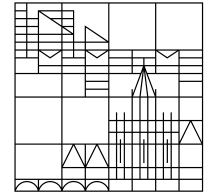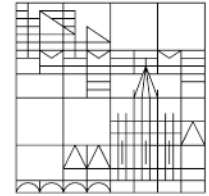# Master's programme in
Social and Economic Data Science

Alexandra Morris & Angelica-Maria Berreca-Garnica
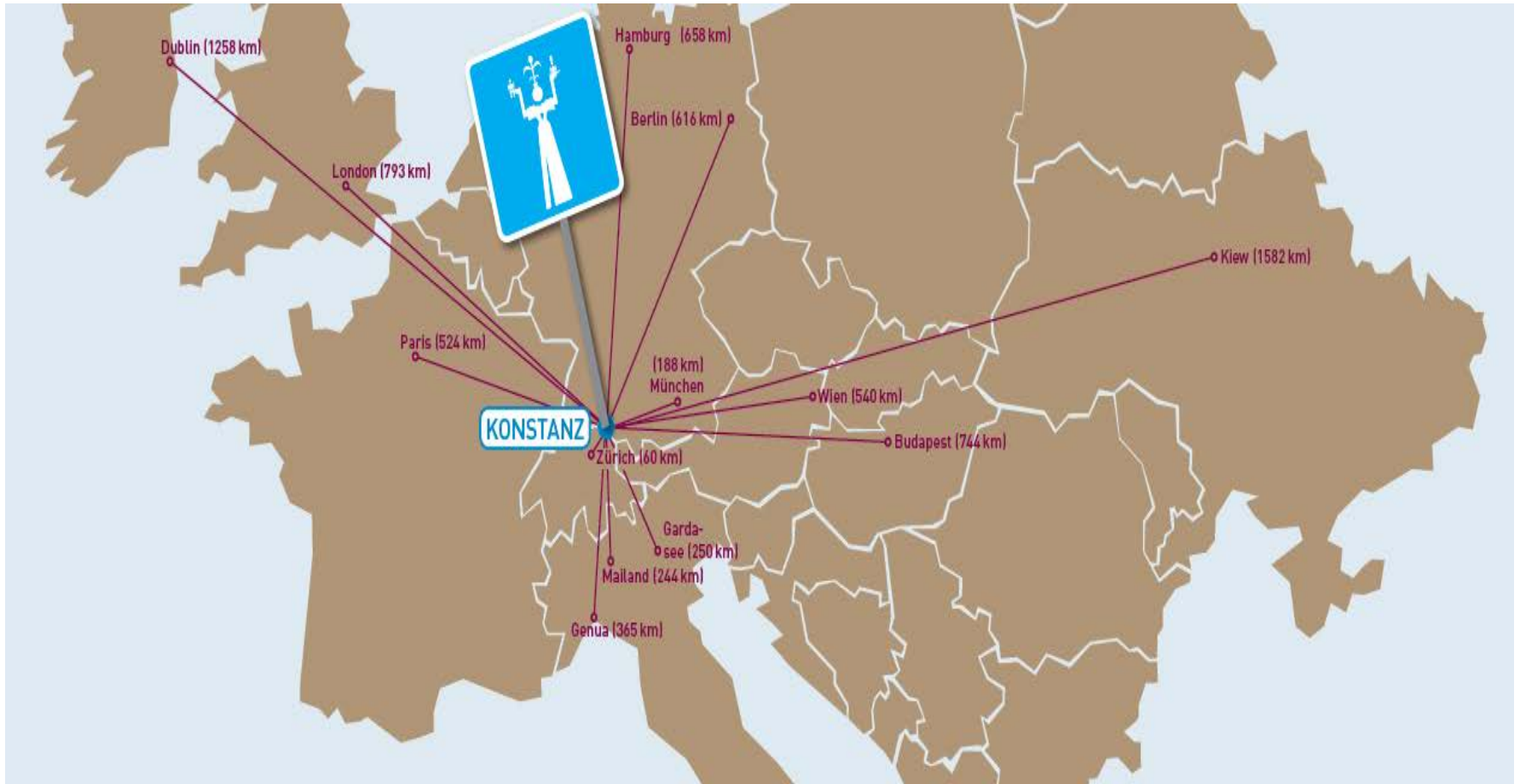**University of Konstanz**

Konstanz, 19/03/2018

Questions

During the presentation, you can use the chat function to get in touch with Angelica, a MSc SEDS student (3rd semester)

Konstanz – in the heart of Europe

We're based at the Lake Constance, bordering Switzerland and Austria.

Lake Constance – Border Triangle

City of Konstanz

The University of Konstanz

 # 1 in Germany
in the
QS Top 50 Under
50 Ranking

**1 of 12
Universities of
Excellence**
in Germany

**92% of our
international
students
recommend us**
ISB 2013

Universität Konstanz

Our University Campus
Situated in a beautiful forest close to the Lake Constance.

First-class sports activities

Mountain sports: bouldering, climbing, hiking, trekking, skiing, snowboarding, snowshoeing …

Water sports: canoeing, kayaking, rowing, sailing, standup paddleboarding, swimming, diving …

Team sports: basketball, football, handball, floorball, lacrosse, rugby, underwater rugby, volleyball …

Racket games: badminton, table tennis, tennis …

Individual sports: archery, track and field, boxing, cycling, dancing, fencing, gymnastics, martial arts, running …

– hsp.uni.kn

Universität Konstanz

Services for international students

Getting started

- Orientation Programme before the start of your first semester
- German Language Programmes before and during each semester
- Prep Courses from the participating departments before you start
- Master's hut to get to know your fellow students
- Housing for international students in a convenient and safe location. Single rooms in shared apartments or single apartments available.
- Buddy programme with 2nd semester MSc SEDS students
- International Office
- Career Service

Life of a Colombian student

Beautiful city

- Bright, colorful and warm in spring
- Amazing snowy sceneries in winter
- Surrounded by the alps
- Free Wi-Fi in the center of the city

Lots of activities for all likes and tastes

- Clubs, shops, movie theaters, hot springs
- Great cycling routes
- Swimming in the lake during the warm months
- Skiing in Switzerland during the cold ones

Easy to travel to other cities

- Zurich airport just 50 mins. away with routes to most important cities in Europe and Asia
- Train and bus connections to touristic cities in Germany, Switzerland and Austria

Universität Konstanz

Big university with personalized curriculum

One campus with all the commodities

- Beautiful 24 hour library recently renovated
- Cafeteria buffet-style with low prices for students
- Bus connection to all points in the city
- Free Wi-Fi on campus and on the fitness center
- Computers, printers and scanners available 24/7
- Orientation camp

Flexible and complete Master's Programme in Social and Economic Data Science

- You can choose any lectures and seminars to complement and enhance your background
- Lectures and seminars from 6 different departments

Universität Konstanz

„Knowledge and skills to collect, manage and analyse data on human action and interaction - for future experts in Big Data"

M.Sc. Social and Economic Data Science

M.Sc. Programme in Social and Economic Data Science: Motivation & Interdisciplinary scope

Motivation

– Big Data: unprecedented availability of data about human behavior and social interactions

– Forecasting of economic / political / public health trends and events

– Support of evidence-based policy-making and management

– Requires competences and skills from several fields

– Interdisciplinary training of data scientists for private and public sector, academia

M.Sc. Programme in Social and Economic Data Science: Motivation & Interdisciplinary scope

Interdisciplinary scope

- **Computer science:** system architectures and algorithms
- **Mathematics & statistics:** formal grounds for scripting, statistical modeling and inference
- **Social science methodology:** assessment and correction of data quality issues; processing of unstructured data
- **Substantive fields (economics, sociology, political science, psychology):** theories and research questions

M.Sc. Programme in Social and Economic Data Science: Curriculum

Curriculum

- **Semesters 1 :** „introduction to computational methods for the social sciences", foundations of data science
- **Semester 2 & 3:** advanced methods of data science, data analysis project
- **Semester 4:** Master's thesis
- **Further information** at the programme's website: www.wiwi.uni-konstanz.de/en/study/master-of-science/social-and-economic-data-science/curriculum/

M.Sc. Programme in Social and Economic Data Science: Curriculum

Foundations of Data Science (18 ECTS):

- **Computer Sciences**
  - Data Visualization
  - Konzepte der Informatik and Programmierkurs I

- **Mathematics**
  - Diskrete Mathematik und Logik
  - Analysis und lineare Algebra
  - Datenmathematik
  - Mathematik für Wirtschaftswissenschaftler
  - Lineare Algebra I

M.Sc. Programme in Social and Economic Data Science: Curriculum

- **Statistics**
  - Statistik I (Politics and Public Administration)
  - Statistik (Psychology)
  - Statistics I (Economics)
  - Statistik (Sociology)

- **Social-scientific Methods**
  - Econometrics I (Economics)
  - Introduction to Survey Methodology (Politics and Public Administration)
  - Research Design I: Research Design and Causal Inference (Politics and Public Administration)
  - Methoden der empirischen Politik- und Verwaltungsforschung (Politics and Public Administration)
  - Empirie: Quantitative Methoden (Sociology)
  - Methoden I & II (Psychology)

M.Sc. Programme in Social and Economic Data Analysis: Curriculum

Advanced Methods of Data Science (Semester 2&3):

- Advanced Methods: Computer Science (Big Data, Algorithmen und Datenstrukturen, Datenbanksysteme etc.)
- Advanced Methods: Statistics (Probability Theory and Statistical Inference, Microeconometrics, Research Design II, etc.)
- Programming and Scripting (Data Analysis with R, Advanced Data Challenge, Programmierkurse)
- Social Science Applications (Computational Social Science Seminar, Data Analysis Project)

MSc Colloquium and Master's Thesis (Semester 4)

- Language of tuition: mostly English
- Duration: 4 Semesters
- Application deadline: 30th April

M.Sc. Programme in Social and Economic Data Science: Target group & admission

Target group

– Students with a B.A. in a social science (or in computer science) and a strong interest in quantitative methods and empirical research

Admission

– 16 students per year
– **Requirements:**
    – above average B.A. degree;
    – min. **three** B.A. courses that cover at least **two** focus areas (mathematics, statistics, computer science, social-scientific methods)
    – Evidence of a sufficient command of English
    – CV and motivation letter
    – Two letters of recommendation from university teachers
    – Results of the GRE test desirable (Graduate Record Examinations)

Tuition fees

– no tuition fees for citizens from EU- and EEA-member states
– 1,500 € per semester for citizens from non EU- and non EEA-states

Financial Aspects of your Studies

Usual expenses in Konstanz:

− Accommodation: 270 – 390 € / month
(student accommodation)

300 – 450 € / month
(private accommodation)

− Food, clothes, …: ca. 400 € / month

− University fees: 160 € / semester
(1500 € for non EU/EEA-students / semester)

− Public transportation: 52 € / semester

− Health insurance: free for EU/EEA-students,

80 € / month for non-EU/EEA-students

− Broadcasting fees: 18 € / month

+ Leisure activities: travelling, skiing, …

− Remuneration from a job?

The practical dimension: Job opportunities inside and outside the University
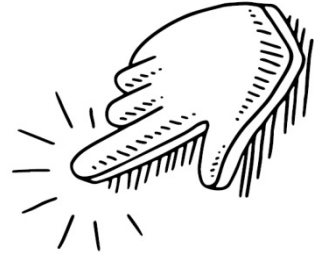
Option 1: You work at the University

– There are a number of student jobs: in the departmental administration, the International Office, research projects, …

– Contracts of between 20 and 50 hours per month

– Gross hourly wages of 10.68 € (M.Sc.)

– Usually, all students interested in a job are able to find a job

Option 2: You look for an internship

– The Dept. of Politics and Public Administration maintains a large internship database. The Dept. of Economics publishes internship positions regularly.

– Internship positions at private enterprises, international organizations, NGOs, public authorities,– in Germany, Europe, and worldwide

How to apply

Application deadline: April 30th

(the online application tool will be open for MSc SEDS on March, 26th 2018)

1. Find detailed information on our website
   www.wiwi.uni-konstanz.de/en/study/master-of-science/social-and-
   economic-data-analysis/how-to-apply/
   Contact us if you have any questions.
2. Collect and scan all necessary documents.
   A checklist is available on our website.
3. Apply through our online application system
   (scanned application documents are sufficient).

– wiwi.uni.kn/ seda

Universität Konstanz

Why study MSc SEDS ?

- A unique, interdisciplinary programme bridging social sciences and computer science
- Big variety of classes for high quality education
- Study with top-notch, international guest researchers
- Small classes allow for close interaction with your lecturers

Why study MSc SEDS ?

− Be part in an international and open environment in the heart of Europe

− Graduates will be highly employable as data scientist e.g.:

 − in academia

 − in polling firms

 − in market research institutes

 − in online marketing

 − as political advisor

 − as social policy consultant

Enjoy our beautiful countryside: Enjoy swimming or sailing on the Lake Constance, go hiking or skiing in the nearby Black Forest or the Swiss Alps.

Advisory service

Need advice?

Contact

us!

Alexandra Morris

Master Coordination

Tel: +49-7531-88-4494

alexandra.morris@uni.kn

Franziska Fobbe

Student Course Guidance & SEDS student

seds.msc@uni.kn

Q&A session