

## RESEARCH AND INNOVATION

# SUN-AREA

## Predicting the Potential for Renewable Energy Supply



Prof. Dr. Martina Klärle, head of the SUN-AREA research project and winner of the German Solar Price 2009.

The SUN-AREA research project demonstrates that about 20% of Germany's roof tops are suitable for solar energy use. This share could cover the complete power requirement of homes throughout Germany, which corresponds to more than 100 times the amount of solar energy used today. SUN-AREA calculates the solar power potential of each roof area, each city and each county or district. Based on geographical information systems and aircraft scanner data, the solar potential of all roof areas is automatically and accurately calculated, taking into account a range of variables such as the angle of the roof, its alignment and shade. Thereby, solar suitability, potential power output, CO<sup>2</sup> reduction as well as investment volume can be calculated for each subarea of a roof. These results

are made available to the public in a web-based interactive map. The SUN-AREA method was developed by Prof. Dr. Martina Klärle and her research team.

### CONTACT

Prof. Dr. Martina Klärle  
Faculty of Architecture, Civil  
Engineering and Geomatics  
+49-(0)69-1533-2778  
martina.klaerle@fb1.fh-frankfurt.de

## RESEARCH AND INNOVATION

# Electric Mobility: Matching User Profiles and Available Technologies

Electric vehicles enable emission-free travelling and are virtually noiseless. The negative effects of mobility can thus be minimized, especially when the electricity used to run the vehicle is produced with renewable energy sources. A research project is currently conducted at the Fachhochschule Frankfurt am Main to provide new, concrete and short-term findings about the mobility behaviour of Hessian citizens, with regards to the substitution potential and use of electric mobility in the region. (see next page)



Präsident Dr.-Ing. Detlev Buchholz

Energy, mobility and health care are only some areas of research and teaching at our institution. But they do have something in common: They cover challenges of utmost importance for our societies which have to deal with demographic transition, climate change and economic downturn. However, I do believe that international cooperation in research, teaching and student exchange is beneficial for learning how to overcome these challenges. This newsletter's issue again presents a number of interesting projects carried out at the Fachhochschule Frankfurt am Main. I kindly invite you to take a look at it. Do not hesitate to contact us, if you need further information on any of the projects presented. Enjoy reading!

Sincerely yours

Dr.-Ing. Detlev Buchholz

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Source: Petra K. Schäfer

Charging point for electric vehicles in Frankfurt.

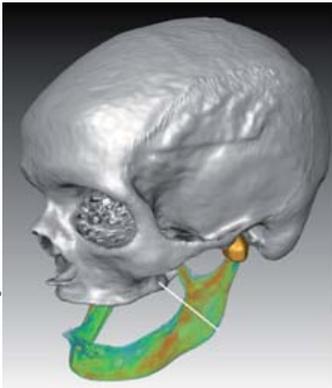
One aim is to identify the potential typical or average user in the state of Hessen. Available data of mobility behaviour, as well as the general acceptance of electric mobility options

are evaluated in order to optimize electric mobility in the region. Users of electric vehicles will be asked to take part in extensive surveys. The project's main focus addresses the question of how available technologies match the user profile.

**CONTACT**  
 Prof. Dr.-Ing. Petra K. Schäfer  
 Faculty of Architecture, Civil Engineering and Geomatics  
 +49-(0)69-1533-2797  
 petra.schaefer@fb1.fh-frankfurt.de

RESEARCH AND INNOVATION

**LOEWE Research Collaboration in Preventive Biomechanics**



Source: Elke Vera Ziegler

Bone/cartilage structure of a jaw.

Strengthening research and innovation, the state of Hessen is financing the "Landes-Offensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz" (LOEWE) programme. Within the LOEWE programme, Preventive Biomechanics (PreBionic) is a multi-disciplinary network, which is funded by the state with a subsidy of 3,765,000 Euros for

an initial period of three years, starting January 1st 2010. The PreBionic network is a joint research association of the Fachhochschule Frankfurt am Main (coordination), Goethe-University Frankfurt am Main, Philipps-University Marburg and the Baden-Wuerttemberg Cooperative State University Mosbach. Goal of this joint initiative is to combine research excellence in engineering and the life sciences and to establish areas of coordinated research in preventive biomechanics, i.e. modelling the mechanical behaviour of human tissues such as arteries, aneurysms, heart, cartilage and jaw. A further topic focuses on the interaction of tissues and organs with supporting structures (e.g. stents, implants, seats, etc.). The research association is very interested in gaining international partners to further extend their research network.

**CONTACT**  
 Dr. Elke Vera Ziegler  
 LOEWE-PreBionic  
 Project Management  
 +49-(0)69-1533-2636  
 eziegler@preventive-biomechanics.eu

an initial period of three years, starting January 1st 2010. The PreBionic network is a joint research association of the Fachhochschule Frankfurt am Main (coordination), Goethe-University Frankfurt am Main, Philipps-University Marburg and the Baden-

**More Information:** [www.praeventive-biomechanik.eu](http://www.praeventive-biomechanik.eu)

TEACHING AND LEARNING

**Institute of Entrepreneurship cooperates with Romanian Universities**

The Institute for Entrepreneurship has been engaged in an 18-months cooperation project with two Romanian Universities in Bucharest: Universitatea Titu Maiorescu (UTM) and

Universitatea Politehnica Bucuresti (UPB). The aim of the project financed by the Romanian Ministry of Labour and the European Social Fund is to provide entrepreneurial training for various faculties at both universities, and to implement a pilot curriculum. In April 2010, Prof. Dr. Hans-Jürgen Weissbach provided the first 'train-the-trainer' seminar in cooperation with the leader of the Career Service of UTM, Dr. Ioana Panc and Prof. Dr. Istvan Sztojanov of UPB. This seminar will be followed by three entrepreneurial courses for 12 students each.

**CONTACT**  
 Prof. Dr. Hans-Jürgen Weissbach  
 Faculty of Business and Law  
 Institute for Entrepreneurship  
 +49-(0)69-1533-2719  
 weissbach@ife-frankfurt.net

TEACHING AND LEARNING

**Palliative Care – A Workshop Report**

The Faculty of Health and Social Work, Department of Nursing, (Prof. Dr. Ulrike Schulze) hosted a European workshop on Palliative Care at the end of last year. The workshop was a follow-up event to the 2008 Palliative Care meeting organized by our partners in The Hague (Haagse Hogeschool). Staff and students from the Netherlands, the Czech Republic, Finland and Scotland

were invited to engage in comparative studies within the European context. The workshop featured a range of (see next page)

**CONTACT**  
 Prof. Dr. Ulrike Schulze  
 Faculty of Health and Social Work  
 +49-(0)69-1533-2845  
 usschulze@fb4.fh-frankfurt.de

outstanding contributors, one of which was Prof. Eva-Maria Ulmer who presented her work on the role of nurses in the Nazi era. Workshop participants were also impressed by on-site visits

to hospices and palliative wards as well as by an insight into the work music therapists do with critically sick people.

## TEACHING AND LEARNING

### Student Exchange: Phase II of Hessen-Queensland Protocol signed



Source: Andrius Fischer

The signatories of the protocol (from left to right): Dr.-Ing. Detlev Buchholz, President of the Fachhochschule; Peter Tesch, Australian Ambassador to Germany; Eva Kühne-Hörmann, Hessen State Minister for Higher Education, Research and the Arts and Prof. Dr. Rolf-Dieter Postlep, President of the University of Kassel.

In January 2010 twelve Hessen universities and their nine Queensland partners extended their exchange relationship for another three years by signing a new protocol. This very successful student exchange program includes semesters abroad, internships and the attendance of the Hessen International Summer University programmes. A growing number of staff from either side are involved in the exchanges. Fachhochschule Frankfurt am Main is the coordinating institution on the Hessen side. The Hessen Ministry of Science and the Arts is financially supporting the exchanges.

#### CONTACT

Annabelle Bijelic  
International Office  
+49-(0)69-1533-2740  
bijelic@aa.fh-frankfurt.de

## NEWS AND EVENTS

### Music Therapy - Graduate granted Fulbright-Scholarship



Source: Johanna Bosse

A Fulbright scholar: Johanna Bosse.

her to complete her studies in Expressive Therapy and in Play Therapy at Lesley College, Cambridge, Massachusetts, USA.

Johanna Bosse, a graduate from Fachhochschule Frankfurt am Main, has been granted a one year scholarship for post-graduate studies by the Fulbright Commission. The scholarship allows

Having graduated in 2005 in the field of Music Education from the Musikhochschule Bremen Johanna came to the Fachhochschule Frankfurt am Main to complete a postgraduate degree in Music Therapy in 2008. Her Master thesis investigated a choir project with children in Quito (Ecuador). Johanna Bosse is currently employed as a research assistant at the University of Augsburg, Germany, in the department of Music Therapy.

#### CONTACT

Prof. Dr. Eckhard Weymann  
Faculty of Health and Social Work  
+49-(0)69-1533-2889  
weymann@fb4.fh-frankfurt.de

## NEWS AND EVENTS

### International Summer University on Business Studies and European Integration

From July 19th to August 14th 2010 the Fachhochschule Frankfurt am Main and the neighbouring Goethe-University will be hosting their 8th International Summer University programme for undergraduate business students interested in the subject of European Integration. The courses cover intercultural commu-

nication, the European Central Bank System, the EU as global player, european integration and market liberalization, money and macro, Financial Markets, european eEconomy and eBusiness. All courses will be taught in English. In addition, German language courses are on offer for different (see next page)

## CONTACT

Prof. Dr. Hilko J. Meyer  
Dean of the Faculty  
of Business and Law  
+49-(0)69-1533-3018  
dekan@dek3.fh-frankfurt.de

levels. Excursions and socialising events are scheduled as part of the programme. The fee is 1,900 Euros and includes a B&B double

room. The programme is part of the International Summer Universities series supported by the Hessen Ministry of Science and the Arts.

## NEWS AND EVENTS

### Master Programme “Urban Agglomerations” hosts first International Workshop



Germany's financial centre: Skyline of Frankfurt am Main.

From May 30th until June 4th 2010 the Master Programme „Urban Agglomerations“, which was launched successfully in October 2008, will be hosting its first international workshop at the Fachhochschule Frankfurt am Main. The general topic will focus on “Concepts for Sustainable Metropolitan Regions”, with an emphasis on territories, networks, functions and governance

within city-regions in an international comparative perspective. The primary objective of the workshop is to share experiences in teaching and research in these fields, as well as to jointly develop future steps for a further integration of relevant Master programmes and research interests. Participants will join the workshop from universities in Brazil, Chile, México, Columbia, Sweden and Australia. The workshop will be open to the interested public, though registration is requested.

## CONTACT

Prof. Dr. Michael Peterek  
Dipl.-Ing. M.Sc. Caroline Günther  
Faculty of Architecture, Civil  
Engineering and Geomatics  
+49-(0)69-1533-2765  
ua-info@fb1.fh-frankfurt.de

**More Information:** [www.urban-agglomerations.eu](http://www.urban-agglomerations.eu)

## AT LAST

### A Wisdom for the Way

*“The door of opportunity won't open unless you do some pushing.” (Anonymous)*

## Imprint

President Dr.-Ing. Detlev Buchholz | Fachhochschule Frankfurt am Main – University of Applied Sciences | Nibelungenplatz 1 | D-60318 Frankfurt am Main  
+49(0)69-1533-2415 | praesident@fh-frankfurt.de

## Editorial Staff

Günter Kleinkauf | Head International Office | +49(0)69-1533-2735 | kuf@aa.fh-frankfurt.de  
Kristiane Seidel-Sperfeld | Dept. for Research, Further Education and Transfer | +49(0)69-1533-2162 | seidels@fwbt.fh-frankfurt.de

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