



The European Academy of Wind Energy



Programme of

4th PhD SEMINAR ON WIND ENERGY IN EUROPE

Otto-von-Guericke University Magdeburg, Germany

1st and 2nd October 2008

Organized by Otto-von-Guericke University Magdeburg for

European Academy of Wind Energy, EAWE

Magdeburg 2008

General Session Plan for 1st October 2008 (Wednesday)

09 ⁰⁰ - 09 ³⁰	<p style="text-align: center;">OPENING CEREMONY Building 22A / Room 021 (H2)</p> <ul style="list-style-type: none"> • <i>President of ZERE</i> - Prof. Dr. Zbigniew A. Styczynski • <i>Rektor - Univ.-Prof.</i> Dr. Klaus Erich Pollmann • <i>Minister for Economic Affairs of Saxony-Anhalt</i> - Dr. Reiner Haseloff • <i>President of EAWE</i> - Prof. Dr. Jürgen Schmid 	
09 ³⁰ - 10 ⁰⁰	<p style="text-align: center;">Guest Lecture</p> <ul style="list-style-type: none"> • <i>President of ENERCON</i> - Dr. Aloys Wobben 	
10 ⁰⁰ - 11 ⁰⁰	<p style="text-align: center;">SESSION 1: SIMULATION AND MODELLING - PART I Building 22A / Room 021 (H2)</p>	
11 ⁰⁰ - 11 ³⁰	<p style="text-align: center;">Coffee break</p>	
11 ³⁰ - 12 ¹⁰	<p style="text-align: center;">- CONTINUATION - SESSION 1: SIMULATION AND MODELLING - PART I Building 22A / Room 021 (H2)</p>	
12 ¹⁰ - 14 ⁰⁰	<p style="text-align: center;">Lunch: University Canteen</p>	
14 ⁰⁰ - 15 ⁰⁰	<p style="text-align: center;">SESSION 2-A: WIND POWER GENERATION AND CONTROL (Parallel to the Session 2-B) Building 22A / Room 021 (H2)</p>	<p style="text-align: center;">SESSION 2-B: SIMULATION AND MODELLING - PART II (Parallel to the Session 2-A) Building 22A / Room 020</p>
15 ⁰⁰ - 15 ³⁰	<p style="text-align: center;">Coffee break</p>	
15 ³⁰ - 15 ⁵⁰	<p style="text-align: center;">- CONTINUATION - SESSION 2-A: WIND POWER GENERATION AND CONTROL (Parallel to the Session 2-B) Building 22A / Room 021 (H2)</p>	<p style="text-align: center;">- CONTINUATION - SESSION 2-B: SIMULATION AND MODELLING - PART II (Parallel to the Session 2-A) Building 22A / Room 020</p>
15 ⁵⁰ - 16 ³⁰		<p style="text-align: center;">SESSION 2-C: SOCIAL AND BEHAVIORAL ASPECTS (Parallel to the Session 2-A) Building 22A / Room 020</p>
16 ³⁰ - 18 ³⁰	<p style="text-align: center;">Poster Session</p>	
20 ⁰⁰	<p style="text-align: center;">“Get Together” – Barbecue party at the Elbe river (Fraunhofer IFF)</p>	

General Session Plan for 2nd October 2008 (Thursday)

09 ³⁰ - 10 ³⁰	SESSION 3-A: SIMULATION AND MODELLING - PART III (Parallel to the Session 3-B) Building 22A / Room 021 (H2)	SESSION 3-B: OPERATION, PLANNING AND ECONOMICS (Parallel to the Session 3-A) Building 22A / Room 020
10 ³⁰ - 11 ⁰⁰	Coffee break	
11 ⁰⁰ - 11 ⁴⁰	<i>- CONTINUATION -</i> SESSION 3-A: SIMULATION AND MODELLING - PART III (Parallel to the Session 3-B) Building 22A / Room 021 (H2)	<i>- CONTINUATION -</i> SESSION 3-B: OPERATION, PLANNING AND ECONOMICS (Parallel to the Session 3-A) Building 22A / Room 020
11 ⁴⁰ - 12 ⁰⁰	Best Poster Awards	
12 ⁰⁰ - 13 ³⁰	Lunch: University Canteen	
13 ³⁰ - 14 ⁰⁰	Travel to Enercon Company (with a tram)	
14 ⁰⁰ - 15 ³⁰	Visit in Enercon Company	
15 ³⁰ - 16 ⁰⁰	Travel back from Enercon Company (with a tram)	
16 ⁰⁰	End of the Workshop	

1st October 2008

Wednesday

Building 22A / Room 021 (H2)

09⁰⁰ - 09³⁰

Opening Ceremony:

- *President of ZERE* Prof. Dr. Zbigniew A. Styczynski
- *Rektor Univ.-Prof. Dr. Klaus Erich Pollmann*
- *Minister of Trade & Commerce and Employment, Saxony-Anhalt* Dr. Reiner Haseloff
- *President of EAWC* Prof. Dr. Jürgen Schmid

09³⁰ - 10⁰⁰

Guest Lecture:

- *President of ENERCON* Dr. Aloys Wobben

SESSION 1: SIMULATION AND MODELLING - PART I

10⁰⁰ – 12¹⁰

Building 22A / Room 021 (H2)

Supervisor:

Prof. A. Orths, Energinet.dk

Chairman:

C. Heyde, Otto-von-Guericke University Magdeburg

10⁰⁰ – 10⁰⁵

Wind turbine Reliability Modelling

Hooman Arabian; Durham University

10¹⁰ – 10¹⁵

Offshore Wind Speeds - Modelling and Forecasting the Wind Resources over the North Sea

Jens Tambke; ForWind, University of Oldenburg

10²⁰ – 10²⁵ Overall Dynamics and Integrated Design of Offshore Wind Turbines

Jan Quappen; University of Stuttgart

10³⁰ – 10³⁵ Simulations with solution based mesh adaptation for fluid structure interactions

Joost Sterenborg; Delft University of Technology

10⁴⁰ – 10⁴⁵ Wind Turbine Load Reduction by Learning the Periodic Load Disturbance

Ivo Houtzager; Delft University of Technology

10⁵⁰ – 10⁵⁵ Validation of a CFD wake model based on the actuator disk technique and the thrust coefficient. Preliminary results

Daniel Cabezon; CENER

11⁰⁰ – 11³⁰ **Coffee break**

11³⁰ – 11³⁵ Sea State and Wave Load Modeling in WaveLoads 2.0 and its application in a Multibody Simulation Framework

Thomas Kossel; Leibniz Universität Hannover

11⁴⁰ – 11⁴⁵ Large Eddy Simulations of an Airfoil in Turbulent Inflow

Lasse Gilling; Aalborg University

11⁵⁰ – 11⁵⁵ Planned Implementation of a Navier-Stokes based Immersed Boundary Method for Simulation of Moving Trailing Edge Flaps on a Wind Turbine Blade

Tim Behrens, Technical University of Denmark / Vestas Wind System A/S

12⁰⁰ – 12⁰⁵ Investigation of Coupling of EMC Disturbances in Wind Generators with DFIG

Sebastian Schulz; Otto-von-Guericke University Magdeburg

12¹⁰ – 14⁰⁰ **Lunch: Cafeteria**

SESSION 2-A: WIND POWER GENERATION AND CONTROL

(Parallel to the Sessions 2-B)

14⁰⁰ – 16³⁰

Building 22A / Room 021 (H2)

Supervisor:

Prof. R. Rolfes, University of Hannover

Chairman:

A. L. Vernay, Delft University of Technology

14⁰⁰ – 14⁰⁵ Reactive Power Management and Voltage Control by the Wind Farm Cluster Management System

César Augusto Quintero Marrone; ISET e.V.

14¹⁰ – 14¹⁵ Future Power System Control Architecture

Kai Heussen; Technical University of Denmark

14²⁰ – 14²⁵ Direct Drive Generators for Future Wind Turbines

Ghanshyam Shrestha; Delft University of Technology

14³⁰ – 14³⁵ Sensor Design and Control Algorithm for Flaps on Wind Turbine Blades

Damien Castaignet; Vestas Wind System A/S, Risø National Laboratory for Sustainable Energy, Technical University of Denmark

14⁴⁰ – 14⁴⁵ Online Load Monitoring of Wind Turbines for Advanced Control and Optimized Operation

Ursula Smolka; University of Stuttgart

- 14⁵⁰ – 14⁵⁵ Coordinated Frequency Control of Wind Turbines in Power Systems with High Wind Power Penetration
Germán Claudio Tarnowski; DTU Electrical Engineering, Technical University of Denmark
- 15⁰⁰ – 15³⁰ **Coffee break**
- 15³⁰ – 15³⁵ Promising Direct-Drive Generator for Large Wind turbines
Deok-je Bang; DU Wind, Delft University of Technology
- 15⁴⁰ – 15⁴⁵ Wind Turbine Condition Monitoring and Fault Diagnosis using Wavelet Transforms
Wenxian Yang; Durham University
- 15⁵⁰ – 15⁵⁵ Development Of A Test Rig For Condition Monitoring Offshore Wind Turbines
Chris Crabtree; Durham University
- 16⁰⁰ – 16⁰⁵ No limits for a full electricity supply by renewables
Reinhard Mackensen; ISET e.V.
- 16¹⁰ – 16¹⁵ Aggregated Wind Power Prediction Method Based on Comparison of Weather Forecasting Vectors
Miguel Garcia Lobo; Universidad Carlos II de Madrid
- 16²⁰ – 16²⁵ A Deterministic based Genetic Algorithm applied to a Modern Wind Turbine Controller Using Smart Blade Design
Peter Bjørn Andersen; Risø National Laboratory for Sustainable Energy, Technical University of Denmark

SESSION 2-B: SIMULATION AND MODELLING - PART II

(Parallel to the Session 2-A)

14⁰⁰ – 15⁵⁰

Building 22A / Room 020

Supervisor:

Prof. P. Tavner, Durham University

Chairman:

J. Gottschall, ForWind, University of Oldenburg

- 14⁰⁰ – 14⁰⁵ Rotor-Tower Interaction in HAWTs
Alejandro Gomez; Leibniz Universität Hannover
- 14¹⁰ – 14¹⁵ Wind speed distributions in neutral atmospheres over homogenous terrain
Alfredo Peña; Risø National Laboratory for Sustainable Energy, Technical University of Denmark
- 14²⁰ – 14²⁵ High frequent wind fluctuations on wind turbine blades
Bernhard Stoevesandt; Forwind
- 14³⁰ – 14³⁵ Quasi-3D aerodynamic code for analyzing dynamic flap and sensor response
Néstor Ramos García; Technical University of Denmark
- 14⁴⁰ – 14⁴⁵ Numerical Simulation of Dynamic Stall on a Wind Turbine Airfoil Using Spectral/Hp Methods
Wided Medjroubi; University of Oldenburg
- 14⁵⁰ – 14⁵⁵ The Implementation of Variable Speed Wind Turbine Aerodynamic and Drive Train Modeling for Transient Analysis
Bing Liu; The Norwegian University of Science and Technology
- 15⁰⁰ – 15³⁰ **Coffee break**

15³⁰ – 15³⁵ Identification of Wind Turbines in closed loop operation in the presence of three dimensional turbulence wind speed

Mikel Iribas Latour; CENER

15⁴⁰ – 15⁴⁵ Dynamic loads on a wind turbines rotor

Tanja Mücke; Forwind

SESSION 2-C: SOCIAL AND BEHAVIORAL ASPECTS

(Parallel to the Session 2-A)

15⁵⁰ – 16³⁰

Building 22A / Room 020

Supervisor:

Prof. M. Geir, NTNU

Chairman:

H. S. Toft, Aalborg University

15⁵⁰ – 15⁵⁵ Public Acceptance and Wind Energy Plants - an Environmental Psychological Consideration

Jan Zoellner; Otto-von-Guericke University Magdeburg

16⁰⁰ – 16⁰⁵ An Environmental Psychological Consideration of Participation in the Implementation Process of Wind Energy Plants and Public Acceptance

Irina Rau; Otto-von-Guericke University Magdeburg

16¹⁰ – 16¹⁵ Mental Models in technical development cooperation – exemplary analysis of rural electrification with solar home systems

Annika Tillmans; Otto-von-Guericke University Magdeburg

16²⁰ – 16²⁵ Acceptance of Wind Turbines and Landscape Perception

Maximilian Reuss, Otto-von-Guericke University Magdeburg

16³⁰ – 18³⁰ **Poster Session**

20⁰⁰ **“Get Together” – Barbecue party at the Elbe river**

2nd October 2008

Thursday

SESSION 3-A: SIMULATION AND MODELLING - PART III

(Parallel to the Session 3-B)

09³⁰ – 11⁴⁰

Building 22A / Room 021 (H2)

Supervisor:

Dr. D. Heinemann, ForWind, University of Oldenburg

Chairman:

A. Pena, Risø

09³⁰ – 09³⁵ Distributed Actuation, Sensing, and Control of Flexible Wind Turbine Blades

Justin Rice; Delft Center for Systems and Control

09⁴⁰ – 09⁴⁵ Model Predictive Control of a Floating Wind Turbine
Lars Christian Henriksen; Risø National Laboratory for Sustainable Energy, Technical University of Denmark

09⁵⁰ – 09⁵⁵ Structure of the offshore wind profile of the boundary layer

Allan Morales, ForWind, University of Oldenburg

10⁰⁰ – 10⁰⁵ Characterisation of Wind Variability over the North Sea
Claire Vincent; Risø National Laboratory for Sustainable Energy, Technical University of Denmark

10¹⁰ – 10¹⁵ How to consider turbulence effects for an appropriate definition of a wind turbine's power curve

Julia Gottschall; ForWind

10²⁰ – 10²⁵ Wind tunnel measurements on an FX79W151A airfoil under unsteady conditions studying dynamic stall effects

Gerrit Wolken-Möhlmann; ForWind, University of Oldenburg

- 10³⁰ – 11⁰⁰ Coffee break**
- 11⁰⁰ – 11⁰⁵ A Panel Method – Free Wake Code for Rotor Aeromechanic Analysis
Miquel Roura; Universidad Politécnica de Madrid
- 11¹⁰ – 11¹⁵ Stability curves for wind turbine blades
Gabriel Gerardo Martinez Hernandez; Technical University of Denmark
- 11²⁰ – 11²⁵ New Construction Opportunities for Grouted Joints of Offshore Wind Turbine Structures
Stephan Lochte-Holtgreven; ForWind
- 11³⁰ – 11³⁵ Exploiting Local Flow Structures for Building-Integrated Microgeneration
Nathan Hill; Durham University

SESSION 3-B: OPERATION, PLANNING AND ECONOMICS

(Parallel to the Session 3-A)

09³⁰ – 11⁴⁰

Building 22A / Room 020

Supervisor:

Prof. P. Schweizer-Ries, OvG University Magdeburg

Chairman:

D. Cabezon, CENER

- 09³⁰ – 09³⁵ Design optimization of large scale horizontal axis wind turbines
Turaj Ashuri; Delft University of Technology

- 09⁴⁰ – 09⁴⁵ Decision making tool for trading wind energy in an electricity market
Petros Kritharas; CREST
- 09⁵⁰ – 09⁵⁵ Dynamic Security Assessment Considering High Penetration of Dispersed Generation
Chris Oliver Heyde; Otto-von-Guericke University Magdeburg
- 10⁰⁰ – 10⁰⁵ The Role of Wind Power Forecasting and Innovative Concepts in the Integration of DG/RES
Ümit Cali; ISET e.V.
- 10¹⁰ – 10¹⁵ Non-parametric system identification of an offshore wind turbine structure
Thomas Pahn; Leibniz Universität Hannover
- 10²⁰ – 10²⁵ Opportunities for the Superwind concept - Integrating wind energy with hydrogen producing fuel cells
Anne Lorène Vernay; Delft University of Technology
- 10³⁰ – 11⁰⁰ Coffee break**
- 11⁰⁰ – 11⁰⁵ A Fresh Wind Is Blowing For Rural Electrification - Development Of A Small Wind Turbine Concept For Rural Electrification
Paul Kühn; ISET e. V.
- 11¹⁰ – 11¹⁵ Wind Energy Applications in the Built Environment
Christina Beller; Risø National Laboratory for Sustainable Energy, Technical University of Denmark
- 11²⁰ – 11²⁵ Load Extrapolation during operation for Wind Turbines
Henrik Stensgaard Toft; Aalborg University

11³⁰ – 11³⁵ Wind Energy Research at the Department of Civil and Transport Engineering at NTNU

Karl Merz; The Norwegian University of Science and Technology

11⁴⁰ – 12⁰⁰ **Best Poster Awards**

12⁰⁰ – 13³⁰ **Lunch: Cafeteria**

13³⁰ – 14⁰⁰ **Travel to Enercon Company (with a bus)**

14⁰⁰ – 15³⁰ **Visit in Enercon Company**

15³⁰ – 16⁰⁰ **Travel back from Enercon Company (with a bus)**

16⁰⁰ **End of the Workshop**

4th EAWE Seminar – Important Facilities and Meeting Places

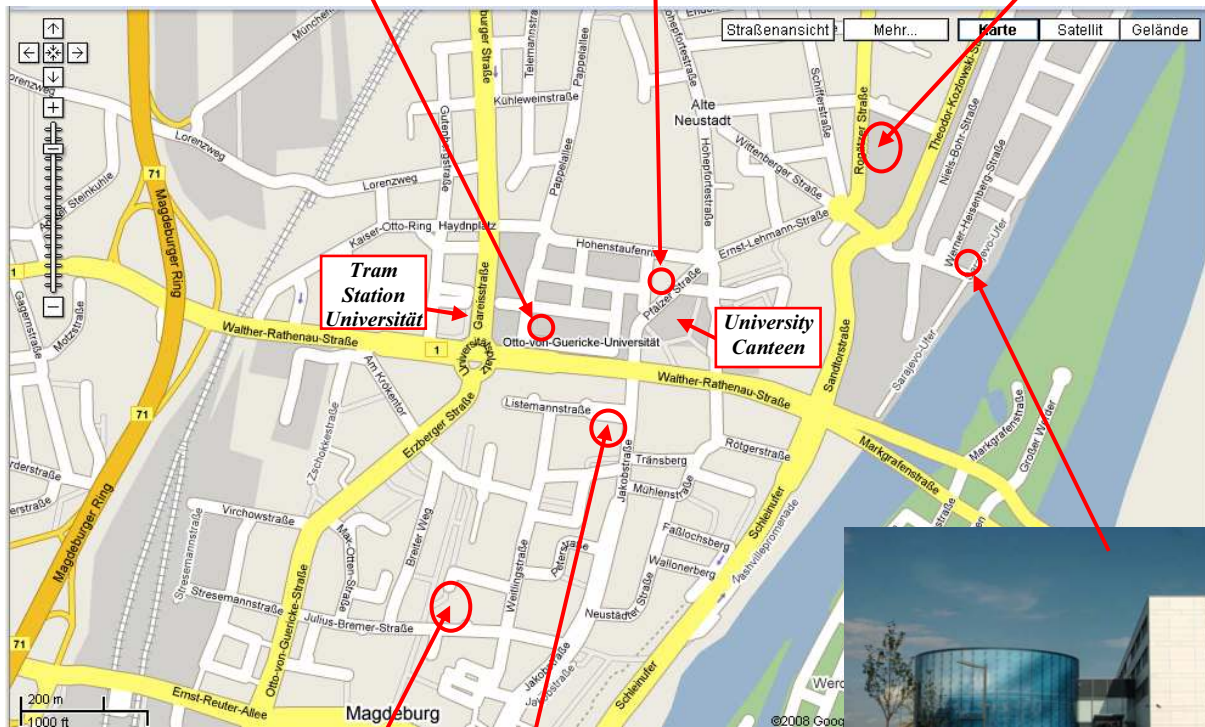
**Otto-von-Guericke
University Magdeburg**
Building 9
Universitätsplatz 2
39106 Magdeburg



**Otto-von-Guericke
University Magdeburg**
Building 22
Universitätsplatz 2
39106 Magdeburg



Hotel Sleep&Go
Rogätzerstr. 5A
39106 Magdeburg
Germany



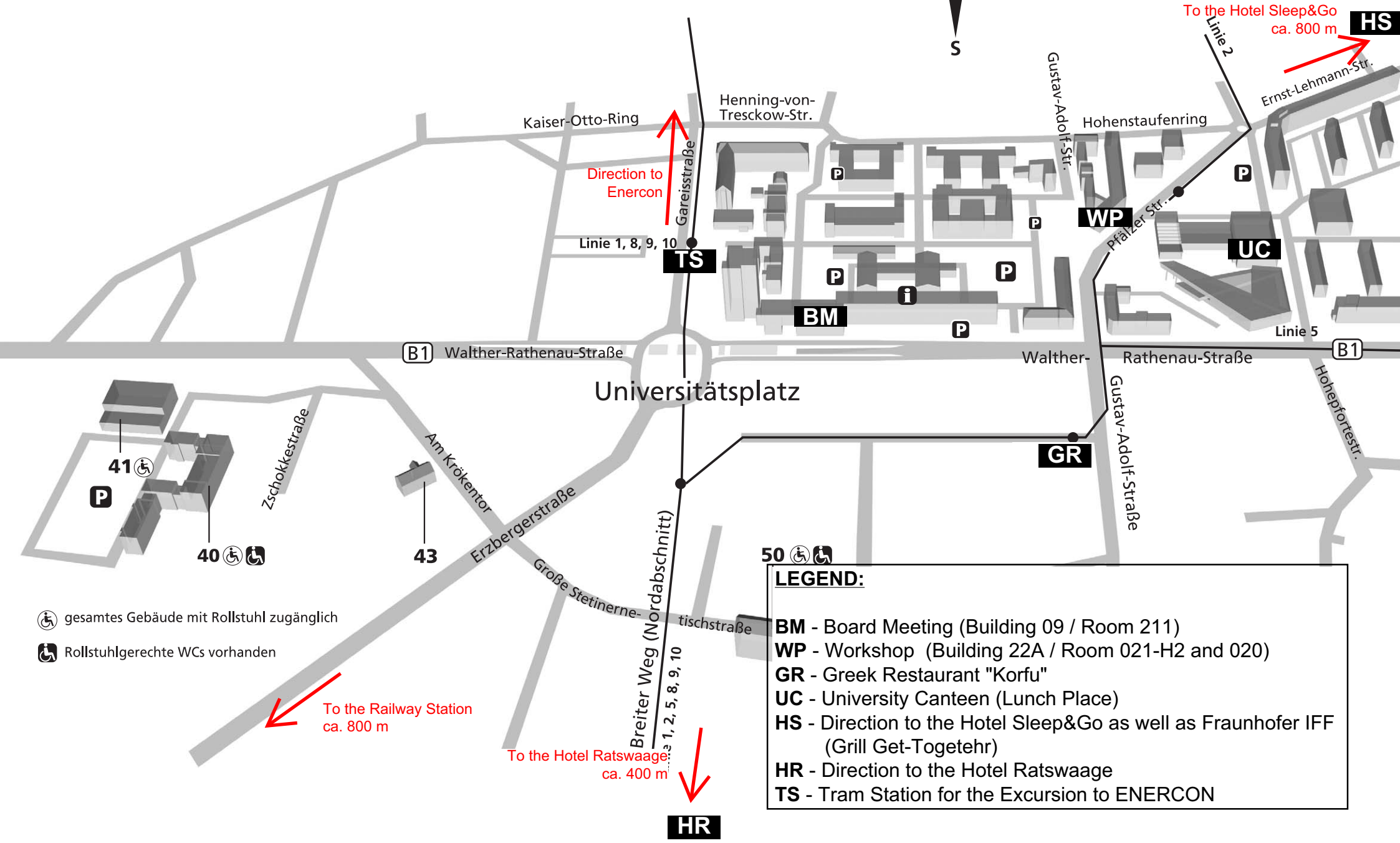
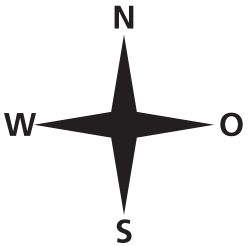
Hotel Ratswaage
Ratswaageplatz 1-4
39104 Magdeburg
Germany



Korfu Restaurant
Listemannstr. 18
39104 Magdeburg
Germany



Fraunhofer IFF - VDTC
Werner-Heisenbergstr.
39106 Magdeburg
Germany



- gesamtes Gebäude mit Rollstuhl zugänglich
- Rollstuhlgerechte WCs vorhanden

LEGEND:

- BM** - Board Meeting (Building 09 / Room 211)
- WP** - Workshop (Building 22A / Room 021-H2 and 020)
- GR** - Greek Restaurant "Korfu"
- UC** - University Canteen (Lunch Place)
- HS** - Direction to the Hotel Sleep&Go as well as Fraunhofer IFF (Grill Get-Together)
- HR** - Direction to the Hotel Ratswaage
- TS** - Tram Station for the Excursion to ENERCON

Direction: **BARLEBER SEE**



Station: **Universität**

gültig: **ab 18.08.2008**

10

Monday till Friday

5 Uhr	13	33	53			
6 Uhr	13	25	35	45	55	
7..12 Uhr	05	15 _R	25	35 _R	45	55 _R
13 Uhr	05	15 _R	25	35	45	55
14 Uhr	05	15	25	35	45	55
15 Uhr	05	15	25	35	45	55 _R
16 Uhr	05	15 _R	25	35 _R	45	55 _R
17 Uhr	05	15 _R	25	35 _R	45	55 _N
18 Uhr	05	15 _N	25	35 _N	45	55
19 Uhr	05 _N	15	23 _N	33	53	
20 Uhr	13	33	53			
21 Uhr	13 _N	23 _N	33 _N			

Universität

- 1 Min ● AOK
- 2 Min ● Bf. Neustadt
- 3 Min ● Neustädter Friedhof
- 4 Min ● Mittagstr.
- 5 Min ● Nicolaiplatz
- 7 Min ● Kastanienstraße
- 8 Min ● Rostocker Str.
- 9 Min ● Zoo
- 11 Min ● Pettenkoferstr.
- 12 Min ● Hp. Eichenweiler
- 13 Min ● Havelstr.
- 14 Min ● Schule Rothensee
- 16 Min ● Hohenwarther Str.
- 18 Min ● Betriebshof Nord
- 19 Min ● Rothensee
- 20 Min ● ENERCON**
- 21 Min ● Industrie-u.Logistik-Centrum
- 22 Min ● Barleber See

Saturday

6 Uhr	53				
7..8 Uhr	13	33	53		
9 Uhr	13	32	47		
10..17 Uhr	02	17	32	47	
18 Uhr	02	17	33	38 _N	53
19 Uhr	13	33	38 _N	53	
20 Uhr	13	33	53		
21 Uhr	33 _N				

Sunday and Holidays

12..20 Uhr	13	33	53		
21 Uhr	13 _N	33 _N			

N : zum BETRIEBSHOF NORD
R : nur bis ROTHENSEE



Service-Hotline:
0800 / 548 1245

Fahrplanklau ? Wie blöd ! Gibt's doch unter www.mvbnet.de !

Weitere Fahrten finden Sie auf den Plänen der Linien 91 bis 96.



Direction: SUDENBURG

Station: ENERCON

gültig: ab 18.08.2008

10

ENERCON

Monday till Friday

5 Uhr	40					
6 Uhr	01	21	41			
7 Uhr	01	11	21	31	41	51
8..13 Uhr	11	31	51			
14 Uhr	11	21	31	41	51	
15 Uhr	01	11	21	31	41	51
16 Uhr	01	11	21	31	51	
17 Uhr	11	31	51			
18 Uhr	11	31	47			
19 Uhr	07	27	47			
20 Uhr	07	27				

Saturday

6 Uhr	07	27	47		
7 Uhr	07	27	37	47	
8 Uhr	07	27	47		
9 Uhr	07	24	39	54	
10..17 Uhr	09	24	39	54	
18 Uhr	09	27	47		
19 Uhr	07	27	47		
20 Uhr	07	27			

Sunday and Holidays

11 Uhr	47		
12..19 Uhr	07	27	47
20 Uhr	07	27	

- 1 Min ● Rothensee
- 2 Min ● Betriebshof Nord
- 3 Min ● Hohenwarther Str.
- 5 Min ● Schule Rothensee
- 7 Min ● Havelstr.
- 8 Min ● Hp. Eichenweiler
- 9 Min ● Pettenkoferstr.
- 10 Min ● Zoo
- 11 Min ● Rostocker Str.
- 14 Min ● Kastanienstraße
- 15 Min ● Nicolaiplatz
- 16 Min ● Mittagstr.
- 17 Min ● Neustädter Friedhof
- 18 Min ● Bf. Neustadt
- 19 Min ● AOK
- 20 Min ● **Universität**
- 22 Min ● Theater
- 23 Min ● Breiter Weg
- 25 Min ● Alter Markt
- 26 Min ● Leiterstraße
- 27 Min ● Domplatz
- 29 Min ● Hasselbachplatz
- 32 Min ● Halberst./Leipz.Str.
- 33 Min ● Jordanstr.
- 34 Min ● Südring
- 36 Min ● Eiskellerplatz
- 37 Min ● Ambrosiusplatz
- 38 Min ● Braunlager Str.
- 39 Min ● Sudenburg (Kroatenweg)