



## Newsletter December 2012

### Expansion and development of ITS Postgraduate school in 2012

During 2012, additional Ph D students have joined ITS Postgraduate school (NFITS). In December, we had 14 Ph D students and we are actively working to expand further. We have increased our work to establish new contacts with departments and universities which are not involved in NFITS. As an example, Malmö University has become a member of NFITS during 2012. We are currently discussing alternative forms of membership for Ph D students, senior researchers and industrial partners to join and become involved in NFITS.

On the international side, we are also working to expand and maintain our networks. Since several of our members also are active members of the [ITS-EduNet](http://www.its-edunet.org/) (<http://www.its-edunet.org/>), we ensure that the work on the research educational side is coordinated. Furthermore, we have been discussing possible cooperation with the network [NEARCTIS](#) during the fall of 2012 via Linköping university (LiU). A joint EU application (within the call for Marie Curie Initial Training Networks, FP7) named "BOOST" was submitted during November 2012. Main applicants are Juliette Renaud (IFFSTAR) and Christine Buisson (ENTPE). In the application, LiU and then indirectly also NFITS, is an associated partner. In addition, discussions have been made with ERTICO about possibilities for NFITS Ph D students to make a shorter trainee period within their organization.

### Some events during the fall of 2012

#### Course start for *Introduction to ITS* on September 18<sup>th</sup>

An important part of the work by NFITS is to provide relevant postgraduate courses in the ITS area. These courses are held in English and primarily intended for Ph D students enrolled in NFITS, but we also gladly welcome external participants. The course *Introduction to ITS* started in September 2012 and is held by Stig Franzén, Chalmers University. More information can be found on our website.

#### The Swedish National ITS conference in Kista on September 19<sup>th</sup>

NFITS made a presentation of its research portfolio during the Swedish National ITS-conference in Stockholm June 18<sup>th</sup> and September 19<sup>th</sup>. The presenters from NFITS were Annika Larsson (LU), Jana Sochor (KTH), Gideon Mbiydzonyuy (BTH), Tor Skoglund (Chalmers), Ellen Grumert (LiU) and Jan Lundgren (LiU). These events provided good opportunities for NFITS to present the mission and purpose of our work as well as to demonstrate what kind of research we are conducting.

#### NFITS yearly gathering and ITS WC 2012 in Vienna on October 21-26<sup>th</sup>

In conjunction with the ITS World Congress 2012 in Vienna, NFITS had its annual gathering where the majority of the researchers participated. Several of the Ph D students also participated in the ITS postgraduate course which was offered by ITS-EduNet in Vienna just prior to ITSWC2012. During the conference, Gideon Mbiydzonyuy and Jana Sochor also

presented one accepted paper each. VINNOVA and Trafikverket also organized a Swedish workshop focusing on innovations and cooperation in the ITS area, and during which Johanna Törnquist Krasemann presented NFITS. During ITSWC2012, the EU-funded, Network of Excellence "NEARCTIS" organized an workshop and a series of seminars. Gideon Mbiydzonyuy, Paul Davidsson and Johanna Törnquist Krasemann participated during parts of this. During this event, Gideon received the award "NEARCTIS School Best Report Award Laureate" which he shared with his two fellow team mates for their joint work during the 2nd MULTITUDE-NEARCTIS Summer School for Ph D students in June, 2012.

Finally, Jan Lundgren and Stig Franzén also had the opportunity to attend the "minister lunch" during ITSWC2012 where the Swedish Minister for Infrastructure, Catharina Elmsäter-Svärd was the honorary guest.

### Thesis defences

During the fall, NFITS had the pleasure to congratulate the first NFITS Ph D student to receive his doctoral degree. Omar Bagdadi defended his doctoral dissertation *"The development of methods for detection and assessment of safety critical events in car driving"* at Lund University on October 16<sup>th</sup> 2012.

We also had the opportunity to have three of the Ph D students defending their licentiate thesis during the fall:

- Åse Jevinger (BTH) defended her licentiate thesis *"Intelligent Goods – Characteristics and Architectures"* on September 20<sup>th</sup>.
- Jana Sochor (KTH) defended her licentiate thesis *"Impacts of Intelligent Transportation Systems on Users' Mobility: A Case Study Analysis"* on October 4<sup>th</sup>.
- Mahmood Rahmani defended his licentiate thesis *" Path Inference of Sparse GPS Probes for Urban Networks: Methods and Applications"* on November 26<sup>th</sup>.



Photos (from left): Omar Bagdadi (LU), Åse Jevinger (BTH), Jana Sochor (KTH), Mahmood Rahmani (KTH).

If you are interested in reading the theses or other publications associated with the Ph D students, please visit the publication list on our website <http://www.its-sweden.se/Forskarskolan>.

### **The conference IEEE-ITSC 2012 in Alaska**

During September one of the largest ITS research conferences was held, i.e. [IEEE-ITSC2012](#). This year it was held in Alaska and where Andreas Allström and his colleague David Gundlegård (also LiU) presented parts of their joint research which is also published in the paper:

Allström A, Gundlegård D, Rydergren C. (2012), Evaluation of travel time estimation based on LWR-v and CTM-v: A case study in Stockholm. In: *2012 14th International IEEE Conference on Intelligent Transportation Systems (ITSC 2012)*, Alaska, USA.

Next fall (2013) this conference (IEEE-ITSC2013) is held in the Hague, the Netherlands. This conference as well as the [MT-ITS](#) (held in Dresden, Germany during December 2013) are two examples of very relevant research conferences in the ITS area.

### **Planned NFITS activities for the Spring 2013**

During the Spring 2013, additional licentiate and thesis defences will be organized. Also the NFITS course *Evaluation of ITS-applications* organized and held by Lund University will start. A study trip to Brussels and NFITS annual gathering will be held. Before then there are also several other important activities taking place, where Transportforum in Linköping on January 9-10th is one. There will be several presentations by NFITS members, see below:

- Day 1 (January 9th ), session "Öppen data för kommersiella transporter" kl 13.00-15.00: "GPS-baserad ankomsttidsintervallskattning för godstransporter", Mattias Dahl and Gideon Mbiydzenyuy (BTH)
- Day 1, session "Järnvägens kapacitet och trafikering" kl 13.00-15.00: "Jakten på den robusta tidtabellen fortsätter", Anders Peterson (LiU) and Johanna Törnquist Krasemann (LiU/BTH)
- Day 1, session "ITS i samhället" kl 15.30-17.30: "ITS forskarskolan- pågående aktiviteter", Christer Karlsson (ITS Sweden)
- Day 2, session "Bluetooth för trafikmätning" kl 9.00-10.30: "Är Bluetooth framtidens metod för att samla in restider?" Andreas Allström (Sweco/LiU)  
"Behöver vi verkligen så många fasta sensorer på Essingeleden?" Andreas Allström (Sweco/LiU)
- Day 2, session "Trafikteknik" kl 11.00-12.30: "Assessing the benefits of intelligent parking", Jana Sochor (KTH)  
"Privacy in the professional driver's workplace", Jana Sochor (KTH)

**Finally, we would like to thank all of you whom have been involved in NFITS during the past year. Especially, we would like to thank VINNOVA, Trafikverket and ITS-Sweden.**

**Happy Holidays and see you next year!**

## About the Swedish ITS Postgraduate school - NFITS

The area of Intelligent Transportation Systems and Services (ITS) is known to be multi-disciplinary where different areas of competence meet to achieve sustainable, safe and cost-effective traffic and transport systems. The research frontier in the ITS area has earlier primarily been divided according to the different disciplines while there has been a need for research projects and researchers which go beyond their specific domain with a wider perspective to address relevant issues in a larger context than before.

Based on this need of a broaden multi-disciplinary research scope and in conjunction with the discussions of the organization of the ITS World Congress 2009 in Stockholm, the idea of a Swedish ITS Postgraduate School (NFITS) was formed. The establishment of NFITS was then made by VINNOVA (The Swedish Governmental Agency for Innovation Systems), Banverket (The Swedish Rail Administration) and Vägverket (The Swedish Road Administration) together with ITS-Sweden and a number of Swedish companies and Swedish universities.

One main purpose of the ITS Postgraduate School is to provide for a good, multi-disciplinary research education based on the different areas of competence of the participating universities. Another important objective is to initiate and run research projects highly relevant for the industry and the society defined in cooperation with the companies involved in the ITS Postgraduate School. Below is a list of the Ph D students associated with NFITS. \* indicates that the student joined NFITS during 2012, while \*\* indicates that the student left NFITS after graduation (licentiate, or doctoral).

Gideon Mbiydzenyuy	Blekinge Institute of Technology
Åse Jevinger	Blekinge Institute of Technology
Shoaib Bakhtyar*	Blekinge Institute of Technology
S.M. Zeeshan Iqbal*	Blekinge Institute of Technology
Tor Skoglund	Chalmers University
Niklas Strand	Chalmers University
Jana Sochor	KTH Royal Institute of Technology
Mahmood Rahmani	KTH Royal Institute of Technology
Arthur Trigueiro Baptista*	KTH Royal Institute of Technology
Lars Backåker**	Linköping University
Andreas Allström	Linköping University
Ellen Grumert*	Linköping University
Annika Larsson	Lund University
Omar Bagdadi**	Lund University
Banafsheh Hajinasab Razlighi*	Malmö University
Taline Jadaan	Viktoria Institute

The ITS Postgraduate School is mainly funded by VINNOVA and Trafikverket (formerly known as Banverket and Vägverket) which are represented in NFITS by Eva Schelin (VINNOVA) and Bengt Hallström (Trafikverket). The work in NFITS is planned and executed by a research council which is composed of the following members:

Christer Karlsson, ITS-Sweden  
Paul Davidsson, Blekinge Institute of Technology/ Malmö University  
Stig Franzén, Chalmers University  
MariAnne Karlsson, Chalmers University  
Albania Nissan, KTH Royal Institute of Technology  
Harilaos Koutsopoulos, KTH Royal Institute of Technology  
Jan Lundgren, Linköping University  
Johanna Törnquist Krasemann, Linköping University  
András Várhelyi, Lund university  
Jan Persson, Malmö University/Blekinge Institute of Technology

NFITS is coordinated by ITS-Sweden. The main and assisting director for the ITS Postgraduate School are Prof. Jan Lundgren and Dr. Johanna Törnquist Krasemann, Linköping University. More information can be found here: <http://www.its-sweden.se/Forskarskolan>.