

Computer Science in Oldenburg (Oldb.) Germany



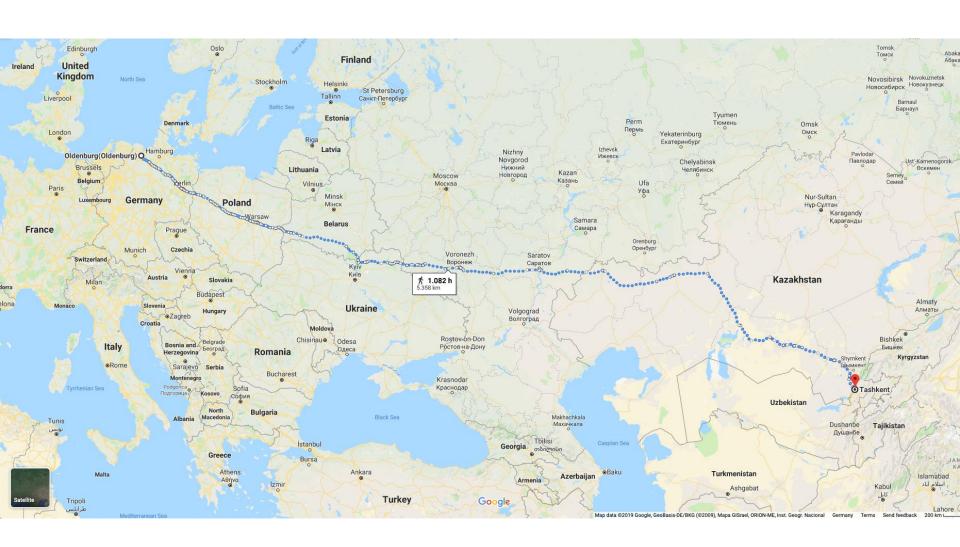
Oldenburg at Night





Oldenburg - Tashkent





Oldenburg (Oldb.)



Where is it?

- Northwest of Germany
- Close to the North Sea and to the Netherlands

Distances

Hamburg: 150 km

Berlin: 450 km

Munich: 750 km

Amsterdam: 300 km

Tashkent: 4650 km



How to reach Oldenburg

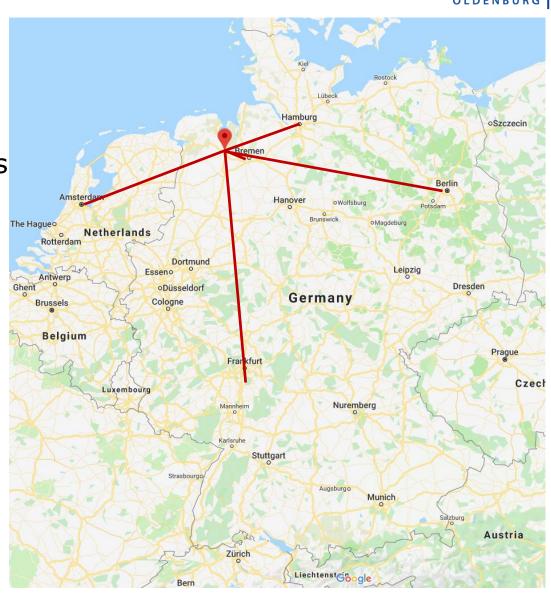


Easy to reach by air...

- Nearest Airports
 - Bremen
- Intercontinental Airports
 - Hamburg
 - Amsterdam
 - Berlin
 - Frankfurt

... by land

- ICE train station near the city center
- immediate motorway connection



Green Oldenburg



- 900 years of History
- Historical Buildings
- Cozy, green and safe
- Plenty of Entertainment and Culture
- Bike City



Oldenburg - City of Science



















Software Engineering Group

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Oldenburg - Waters





Oldenburg - Gardens





Oldenburg Bikes









Carl von Ossietzky University of Oldenburg



Carl von Ossietzky



* October 3, 1889 + Mai 4, 1938

Journalist, Author, Pacifist

received
Peace Nobel Price
in 1935



[http://www.ndr.de/land_leute/norddeutsche_gesichter/ossietzky100_v-contentgross.jpg]

History: University of Oldenburg



March 7, 1793 Founding a teachers' seminar

by Duke Peter Friedrich Ludwig

Oct. 1, 1945 Establishing the

Pedagogical Academy in Oldenburg

March 1, 1971 Installing of a founding committee

consisting of one third Professors, assistants and students, each



Dec 5, 1973

Founding the University of Oldenburg with an integrated teacher training college

Oct. 22, 1985 Establishing Computer

Science with 55 students

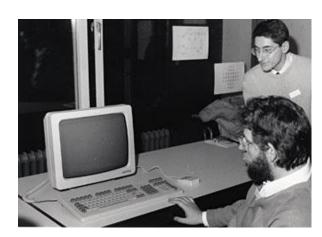
Oct. 3, 1991

Renaming the university

after Carl von Ossietzky

Oct. 18, 2004 starting Bachelor's and

Master's degree programmes



[winter 2018/19]

Statistics: University

Students: 15947

Female: 8999

Male: 6948

Professors: 222

Female: 66

Male: 156

Researcher: 1305

Female: 628

Male: 677

Completed PhDs (2018): 162

Female: 62

Male: 100



Faculties



- School of Education
- II School of Computing Science, Business Administration, Economics and Law
- III School of Linguistics and Cultural Studies
- IV School of Humanities and Social Sciences
- V School of Mathematics and Science
- VI European Medical School

I Education 2607

II Computer Science 1437

II Business Administration, Economics and Law 2595

III Linguistics and Cultural Studies 3121

IV Humanities and Social Sciences 1347

V Mathematics and Science 4323

Coop. Bremen 55 VI European Medical School 462

[heads]

https://uol.de/en/students/degree-programmes



Degree Courses

Bachelor's Programme

- Biology
- › Business Administration and Law
- Business Administration for Medium-Sized Enterprises
- Business Administration for Top Athletes
- > Business Informatics
- Chemistry
- Comparative and European Law
- Computing Science
- Economics and Business Administration
- Education
- Engineering Physics
- Engineering Physics Dual Study Program
- Environmental Science
- Mathematics
- Pedagogic acting in migration society
- Physics
- Physics, Engineering and Medicine
- Social Studies
- Sustainability Economics

Master's Programme

- > Art and Media Studies
- > Biology
- Business Administration, Economics and Law
- > Business Informatics
- → Chemistry
- > Computing Science
- > Cultural Analysis
- > Dutch Linguistics and Literary Studies
- > Ecumenism and Religions
- Education and Research Management
- > Educational Science
- > Engineering Physics
- > Engineering of Socio-Technical Systems
- > English Studies
- Environmental Modelling
- > European History
- European Master in Migration and Intercultural Relations
- European Master in Renewable Energy (EUREC)
- German Studies
- German as a Foreign Language / German as a Second Language
- Hearing Technology and Audiology
- Innovation Management and Entrepreneurship
- Integrated Media Audiovisual Media in Practice, Theory and Instrumentality

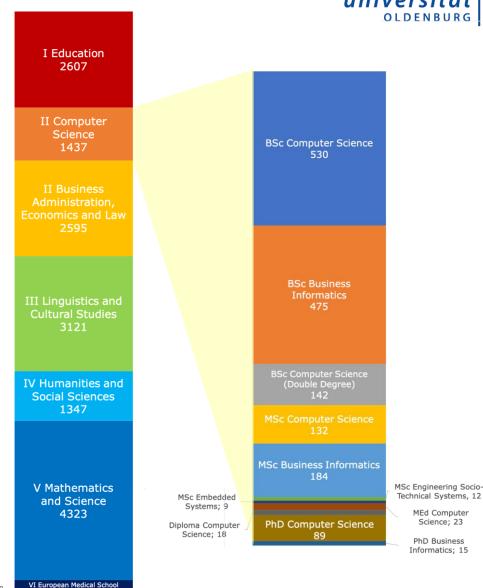
- Landscape Ecology
- Language Dynamics: Acquisition, Variation,
 Change
- Law and Information Systems
- Management Consulting
- Management of Technology Enhanced Learning
- Marine Environmental Sciences
- Marine Sensors
- Mathematics
- > Microbiology
- Museum and Exhibition
- Music Studies
- Neurocognitive Psychology
- → Neuroscience
- > Philosophy
- Physics
- > Physics, Engineering and Medicine
- Postgraduate Programme Renewable Energy
- > Rehabilitation Counseling Education
- Renewable Energy Online
- Risk Management for the Financial Industry
- Slavic Studies
- Social Studies
- > Sport and Lifestyle
- > Sustainability Economics and Management
- Transnational Law
- > Water and Coastal Management US.U1.2U2

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Faculties

CARL VON OSSIETZKY UNIVERSITÄT OLDENBURG

- I School of Education
- II School of Computing Science, Business Administration, Economics and Law
- III School of Linguistics and Cultural Studies
- IV School of Humanities and Social Sciences
- V School of Mathematics and Science
- VI European Medical School



[student cases]

Coop. Bremen

Statistics: Computing Science

Students: 1611

Bachelor: 1147

Master: 360

o PhD: 104

Professors: 15

 $_{\circ}$ hiring: 4

Researcher: 120

Grant holders: 50

Researcher @ OFFIS: ~250



[student cases]

Professors and Groups



Theoretical CS



E.R. Olderog Correct **Systems**

Practical CS



Oliver Kramer

Computational Inteligence



Oliver Theel Distributed **Systems**



Applied CS

Ira Diethelm Didactics in Computer Science

Axel Hahn Business

Informatics

Frank Köster **Transportation Systems**

S. Lehnhoff Energy **Informatics**

J. Marx Gomez

Business Informatics (VLBA)

Technical CS

Werner Damm

Safety Critical **Embedded Systems**



Micro-Robotics & Control Engineering



Hybrid **Systems**



Embedded HW/SWSystems





Engineering







Systems

Applied Artificial

Formal Methods

professorships in

Intelligence Data Science

successfully

the field of digitalization

applied for additional five

Fields of Expertise in Research





Dependability (Safety, Security, Availability, Resilience)

Data Science

Artificial Intelligence

Algorithms

Formal Methods

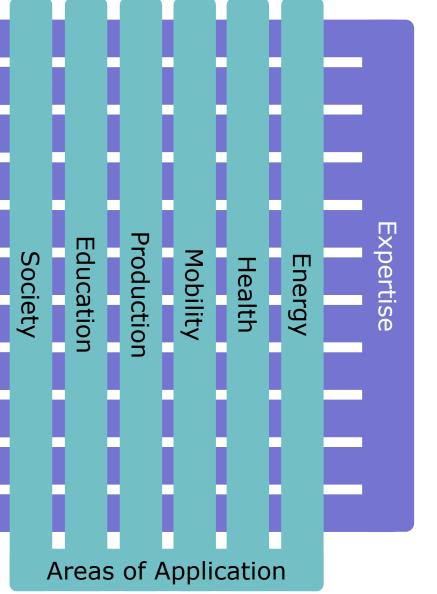
Business Informatics

Human Machine Interaction

Multi-Rate Multi-Scale Co-Simulation

Modeling

Didactics

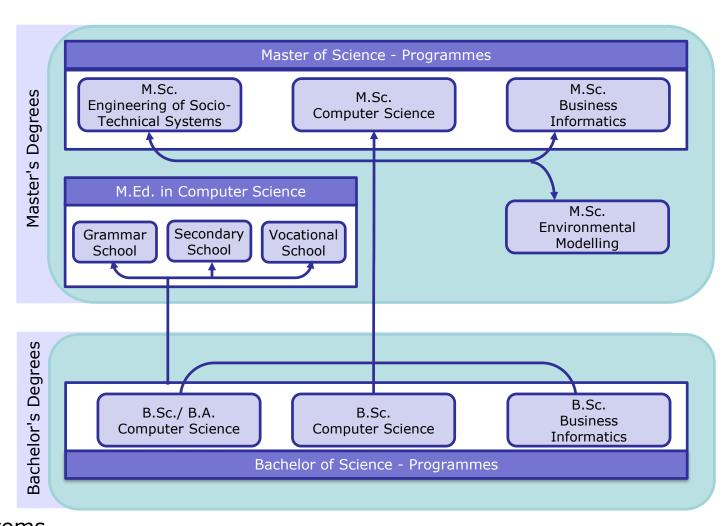


Teaching Programs



Bachelor Master PhD

- research assistants (CvO, OFFIS)
- PhD Grants
 - DAAD
- PhD Programs
 - DFG SCARE
 - System
 Integration
 of Renewable
 Energy
 - Safe Automation of
 Maritime Systems



Collaborations Uzbekistan – Germany



- PhD of Dilshodbek Kuryazov (2011–2019)
- Memorandum of Understanding (2014, extended 2017)
- Visits of Uzbek Researchers in Germany (2014, 2017–2019)
- SmartModeling (2018/19–2020/21)
- SuMoCoS (2019)
- Erasmus+ Credit Mobility (2019–2022)



Delegation from Oldenburg

Software Engineering Group

@University of Oldenburg



Topics of Interest

- Software-Engineering
- Modeling and Meta Modeling
 - collaborative Modeling
 - Model Versioning
 - Model Consistency
- Graph-Technology
- Software Architecture
 - for Sensor-based Smart Systems
 - for IoT Systems
 - View(point)s and Integration
- Process-Models
- Software Evolution
 - Sustainable Software
- Tool Interoperability



Prof. Dr. Andreas Winter winter@se.uol.de



Dr. Christian Schönberg christian.schoenber g@uol.de



M.Sc. Johannes Meier meier@se.uol.de

- Architecture of Sensor- and Actuator-Networks for SmartCities
- IoT Languages for SmartCities
- Research, Exchange and Collaborations for SmartCities

System Software & Distributed Systems Group

@University of Oldenburg

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Topics of Interest

- Dependable Distributed Computing
- Fault Tolerance in Distributed **Systems**
 - Replication of Data & Services
 - Self-Stabilizing Distributed Algorithms
 - Region-Adherent Distributed **Algorithms**
- Dynamics in Distributed Systems
- Distributed Base Algorithms
 - Scalability
 - Self-Organization
 - **Graceful Degradation**
 - Energy-Efficiency
 - Consistency
- (Wireless) Sensor Networks
- Sensors for Environmental
- Phenomena







Prof. Dr.-Ing. Oliver Theel oliver.theel@uol.de marvin.banse@uol.de

M.Sc. Inform. Cand. Marvin Banse

- Sensor & Actuator Networks for **SmartCities**
 - Models
 - Properties
 - Sensor & Actuator Devices
- Exchange & Collaborations

Very Large Business Applications

@University of Oldenburg



Topics of Interest

- Data Science
 - Artificial Intelligence
 - Big Data Integration
 - Blockchain
 - Business Intelligence
 - Data Ownership / Transparency



Prof. Dr.-Ing. Jorge Marx Gómez



M.Sc. Christian Janßen



M.Sc. Alexander Sandau



Dr.-Ing. Andreas Solsbach

- Sustainability
 - EMIS
 - Sustainable Mobility
 - Sustainable Reporting
 - Recycling networks
- Knowledge Transfer & Capacity Building

- Architecture of Smart City
 Platforms
- Data Management in Smart Cities
- Exchange and Collaborations

Energy R&D Department @OFFIS



Topics of Interest

- Power System Intelligence
- Artificial Intelligence (via CCAI)
- Cyber-Resilient Architectures and Cyber-Security
- Standardized Systems
 Engineering and Assessment
- Energy-efficient Smart Cities
- Automation, Communication and Control
- Simulation and Agents in Multiple Domains
- Data Integration and Processing



Dr.-Ing. Eric MSP Veith eric.veith@offis.de

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+ a team of more than 60 people

Interests in SuMoCoS

- AI-based Resilient Control
- Sustainable Energy
 Management in Smart Cities
- Integration of Renewable Energy

OFFIS 08.01.2020

Interdisciplinary Centre for Law of the Information Society (ZRI)



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Topics of Interest

- Privacy by Design
- Smart Cars
- IoT
- Tracking Technologies
- Video Surveillance
- Fundamental Rights
- Electronic Contracts
- Privacy Enhancing Technologies
- Cyber Security



Boris Reibach, LL.M., Attorney at Law (Germany) Boris.Reibach@uol.de

- Legal Regulation of Smart Cities
- Transparency
- Privacy Policies
- Data Subject Rights

erminas GmbH



Topics of Interest

- Retrofitting Existing Machine Parks
- Development of IIoT Products
- Modeling and Meta Modeling
 - Model-driven Development of Industrial IoT Systems
 - Model Integration
- Tool Development
 - Monitoring and Tracing
 - IIoT IDE
- Machine Learning
- Research in IIoT
- Sustainable IIoT Software
- Enterprise Applications
 - Mobile App Development
 - Web-based Applications



Dr. Yvette Teiken yvette.teiken@ erminas.de



Mr. Hilmar Bunjes hilmar.bunjes@ erminas.de

- Modeling of Systems and Languages for SmartCities
- Retrofitting of Existing Things in SmartCities
- Exchange and Collaborations