Faculty

- **Flavio Angileri**
  Department of Neurosurgery
  University of Messina
- **Paolo Avesani**
  Neuroinformatics Lab (NiLab)
  Fondazione Bruno Kessler (FBK), Trento
- **Lorella Battelli**
  Italian Institute of Technology (IIT), Trento
- **Lorenzo Bello**
  University of Milan
  Division of Oncological Surgery
  Istituto Clinico Humanitas, Milan
- **Mitchell Berger**
  University of California, San Francisco (USA)
- **Francesco Cardinale**
  "C. Munari" Epilepsy Surgery Center
  ASST Grande Ospedale Metropolitano
  Niguarda, Milan
- **Marco Cenzato**
  Division of Neurosurgery
  ASST Grande Ospedale Metropolitano
  Niguarda, Milan
- **Franco Chioffi**
  Division of Neurosurgery
  "S. Chiara" Hospital, Trento APSS
- **Domenico D'Avella**
  Division of Pediatrics Neurosurgery
  University of Padova
- **Alessandro De Benedictis**
  Division of Neurosurgery
  Ospedale Bambino Gesù, Rome
- **Maxime Descoteaux**
  University of Scherbrooke
  Department of Computer Science (Canada)
- **Alessandro Ducati**
  University of Turin
  Division of Neurosurgery
  Ospedale Le Molinette, Turin
- **Hugues Duffau**
  University of Montpellier (France)
  INSERM and Department of Neurosurgery
  Hopital Gui de Chauliac, Montpellier
- **Marco Farneti**
  Division of Neurosurgery "S. Anna"
  University-Hospital, Ferrara
- **Ernesto Gastaldo**
  Division of Neurology
  "Ospedale dell'Angelo", Mestre-Venice
- **Bruno Giometto**
  Division of Neurology
  "S. Chiara" Hospital, Trento APSS
- **Franco Guida**
  Division of Neurosurgery
  Ospedale dell'Angelo, Mestre-Venezia
- **Tamara Ius**
  Division of Neurosurgery
  "S. Maria della Misericordia" University-Hospital, Udine
- **Jorge Jovicich**
  Center for Mind and Brain Sciences (CiMeC)
  University of Trento
- **Emmanuel Mandonnet**
  Division of Neurosurgery
  Lariboisière University-Hospital, Paris (France)
- **Carlo Marras**
  Division of Neurosurgery
  Ospedale Bambino Gesù, Rome
- **Alberto Morini**
  Division of Neurology
  "S. Chiara" Hospital, Trento APSS
- **Emanuele Olivetti**
  Neuroinformatics Lab (NiLab)
  Bruno Kessler Foundation (FBK)
- **Alessandro Olivi**
  Department of Neurosurgery
  Cattolica University, Rome
- **Laurent Petit**
  Groupe d'Imagerie Neurofuncionelle (GIN)
  University of Bordeaux, France
- **Benedetto Petralia**
  Division of Neuroradiology
  "S. Chiara" Hospital, APSS Trento
- **Rocco Quatrale**
  Division of Neurology
  "Ospedale dell'Angelo", Mestre-Venice
- **Michele Rizzi**
  "C. Munari" Epilepsy Surgery Center
  ASST Grande Ospedale Metropolitano
  Niguarda, Milan
- **Francesco Sala**
  University of Verona
  Division of Neurosurgery
  Borgo Trento University-Hospital, Verona
- **Silvio Sarubbo**
  Division of Neurosurgery
  "S. Chiara" Hospital, Trento APSS
- **Andreas Schwarz**
  Division of Neurosurgery
  "S. Maurizio" Hospital, Bolzano ASDAA
- **Miran Skrap**
  Division of Neurosurgery
  "S. Maria della Misericordia" University-Hospital, Udine
- **Natalie Voets**
  Oxford University
  Nuffield Department of Clinical Neurosciences
  Medical Sciences Division, Oxford (UK)

Accomodation

Info & booking
Azienda per il Turismo Trento, Monte Bondone, Valle dei Laghi
Via Torre Verde, 7 – 38122 Trento
Tel. +39 0461 216027
Rif. Sabrina Giuliani
E- mail: sabrina.giuliani@discovertrento.it
www.discovertrento.it

TRENTO MONTE BONDONE VALLE DEI LAGHI atmosfere da vivere

Registration and admission fee

Coordinators
Servizio Formazione APSS
Cristina Moletta, Nadia Santuari - tel. 0461 903858

Organizing Secretariat
Claudia Chini - tel. 0461 902563
Stefania Marinac - tel. 0461 903409
Elisa Zanon - tel. 0461 902827

Registration Form
servizioformazione@apss.tn.it
SURNAME _____ NAME _____
QUALIFICATION _____
SPECIALIZATION _____
WARD _____
E-MAIL _____ MOBILE _____

I desire to enroll me in:
☐ theoretical session ☐ theoretical session and practice

Da compilare a cura dei **dipendenti dell'APSS**

Matricola n. _____

FIRMA _____ **FIRMA del RESPONSABILE**_____

Per i dipendenti dell'APSS il seminario si qualifica come formazione interna con riconoscimento dell'orario di servizio.

Da compilare a cura dei **professionisti non dipendenti dell'APSS**

NATO IL _____ A _____ PROV. ____

CODICE FISCALE _____

INDIRIZZO _____ CAP _____ CITTÀ_____

Dipendente da ente pubblico ☐ Dipendente/Titolare (da società/ente privato) ☐ Libero professionista ☐

ENTE/SOCIETÀ _____ **FIRMA** _____

QUOTA DI PARTECIPAZIONE

SESSIONE TEORICA: 70 posti
- € 300 early registration (entro 25.02.2019)
- € 350 late registration (oltre 25.02.2019 e non oltre il 15.05.2019).

La quota comprende: iscrizione e materiale didattico su supporto USB; aperitivi di benvenuto e buffet di saluto; lunch e coffee break.

SESSIONI TEORICA e PRATICA: 20 posti
- € 800 early registration (entro 25.02.2019)
- € 1000 late registration (oltre 25.02.2019 e non oltre il 15.05.2019).

La quota comprende: iscrizione e materiale didattico su supporto USB; aperitivi di benvenuto e buffet di saluto; lunch e coffee break; cena del 21/06/2019 per docenti e partecipanti.

Alle quote sopra indicate va aggiunta l'aliquota IVA (22%) se dovuta.
LE MODALITÀ DI PAGAMENTO DELLA QUOTA DI PARTECIPAZIONE SARANNO COMUNICATE VIA E-MAIL UNITAMENTE ALLA CONFERMA DELL'ISCRIZIONE.

CONDIZIONI RILASCIO ATTESTATI ECM
Il rilascio dell'attestato è subordinato alla partecipazione all'intera durata dell'attività seminariale ed al superamento della prova finale di apprendimento.
Accreditata la figura del medico.

Servizio Formazione

Azienda provinciale per i servizi sanitari
Via Degasperi 79, 38123 Trento
Finito di stampare nel mese di gennaio 2019

www.apss.tn.it

Info: servizioformazione@apss.tn.it

Trento June 20-22, 2019
Sala Stringa – FBK
Via Sommarive , 18 – Povo Trento

connect BRAIN Vol. II

Theoretical and practical course on clinical and surgical applications of structural and functional connectivity

COURSE DIRECTORS
Franco Chioffi
Silvio Sarubbo
Division of Neurosurgery
Emergency Area - "Santa Chiara" Hospital
Azienda Provinciale per i Servizi Sanitari (APSS)
Trento (Italy)

REQUESTED SUPPORT
SINCh (Italian Society of Neurosurgery)
SIN (Italian Society of Neurology)
SINC (Italian Society of Clinical Neurophysiology)
Istituto Superiore di Sanità
Provincia Autonoma di Trento
Ordine dei Medici di Trento

SCIENTIFIC COMMITTEE
Luciano Annicchiarico
Enzo Colarusso
Francesco Corsini
Giovanna Faraca
Valentina Petralia
Giuseppe Pulcrano
Umberto Rozzanigo
Luca Zigiotto
S. Chiara" Hospital, APSS Trento
Paolo Avesani
Bruno Kessler, Foundation
Jorge Jovicich
CiMeC, University of Trento

In collaboration with:
FONDAZIONE BRUNO KESSLER | NILab NEUROINFORMATICS LABORATORY

Under the patronage of:
SINC

Azienda Provinciale per i Servizi Sanitari
Provincia Autonoma di Trento

Course Introduction

Over the last 15 years the knowledge about the brain functional organization experienced new energy and remarkable advancements, as effect of technical and conceptual improvements that lead us in the connectome era. The comprehension of this intricate anatomo-functional maze and the application of the new concepts about the connectome organization to the clinico-surgical practice, are two crucial steps to tailor and improve surgical and non-surgical treatments of brain diseases. In this light, invasive and non-invasive brain mapping techniques are complementary, and not alternative, tools to explore functional organization and neural plasticity. As never before, the integration between techniques and concepts coming from basic and clinical neurosciences should be strictly integrated to improve, reciprocally, competences and knowledges. Based on the experience of the previous edition on 2015 we designed the ConnectBrain Volume II, a theorico-practical course providing an updated overview about tools and concepts coming from neuroscientific research, and the most reliable mapping and monitoring techniques used in brain surgery.

Aims of the theoretical session are to provide:
- a detailed and complete overview about the recent models of organization of brain functions and the structural and functional connectivity of the main networks;
- theoretical and practical principles for the clinical application of neuroimaging (fMRI, resting-state fMRI, tractography), neuropsychological (pre-operative assessment, intraoperative tasks, follow-up) and neurophysiological (cortical and subcortical mapping and monitoring) techniques;
- open discussions with different experts about use, experiences and reliability of the main tools for brain anatomo-functional mapping and monitoring during brain surgery.

Aims of the practical session are to provide the general principles of:
- human white matter anatomy;
- tractography elaboration and tracking;
- non-invasive brain mapping with RS-fMRI.

We imagined an international opportunity for facing off clinical practice and basic neurosciences, in order to improve our skills in the exploration of the brain functional processing for medical purposes. We hope you will share this belief and to meet you in Trento in June 2019.

Franco Chioffi and Silvio Sarubbo

Division of Neurosurgery
Emergency Area
"Santa Chiara" Hospital
Azienda Provinciale per i Servizi Sanitari (APSS), Trento

Theoretical Session

Thursday June 20th, 2019

Congress Venue for Theoretical Session

Sala Stringa - FBK
Via Sommarive, 18
Povo Trento

13:00 Registration and welcome drink
13:30 Authorities welcome
14:15 Course Introduction: Silvio Sarubbo and Franco Chioffi (Division of Neurosurgery, "Santa Chiara" Hospital, Trento APSS)

SESSION I
Exploration of brain structures and functions – Principles
Chairmen: Bruno Giometto, Laurent Petit

14:30 *Principles of RS-fMRI for human brain mapping*
Bernard Mazoyer (GIN, University of Bordeaux)
14:50 *Techniques and limitations in tractography*
Maxime Descoteaux (University of Sherbrooke)
15:10 *How to track the brain: tools*
Paolo Avesani (NiLab, FBK)
15:30 Discussion and Questions
16:00 Coffee break

SESSION II
Exploration of brain structures and functions – Tools
Chairmen: Alessandro Olivi, Alessandro De Benedictis

16:30 *The human brain pathways by tractography*
Laurent Petit (GIN, University of Bordeaux)
16:50 *Extracting brain networks by rs-fMRI*
Jorge Jovicich (CiMeC, University of Trento)
17:10 *Neurophysiology tools for neurosurgery*
Francesco Sala (University of Verona)
17:30 Discussion and Questions
18:00 **Lecture** (introduced by Ernesto Gastaldo, Ospedale dell'Angelo Mestre-Venice)
Variability in hemispheric specialization for cognitive processing
Bernard Mazoyer (GIN, University of Bordeaux)
18:30 Remarks and Closure

Theoretical Session

Friday June 21st, 2019

SESSION III
Brain mapping for surgery
Chairmen: Alessandro Ducati, Silvio Sarubbo

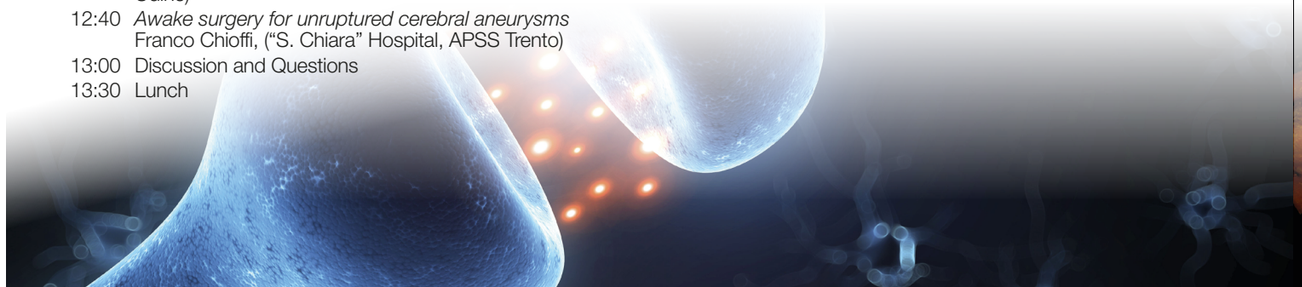
09:00 **Lecture**
Awake surgery for brain gliomas: cognition trough the anatomy
Hugues Duffau (University of Montpellier)
09:40 *Pre-surgical mapping with fMRI and rs-fMRI*
Natalie Voets (Oxford University)
10:00 *Language and motor mapping: intra-operative techniques*
Rocco Quatrale (Ospedale dell'Angelo, Mestre-Venice)
10:20 Discussion
10:30 Coffee break

SESSION IV
Principles of functional anatomy of the human brain
Chairmen: Domenico D'Avella, Franco Guida

11:00 *Language networks: anatomy and functions*
Alessandro De Benedictis (Bambino Gesù Pediatric Hospital, Rome)
11:20 *Motor networks: physiology and surgical mapping*
Lorenzo Bello (University of Milan)
11.40 *Insula and temporal stem anatomy*
Emmanuel Mandonnet (Lariboisière University-Hospital, Paris)
12.00 Discussion and Questions

SESSION V
Surgical Techniques
Chairmen: Marco Cenzato, Rocco Quatrale

12:20 *Insular tumors: techniques and pitfalls*
Miran Skrap ("S. Maria della Misericordia" Hospital, Udine)
12:40 *Awake surgery for unruptured cerebral aneurysms*
Franco Chioffi, ("S. Chiara" Hospital, APSS Trento)
13:00 Discussion and Questions
13:30 Lunch



Theoretical Session

Friday June 21st, 2019

SESSION VI
Neuropsychology
Chairmen: Flavio Angileri, Andreas Schwarz

15:00 Extensive neuropsychological monitoring for resection of brain gliomas
Tamara Ius ("S. Maria della Misericordia" Hospital, Udine)
15:20 Cognitive rehabilitation: techniques and tools
Lorella Battelli (Italian Institute of Technology, Trento)

15:40 Discussion and Questions
16:00 Coffee break

SESSION VII
Epilepsy Surgery
Chairman: Marco Farneti, Alberto Morini

16:30 *Disconnection approaches in epilepsy surgery*
Carlo Marras (Bambino Gesù Children Hospital, Rome)
16:50 *Imaging post-processing in epilepsy surgery*
Michele Rizzi, Francesco Cardinale ("C. Munari" Epilepsy Surgery Center, Milan)
17:10 Discussion and Questions
17:30 **Lecture** (introduced by Franco Chioffi, APSS Trento)
Brain Mapping, extent of resection and new trends in neuro-oncological surgery
Mitchell Berger (University of California, San Francisco)
18:40 Closure and Certificates

Pratical Session
Tractography dissection and resting-state fMRI Mapping

Saturday June 22nd, 2019

Congress Venue for Practical Session

Sala Stringa - FBK
Via Sommarive, 18
Povo Trento

Tutors for virtual dissection:
Silvio Sarubbo, Laurent Petit, Alessandro De Benedictis, Paolo Avesani, Emanuele Olivetti
Tutors for rs-fMRI networks extraction:
Jorge Jovicich, Natalie Voets, Luciano Annicchiarico, Luca Zigiotto, Francesco Corsini

Introduction
09:00 *General principles of white matter tracking*
Laurent Petit (GIN, University of Bordeaux) and Silvio Sarubbo ("S. Chiara" Hospital, APSS Trento)
09:15 *RS-fMRI: practical notions*
Natalie Voets (Oxford University) and Jorge Jovicich (CiMeC, University of Trento)

SESSION I
09:30 Pyramidal tract and motor network
11:00 Coffee break
11:20 Visual and spatial-perception: pathways and networks
13:00 Lunch

SESSION II
14:00 Language pathways and language network (part 1)
16:00 Coffee break
16:20 Language pathways and language network (part 2)
18:00 Closure and Certificates