

Registration

Please download the registration form from
<http://homepages.uni-tuebingen.de/karnath/Sektion.html>

or contact

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Course Fee: 2 days 190 Euro
1st day only 140 Euro
2nd day only 120 Euro

Registration Deadline: March 28th, 2019

For accommodation please contact the
tourism office of the city of Tübingen:

Verkehrsverein Tübingen

Postfach 2623

72016 Tübingen

Tel: +49-7071-913 60

Fax: +49-7071-35070

<http://www.tuebingen.de/1566.html>

Directions

The workshop will take place in the
Conference Centre
“Casino Schnarrenberg”
(Building 520, 2nd floor, Room 1-2)
Uni-Kliniken Berg
Hoppe-Seyler-Straße 1
72076 Tübingen

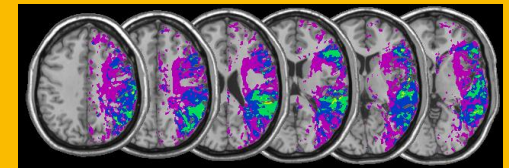


Center of Neurology Division of Neuropsychology



Lesion Analysis Workshop

Tübingen, April 12th & 13th, 2019



Introduction

The workshop aims to provide participants with the technique of modern lesion delineation and statistical analysis in neurological patients with brain injury.

On the first day, the workshop will give a theoretical as well as a hands-on practical introduction to modern lesion analysis techniques, spanning from lesion-delineation using a (semi)-automated lesion delineation technique over to the use of statistical approaches that provide a precise and valid localization of 'critical' brain areas in humans.

On the second day, we will talk about limitations of traditional univariate lesion analysis and introduce new advanced multivariate techniques as well as tools to perform them. Finally, we will demonstrate, how Matlab can be used to perform basic image processing of clinical data and address the statistical procedures to analyse single stroke patients.

Location

Tübingen is a quintessential German university town situated some 25 miles southwest of Stuttgart on a ridge between the Neckar and Ammer rivers in the state of Baden-Württemberg. The city has a population of roughly 90,000, of whom some 27,000 are students attending the Eberhard-Karls-University of Tübingen which is one of the oldest universities in Germany.

Program Day 1

- 10:00 – 10:20** **Modern lesion analysis - general rationale and background**
(Hans-Otto Karnath)
- 10:20 – 10:50** **Lesion delineation on MRI and CT images**
(Bianca de Haan)
- 10:50 – 11:30** **Normalisation of MRI and CT images in stroke patients**
(Bianca de Haan)
- 11:30 – 12:15** **Statistical procedures in modern univariate lesion analysis**
(Bianca de Haan)
- 12:15 – 13:15** **Lunch break**
- 13:15 – 13:45** **Practical demonstration I: (Semi-) Automated lesion delineation**
(Bianca de Haan)
- 13:45 – 14:45** **Practical demonstration II: Normalization**
(Bianca de Haan, Christoph Sperber, Daniel Wiesen)
- 14:45 – 15:15** **Coffee break**
- 15:15 – 16:15** **Practical demonstration II: Normalization - continued**
(Bianca de Haan, Christoph Sperber, Daniel Wiesen)
- 16:15 – 17:15** **Strategies and pitfalls in designing a lesion analysis**
(Hans-Otto Karnath)
- 17:15 – 17:30** **Coffee break**
- 17:30 – 18:30** **Practical demonstration III: Univariate statistics**
(Bianca de Haan, Christoph Sperber, Daniel Wiesen)
- 19:15** **Joint dinner in Tübingen city centre**
(optional / at own expense)

Program Day 2

- 09:00 – 9:15** **Practical demonstration IV: Addressing open questions**
(Bianca de Haan, Hans-Otto Karnath)
- 9:15 – 10:00** **Limitations of the univariate lesion analysis method**
(Christoph Sperber)
- 10:00 – 11:00** **Introduction to different multivariate lesion analysis methods**
(Christoph Sperber, Daniel Wiesen)
- 11:00 – 11:30** **Coffee break**
- 11:30 – 12:15** **Multivariate lesion analysis by support vector regression-based lesion symptom mapping (SVR-LSM)**
(Christoph Sperber, Daniel Wiesen)
- 12:15 – 13:15** **Lunch break**
- 13:15 – 13:45** **Practical demonstration V: Tools for multivariate lesion analysis**
(Daniel Wiesen)
- 13:45 – 14:15** **Using Matlab for basics in image processing**
(Christoph Sperber)
- 14:15 – 15:00** **Single Case Statistics - how to identify a deficit**
(Marc Himmelbach)