Lisa  
HOBSON - WEBB  
Durham, USA



prof. Luca  
PADUA  
Roma, ITALY



prof. Simon  
PODNAR  
Ljubljana, SLOVENIA

**BASIC COURSE  
ROOM OCEANIA**

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8.00 AM Basic Course registrations

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8.30 AM **MAIN UPPER LIMB NERVES : MEDIAN, ULNAR & RADIAL NERVE**  
SIMON PODNAR

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9.15 AM **MAIN LOWER LIMB NERVES: FIBULAR, TIBIAL, SCIATIC & SURAL**  
LUCA PADUA

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10.00 AM **UNUSUAL NERVES TENDONS AND MUSCLES**  
CARLO MARTINOLI

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10.45 AM **HANDS-ON: EXPLAIN, DEMONSTRATE, SUPERVISE**

Hands-on groups with the tutoring of

ANTONIOS KERASNOUDIS - CARLO MARTINOLI -  
GREGOR OMEJEC - LUCA PADUA - SIMON PODNAR -  
CRAIG M. ZAIDMAN

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1.00 PM **BASIC COURSE CLOSURE**

**MAIN CONFERENCE  
ROOM OCEANIA**

|          |  |     |
|----------|--|-----|
| 12.30 PM | Main Conference registrations  |     |
| 1.30 PM  | <b>OPENING SESSION</b>   |     |
|          | Chairs : LISA HOBSON-WEBB, PAOLO MANGANOTTI  |     |
|          | <b>Welcome addresses</b>   |     |
|          | LISA HOBSON-WEBB, PAOLO MANGANOTTI, LUCA PADUA   |     |
| 2.00 PM  | <b>MUSCLE ULTRASONOGRAPHY</b>  |     |
|          | Chairs : NENS VAN ALFEN, FRANCIS WALKER  |     |
|          | Ultrasonography in inflammatory myopathies and muscular dystrophies<br>CRAIG ZAIDMAN   | 20' |
|          | Muscle echogenicity measurements<br>ANDREA BOON  | 20' |
|          | Scoring systems in muscle ultrasonography<br>NENS VAN ALFEN  | 20' |
| 3.00 PM  | <b>HANDS-ON: EXPLAIN, DEMONSTRATE, SUPERVISE</b>   |     |
|          | Unusual upper limb, shoulder girdle and neck nerves<br>JEFFREY A. STRAKOWSKI   | 10' |
|          | Hands-on groups with the tutoring of<br>NENS VAN ALFEN - ZSUZSANNA ARANYI - DANIELE CORACI -<br>DORIS LIEBA-SAMAL - ŽIGA SNOJ              | 50' |
| 4.00 PM  | <b>ULTRASONOGRAPHY IN FOCAL NEUROPATHIES</b>   |     |
|          | Chairs : ERVINA BILIĆ  |     |
|          | Controversies in carpal tunnel syndrome:<br>diagnosis and treatment<br>JEREMY BLAND  | 20' |
|          | The use of ultrasound for focal ulnar neuropathies<br>JOONSHIK YOON  | 20' |
|          | How useful is ultrasonography in diagnosing focal neuropathies<br>added on polyneuropathy<br>DANIELE CORACI                                | 20' |
| 5.00 PM  | <b>HANDS-ON: EXPLAIN, DEMONSTRATE, SUPERVISE</b>   |     |
|          | Unusual lower limb and pelvic girdle nerves<br>CARLO MARTINOLI   | 20' |
|          | Hands-on groups with the tutoring of<br>MICHAEL S. CARTWRIGHT - DANIELE CORACI - CARLO MARTINOLI<br>JEFFREY A. STRAKOWSKI - FRANCIS WALKER | 40' |

## PARALLEL SESSIONS

### ROOM OCEANIA

6.00 PM **PRO ET CONTRA IN  
ULTRASONOGRAPHY AND  
NEUROPATHY**

Chairs :  
MICHAEL S. CARTWRIGHT, LUCA PADUA

#### DIAGNOSIS OF INFLAMMATORY POLYNEUROPATHIES

All you need is electrodiagnosis  
FRANCIS WALKER 15'

Ultrasonography adds important  
information  
ALEXANDER GRIMM 15'

#### FIRST EXAMINATION IN PATIENTS WITH ENTRAPMENT NEUROPATHIES

Ultrasonography  
LISA HOBSON-WEBB 15'

Electrodiagnosis  
JEREMY BLAND 15'

#### STEROID INJECTIONS

Only under strict sterile conditions  
JEFFREY A. STRAKOWSKI 15'

Well cleaned, but not sterile  
NENS VAN ALFEN 15'

7.30 PM **END OF SESSIONS**

7.45 PM **WELCOME COCKTAIL @ CAFFE' DEGLI SPECCHI**

### ROOM VULCANIA

6.00 PM **ULTRASONOGRAPHICALLY  
GUIDED BOTULINUM INJECTION  
IN SPASTICITY**

Chairs :  
SERDAR KOÇER, PAOLO MANGANOTTI

#### INDICATIONS FOR ULTRASONOGRAPHY AND ELECTROSTIMULATION IN BOTULINUM INJECTION

Indications and guidelines for  
ultrasonographically guided injections of  
botulinum toxin in spasticity and dystonia  
JÖRG WISSEL 20'

When the electrostimulation is better  
PAOLO MANGANOTTI 10'

#### 6.30 PM **HANDS-ON: EXPLAIN, DEMONSTRATE, SUPERVISE**

Anatomical guide on usually injected muscles  
and muscle skeletal  
CARLO MARTINOLI 15'

Hands-on groups with the tutoring of  
SERDAR KOÇER - CARLO MARTINOLI -  
JÖRG WISSEL 45'

**PARALLEL SESSIONS**

**ROOM OCEANIA**

8.15 AM **ULTRASONOGRAPHY**

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Chairs :  
DANIELE CORACI, MARCELLO C. ROMANO

Peripheral nerve fascicular structure  
in health and disease  
ALEXANDER GRIMM 30'

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Ultrasonographically important anatomic  
variants and nerve trauma  
LUCA PADUA 30'

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9.15 AM **HANDS-ON: EXPLAIN,  
DEMONSTRATE, SUPERVISE**

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Unusual nerves  
NENS VAN ALFEN 15'

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Hands-on groups with the tutoring of  
NENS VAN ALFEN - ZSUZSANNA ARANYI -  
DANIELE CORACI - DORIS LIEBA-SAMAL -  
ŽIGA SNOJ 60'

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**ROOM VULCANIA**

8.15 AM **ULTRASONOGRAPHY IN NEURAL  
BLOCKS AND UTILITY TREATMENT  
IN FOCAL SPASTICITY**

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Chairs :  
GIANLUIGI GIGLI, CRAIG M. ZAIDMAN

Ultrasonography and toxin injection in the  
treatment of spasticity  
SERDAR KOÇER 20'

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Ultrasonography is better and more useful  
for interventional nerve blocks  
FRANCIS WALKER 20'

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Neurophysiology and electro stimulation is  
better  
JACOPO BONAVIDA 20'

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9.15 AM **HANDS-ON: EXPLAIN,  
DEMONSTRATE, SUPERVISE**

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Interventional musculoskeletal and  
neuromuscular ultrasonography with video  
demonstrations in the treatment of  
spasticity and motor disorders  
FRANCIS WALKER 15'

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Hands-on groups with the tutoring of  
FRANCIS WALKER - SERDAR KOÇER 60'

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10.30 AM **END OF SESSIONS**

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PLENARY SESSION  
ROOM OCEANIA

10.45 AM

INVITED TALK

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prof. Lucio Santoro  
University of Naples,  
Italy

LUCIO SANTORO

**Neurophysiology:  
what can it say and what cannot**

45'

Chairs

LISA HOBSON-WEBB, PAOLO MANGANOTTI

11.30 AM

ISPNI BUSINESS MEETING

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30'

Chairs LISA HOBSON-WEBB, LUCA PADUA

12.00 PM

INVITED TALK

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prof. Giuseppe  
Lauria Pinter  
University of Milan,  
Italy

GIUSEPPE LAURIA PINTER

**Painful neuropathies  
diagnosis and treatment**

30'

Chairs

LISA HOBSON-WEBB, SIMON PODNAR

12.30 PM

INVITED TALK

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prof. Eduardo  
Nobile Orazio  
Humanitas,  
Italy

EDUARDO NOBILE ORAZIO

**Treatment of  
dysimmune neuropathies**

30'

Chairs

LISA HOBSON-WEBB, SIMON PODNAR

1.00 - 2.00 PM

POSTER SESSION & LUNCH BREAK

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**PARALLEL SESSIONS**

**ROOM OCEANIA**

2.00 PM **ULTRASONOGRAPHY IN DIFFERENT NEURO-MUSCULAR CONDITIONS**

Chairs :  
ANDREA BOON, GREGOR OMEJEC

Ultrasonography in neuralgic amyotrophy  
ZSUZSANNA ARANYI 40'

Imaging in myopathies  
NENS VAN ALFEN 40'

Ultrasonography of the cranial nerves  
DORIS LIEBA-SAMAL 40'

4.00 PM **HANDS-ON: EXPLAIN, DEMONSTRATE, SUPERVISE**

Video Olympic on ultrasound  
LUCA PADUA 20'

Hands-on groups with the tutoring of  
MICHAEL S. CARTWRIGHT - DANIELE CORACI - JEFFREY A. STRAKOWSKI - FRANCIS WALKER 40'

5.00 PM **ULTRASONOGRAPHY IN INFLAMMATORY NEUROPATHIES**

Chairs :  
NATALIE WINTER, JOONSHIK YOON

Reference values in Ultrasonography  
ANTONIOS KERASNOUDIS 30'

Ultrasonography as a tool for diseases follow-up  
CRAIG M. ZAIMAN 30'

Ultrasonographic assistance in electrodiagnostic studies  
ANDREA BOON 30'

6.30 PM **END OF SESSIONS**

**ROOM VULCANIA**

2.00 PM **UTILITY OF ULTRASONOGRAPHY IN MOTOR DISORDERS**

Chairs:  
ANTONIOS KERASNOUDIS, PAOLO MANGANOTTI

Ultrasonography in amyotrophic lateral sclerosis and other motor neuron disorders  
LISA HOBSON - WEBB 30'

Immune mediated neuropathies, entrapment neuropathies and US  
ANTONIOS KERASNOUDIS 30'

What ultrasonography adds to the diagnosis of motor neuron disorders?  
STEFANIE SCHREIBER 30'

Ultrasonography in inflammatory myopathies and muscular dystrophies  
CRAIG ZAIMAN 30'

4.00 PM **BREAK**

5.00 PM **MAGNETIC RESONANCE IN CERVICAL AND CRANIAL NERVES**

Chairs :  
MARIA ASSUNTA COVA, DANIEL SCHWARZ

Magnetic resonance in cervical radiculopathies  
ROBERTO GASPAROTTI 30'

Ultrasonography of cranial nerves  
MICHAEL S. CARTWRIGHT 30'

Magnetic resonance imaging of cranial nerves  
DANIEL SCHWARZ 30'



**PLENARY SESSION  
ROOM OCEANIA**

6.30 PM

**ORAL POSTER SESSION - Free communications (4 min. each)**

Chairs : LISA HOBSON-WEBB, LUCA PADUA

Diagnostic usefulness of elastography in myofascial pain syndrome  
SANG MOON YOON

Upper eyelid orbicularis muscle ultrasound in myasthenia gravis: preliminary data  
FERDINANDO SARTUCCI

Ultrasound changes of vagus nerve in diabetes neuropathy  
FERDINANDO SARTUCCI

High resolution ultrasound of scapulae alatae - correlation with electrophysiological measurements - a prospective case control study  
ERISELA QERAMA

Is peripheral nerve ultrasound suitable as a biomarker for representing disease progression in amyotrophic lateral sclerosis?  
SEOL-HEE BAEK

Correlation between nerve conduction studies and nerve ultrasound in compressive sural neuropathy  
CID AURELIO DELGADO PUGLEY

The safety zone of procedure in the sternocleidomastoid muscle  
JUNHO CHOI

A novel small fibre peripheral neuropathy approach -ultrasound on the tips of the fingers and toes  
ANTONIN GECHEV

Contribution of ultrasonography in traumatic lesions of the peripheral nerves  
SIMON PODNAR

Correlation between neurosonographic findings and electrophysiological study in Charcot-Marie-Tooth 1a patients  
SANG BEOM KIM

Ultrasound for evaluation of nerve trauma during radial artery harvest  
SARADA SAKAMURI

Hereditary transthyretin amyloidosis: morphological nerve features. A multicenter Italian study  
DANIELE CORACI

High-frequency ultrasonography of the vagus nerve: a possible candidate marker for the early diagnosis and staging in parkinson's disease. A functional analysis of the scientific literature  
AUGUSTO FUSCO

7.30 PM

**END OF SESSION**

8.30 PM

**SOCIAL DINNER @ STARHOTELS SAVOIA EXCELSIOR PALACE**

**PARALLEL SESSIONS**

**ROOM OCEANIA**

8.30 AM **ULTRASONOGRAPHY  
IN GENETIC  
NEUROPATHIES**

Chairs:  
ZORAN ARNEŽ, LORENZO VERIELLO

Inherited Neuropathies:  
update and potential roles of  
nerve ultrasound  
GIAN MARIA FABRIZI 30'

Ultrasonographic findings  
in neurofibromatosis  
NATALIE WINTER 30'

Ultrasonography  
in amyloidosis  
SIMON PODNAR 30'

Ultrasonography in genetic neuropathies  
(Charcot-Marie-Tooth)  
DANIELE CORACI 30'

10.30 AM **IMPORTANCE OF  
ULTRASONOGRAPHY IN  
NERVE TRAUMA**

Chairs : LUIGI MURENA,  
SIMON PODNAR, LEONELLO TACCONI

Ultrasonography nerve trauma and  
classification  
JEFFREY A. STRAKOWSKI 30'

Ultrasonography in traumatic nerve and  
tendon lesions  
LUCA PADUA 30'

The utility of ultrasonography for the  
intervention  
ANDRE FAIOLA 30'

Round table and discussion for a possible  
international Ultrasonography protocol of  
pre and post nerve interventions 30'

12.30 PM **END OF SESSION**

**PLENARY SESSION  
ROOM OCEANIA**

12.30 PM **CONCLUSIONS**

LISA HOBSON-WEBB, PAOLO MANGANOTTI,  
LUCA PADUA, SIMON PODNAR

1.00 PM **CONGRESS CLOSURE**

**ROOM VULCANIA**

8.30 AM **NEUROIMAGING OF  
PERIPHERAL NERVES WITH  
MAGNETIC RESONANCE**

Chairs :  
ROBERTO GASPAROTTI, MAYA UKMAR

Magnetic Resonance of the  
brachial and lumbar sacral plexus  
ROBERTO GASPAROTTI 35'

Peripheral nerve diffusion tensor imaging,  
neuro-muscular, magnetic resonance imaging  
of cranial nerves  
DANIEL SCHWARZ 35'

Magnetic resonance imaging and  
peripheral nerve trauma  
SIMONETTA GEREVINI 35'

Round table and discussion:  
better MRI or Ultrasound? 15'

10.30 AM **END OF SESSION & BREAK**

### VENUE

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Stazione Marittima  
Molo Bersaglieri 3 - Trieste | Italy

### ORGANIZING SECRETARIAT

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## the office

During the conference the Organizing Secretariat will be available according to the following timetable

|                            |                   |
|----------------------------|-------------------|
| Thursday 19 September 2019 | 8.00 AM - 8.00 PM |
| Friday 20 September 2019   | 8.00 AM - 8.00 PM |
| Saturday 21 September 2019 | 8.00 AM - 1.00 PM |

You can contact the Organizing Secretariat by email ([ISPNI2019@theoffice.it](mailto:ISPNI2019@theoffice.it)) or at the mobile number +39 3383387766.

### ONSITE REGISTRATION FEES

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|                                 |                        |
|---------------------------------|------------------------|
| Specialist                      | EUR 600,00.- VAT incl. |
| Resident / Student / Technician | EUR 500,00.- VAT incl. |

Registration fees include:

- attendance to scientific sessions | Conference kit
- welcome cocktail (Thursday 19) | light lunch (Friday 20) | Social Dinner (Friday 20)

### POSTER SESSION

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Poster will be displayed for the duration of the conference.  
We kindly invite all the authors to stand by their posters during the poster session, scheduled on **Friday 20 September during lunch break**.  
A team of tutors will go through all the displayed posters to ask questions and to evaluate them.  
The best poster will be nominated during the closing session of the conference.

### OFFICIAL LANGUAGE

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The official language of the conference is English.  
No simultaneous interpreting will be available.

### ID BADGE

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Your personal ID badge will be ready for you at the conference registration desk.  
For security reasons, delegates and exhibitors will be asked to wear their ID badges during the whole conference and at all social events.

### CERTIFICATES OF ATTENDANCE

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Certificates of attendance will be sent via email upon request to all participants.

### LIABILITY & INSURANCE

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The Organizing Secretariat and the Committees accept no responsibility whatsoever for any injury or damage involving persons and property during the conference.

## FACULTY

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Aranyi, Zsuzsanna | Hungary  
Arnez, Zoran | Italy  
Bäumer, Philipp | Germany  
Billic, Irina | Croatia  
Bland, Jeremy | UK  
Bonavita, Jacopo | Italy  
Boon, Andrea J. | USA  
Cartwright, Michael S. | USA  
Coraci, Daniele | Italy  
Cova, Maria Assunta | Italy  
Fabrizi, Gian Maria | Italy  
Gasparotti, Roberto | Italy  
Gerevini, Simonetta | Italy  
Gigli, Gianluigi | Italy  
Grimm, Alexander | Germany  
Winter, Natalie | Germany  
Hobson-Webb, Lisa | USA  
Kerasnoudis, Antonios | Greece  
Koçer, Serdar | Switzerland  
Lauria Pinter, Giuseppe | Italy  
Lieba-Samal, Doris | Austria  
Manganotti, Paolo | Italy  
Martinoli, Carlo | Italy  
Murena, Luigi | Italy  
Nobile Orazio, Eduardo | Italy  
Omejec, Gregor | Slovenia  
Padua, Luca | Italy  
Podnar, Simon | Slovenia  
Romano, Marcello Calogero | Italy  
Santoro, Lucio | Italy  
Schreiber, Stefanie | Germany  
Schwarz, Daniel | Germany  
Snoj, Žiga | Slovenia  
Strakowski, Jeffery A | USA  
Tacconi, Leonello | Italy  
van Alfen, Nens | The Netherlands  
Veriello, Lorenzo | Italy  
Walker, Francis | USA  
Wissel, Jörg | Germany  
Yoon, Joon Shik | South Korea  
Zaidman, Craig | USA

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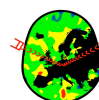
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AND CEREBRAL HEMODYNAMICS



UNIVERSITÀ  
DEGLI STUDI DI TRIESTE





# *See you next year*

9th ICCNMI  
2020

International Conference and Course  
on NeuroMuscular Imaging

17-19 SEPT 2020 | WTC / Rotterdam / The Netherlands

*Dear colleague,*

*Welcome to the website of the 2020 International Course and Conference on Neuromuscular Imaging!*

*ISPNI is a multidisciplinary group dedicated to the advancement of peripheral nerve and muscle imaging. It is comprised of clinicians and researchers from six continents. A wide range of specialties is represented, including neurology, radiology, physiatry, rheumatology, orthopedic surgery and many more. Our academic interest centers on integration of imaging into the clinical and neurophysiologic assessment of peripheral nerve and muscle diseases. ISPNI conducts an annual course and conference for the presentation of research, didactics and to provide hands-on training in neuromuscular ultrasound techniques.*

*This 9th Annual Meeting of the International Society of Peripheral Nerve Imaging (ISPNI) will take place in the vibrant port city of Rotterdam, the Netherlands. On behalf of the local organizing committee and supported by the Dutch Clinical Neurophysiology Society, we are proud to continue the tradition and present you with a varied scientific and teaching program focusing on clinical neuromuscular imaging. Besides talks and demos on ultrasound and MRI for both muscles and nerves, this edition will also feature the Promising Investigators' Awards and ISPNI Francis Walker Award for a colleague who has excelled in advancing neuromuscular ultrasound over the years.*

*In addition to the meeting, there will also be a 2-day international pre-conference hands on teaching course on neuromuscular ultrasound.*

*More details on the conference and course will follow this fall. We look forward to seeing you in Rotterdam next year!*

[www.iccnmi2020.com/](http://www.iccnmi2020.com/)

ORGANIZING SECRETARIAT  
ISPNI 2019  
8TH ANNUAL MEETING

**the office**

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