



9th Winter School on Longitudinal Social Network Analysis

6-8 February 2017

Advanced Siena Users' Meeting (AdSUM-2017)

9-10 February 2017

Norrköping campus
Institute for Analytical Sociology

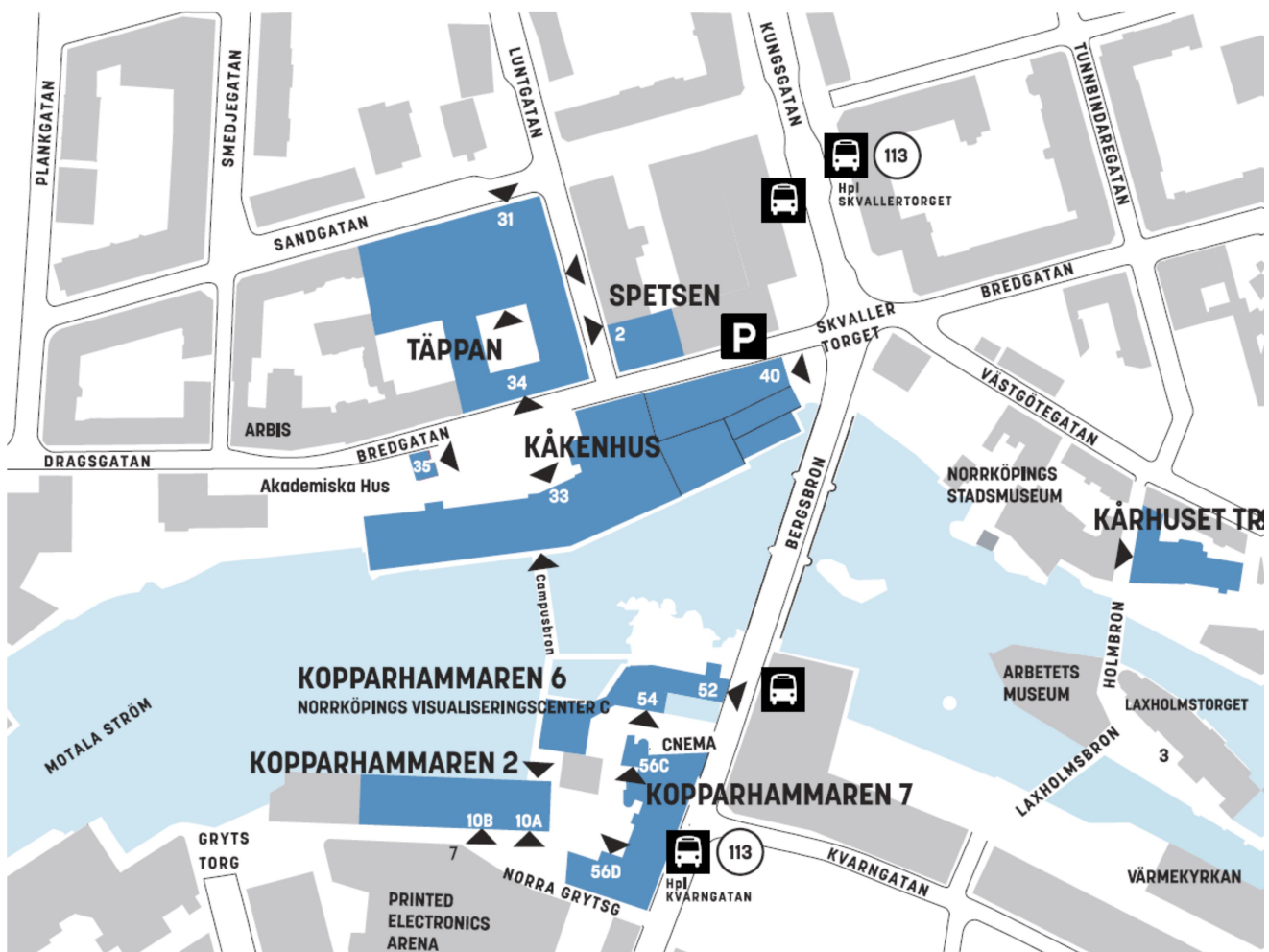


li.u LINKÖPINGS
UNIVERSITET

Welcome to Norrköping!

3 February 2017

The location of our meetings is a room called *utsikten*, *The View*, on the uppermost floor of the university's *Kåkenhus* building. On the title page photograph, it is the smaller white floor to the left of the Linköping University logo. The official address of the building is Bredgatan 33, but you can best enter from *Skvallertorget* (the square at the intersection of *Kungsgatan* / *Bergsbron* with *Bredgatan*).



Sessions start each day at 9:00 and end at 17:00, with an ample lunch break from 12:30-14:00. A detailed schedule of the course days is given below.

We wish you safe travels and hope to see you all next week!

The organisers: Christian Steglich christian.steglich@liu.se
Åsa Wallhagen asa.wallhagen@liu.se
Niclas Lovsjö niclas.lovsjo@liu.se

Institute for Analytical Sociology

The 9th Winter School on Longitudinal Social Network Analysis

The winter school takes place Monday until Wednesday. It introduces participants to the analysis of longitudinal, group-centered network data by way of stochastic, actor-based models ([Snijders, van de Bunt & Steglich, 2010](#)), and to the analysis of peer influence processes taking place in such dynamically changing networks ([Steglich, Snijders & Pearson, 2010](#)). Objective of the winter school is that course participants develop an understanding of the models, familiarise themselves with the use of the [RSiena software](#) for model estimation, and learn how to tell a good model specification from a bad one. The winter school is taught by Christian Steglich with support by Niclas Lovsjö.

The AdSUM-2017 Advanced Siena Users' Meeting

The advanced users' meeting takes place on Thursday and Friday. It will on the one hand address advanced topics and introduce to new developments in RSiena, such as the multilevel analysis of multi-group data with the help of random effects models instantiated in the `sienaBayes()`-function. Teachers of this part are Tom Snijders and Johan Koskinen. On the other hand, there will be a Master Class in which papers of participants are discussed. Paper discussants will be Tom Snijders, Per Block, and the local organisers.

For both the Winter School and the Advanced Siena Users' Meeting, researchers who are in the process of collecting or analysing own longitudinal data sets are especially welcome to participate and, if possible, bring their own data. For participants without own data, sample data sets will be made available.

Preparation before the courses

In both parts, researchers who bring their own longitudinal data sets should get sufficient opportunity to "get the software running" with some guidance by the instructors.

Course participants are expected to bring their own laptop to the course, with the R statistical software environment and the RSiena & RSienaTest packages already installed. The operating system on the laptops can be Windows, Linux, or Mac OS; in principle, all the software we will work with is designed for platform-independence. For installation, please follow these steps:

1. Install R on your computer; see <http://www.r-project.org/>
2. Start R while you have an internet connection.
3. Install the latest version of the RSiena package from R-forge
by typing `install.packages("RSiena", repos="http://R-Forge.R-project.org")`
4. Install the RUnit package (a prerequisite for installation of RSienaTest)
by typing `install.packages("RUnit")`
5. Install the latest version of the RSienaTest package
by typing `install.packages("RSienaTest", repos="http://R-Forge.R-project.org")`

In steps 3 and 5, Mac and Linux users may need to add inside the brackets: `, type="source"`. The software release should be above version '1.1.300' for our meeting. Please check the version of your installation by typing: `packageVersion("RSiena"); packageVersion("RSienaTest")`.

It also is a good idea to check out the two papers linked to on the top of this page. The main course material (sample data, scripts, and lecture slides) will be distributed by e-mail during the workshop.

Winter School on Longitudinal Social Network Analysis

— Monday —

9:00	Walk-in welcome with coffee	
9:15	Introduction round participants	
9:30	Network dynamics and actor-oriented models	<i>lecture</i>
11:00	Coffee break	
11:20	Getting the software ready	<i>assisted lab work</i>
11:30	Hands-on analysis: sex segregation in a school class	<i>joint lab exercise</i>
12:30	Lunch break	
14:00	Simulation, estimation, and convergence	<i>lecture</i>
14:30	Hands-on analysis: estimation by MoM & ML algorithms	<i>joint lab exercise</i>
15:00	Hands-on analysis: straight simulations from a model	<i>joint lab exercise</i>
15:15	Coffee break	
15:30	Goodness of fit	<i>lecture</i>
16:00	Hands-on analysis: obtaining good fit	<i>joint lab exercise</i>
16:30	Starting to work with own data / modifying example scripts	<i>assisted lab work</i>
17:00	End of the course day	

— Tuesday —

9:00	Adding behaviour dynamics to the model	<i>lecture</i>
10:00	Hands-on analysis: co-evolution of alcohol use & friendship	<i>joint lab exercise</i>
11:00	Coffee break	
11:20	Goodness of fit for behaviour	<i>lecture</i>
11:45	Hands-on analysis: customising fit functions	<i>joint lab exercise</i>
12:30	Lunch break	
14:00	Absent data: missingness & composition change	<i>lecture</i>
14:30	Hands-on analysis: handling composition change	<i>joint lab exercise</i>
15:15	Coffee break	
15:30	Hands-on analysis: imputing missing behavior data	<i>joint lab exercise</i>
16:00	Work with own data / adjusting scripts	<i>assisted lab work</i>
17:00	End of the course day	

— Wednesday —

9:00	Analysis of affiliation networks (two-mode / bipartite)	<i>lecture</i>
9:30	Hands-on analysis: co-evolution of music tastes & friendship	<i>joint lab exercise</i>
10:15	Selection of topics for the remainder of the day from list below	
10:30	Addressing desired topics	<i>lecture / lab</i>
11:00	Coffee break	
11:20	Addressing desired topics	<i>lecture / lab</i>
12:30	Lunch break	
14:00	Addressing desired topics	<i>lecture / lab</i>
15:15	Keeping updated and staying connected	<i>information</i>
15:30	Work with own data / adjusting scripts	<i>assisted lab work</i>
17:00	End of the course day	
19:00	Farewell (Winter School) & Welcome (AdSUM) dinner at own expense in Enoteket, Laxholmstorget 3, Norrköping (RSVP). The location can be found on the map in front to the right of the <i>Arbetsmuseum (Museum of Work)</i> .	

Possible topics (but we are free to add others as they arise):

1. Forward and backward model selection
2. Differences between creation and maintenance of ties
3. Rate effects and models for diffusion of innovations on networks
4. Analysis of undirected networks
5. Moderation: working with interaction effects
6. Multiple networks
7. Networks with ordered values
8. Signed (positive-negative) networks
9. The effects portfolio (no lab exercise, Manual-based)
10. Steps towards effect size

— Relevant weblinks —

- [Siena website](#) and [RSiena manual](#)
- [StOCNET-RSiena User group](#) (for discussion of applied research)
- [Journal of Research on Adolescence Special Issue](#) on RSiena applications

Advanced Siena Users' Meeting (AdSUM-2017)

On Wednesday 19:00, there will be a welcome dinner (at own expense, RSVP) for AdSUM participants who already arrived and want to join – for details, see the Wednesday schedule on the previous page.

— Thursday —

9:00	Walk-in welcome with coffee	
9:15	Introduction round participants	
9:30	Recent developments in RSiena	<i>Tom Snijders</i>
11:00	Coffee break	
11:20	How TERGMs are different from SAOMs	<i>Per Block</i>
12:30	Lunch break	
14:00	Master class: discussion of submitted papers	<i>Snijders, Block, Steglich</i>
15:00	Coffee break	
15:15	Master class: discussion of submitted papers	<i>Snijders, Block, Steglich</i>
16:15	Addressing participants' data / scripting questions	<i>assisted lab work</i>
17:00	End of the course day	

— Friday —

9:00	Analysing multi-group data, with and without random effects	<i>Tom Snijders, Johan Koskinen</i>
11:00	Coffee break	
11:20	More recent developments in RSiena	<i>Tom Snijders</i>
12:30	Lunch break	
14:00	Addressing participants' data / scripting questions	<i>assisted lab work</i>
15:00	Coffee break	
15:15	Wrapping up	
17:00	End of the course day	

RSiena architecture

