

Scaling Subgroup Meeting

**European Aquatic Modelling
Network
COST626**



11-14 December 2002

Ghent University

Organisers:

Peter Goethals

Harm Duel

Mike Dunbar

Atle Harby

Niels De Pauw

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Introduction

During last joint WG and MC meeting in Oulu, Finland on May 30-31 this year, we outlined further work and decided what topics to focus our research on. Working Group 3 agreed to focus on scaling issues in aquatic and habitat model applications which links with most WG member's current national funded research. To avoid overlapping and to ensure integration and motivate research collaboration, Working Group 3 of COST Action 626 would like to organise a meeting in **Ghent, Belgium, 11-14 December 2002**.

Travelling information

For most people it is probably the easiest to fly to the Brussels' national airport (Zaventem).

From there you can take the train (there is a train station inside the airport building, and you can buy your train ticket when you arrive in the trainstation, it will cost around 6-7 EUR for a standard second class ticket) to the Gent-Sint-Pieters trainstation. The quickest trains are these that go to Oostende (as final destination).

Once arrived in the Sint-Pieters train station in Gent, you can quickly access town (and the hotel(s)) via tram. You can buy a ticket on the tram itself (eventually a multipass (10 rides), if you intend to make intensive use of the tram during these days).

I suggest the following **hotels**:

Hotel IBIS – Opera (easiest access to city center, train station and workshop building)

Nederkouter 24-26

B-9000 Gent

<http://www.hotels-belgium.com/gent/ibis-opera.htm>

cost per night (single room): 74 EUR (breakfast costs around 6 EUR extra)

location near old city center, easy acces to conference place and train station via tram (stops in front of the building)

How to get there: From Gent St-Pieters station: tram 1, 10, 11 of 12 (every 6 minutes), leave the tram at the Korenmarkt

Carlton Hotel

Koningin Astridlaan 138

9000 Gent

<http://www.hotels-belgium.com/gent/carlton.htm>

Telephone : 32 9 2228836

Fax : 32 9 2204992

Cost per night (single room): 62 EUR (weekend) and 65 EUR (during week) (breakfast included!)

Location near Sint-Pieters trainstation. It is at something like 3 km from the old city center (trams can be taken till 23h in the evening)

How to get there: by foot from Gent Sint-Pieters station (few hundred meters)

Monasterium hotel (cosy hotel, close to the old city centre and near the Korenmarkt) tram station around 750 m)

Oude Houtlei 56

9000 Gent

<http://www.monasterium.be/index.jsp>

Cost per night (single room): 71 EUR (breakfast included)

Location close to the old city centre and near the Korenmarkt (there is a tram station at the Korenmarkt with a direct connection to the Sint-Pieters trainstation)

How to get there: From Gent St-Pieters station: tram 1, 10, 11 of 12 (every 6 minutes), leave the tram at the Korenmarkt

Other hotels can be found on:

<http://www.hotels-belgium.com/gent/hotels.htm>

Contactperson in case of problems:

Peter Goethals

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Tel (home): ++32 (0)9 220 46 59 (in Belgium just dial 09 220 46 59)

Mobile: ++32 (0)479 998 171 (in Belgium just dial 0479 998 171)

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Meeting places

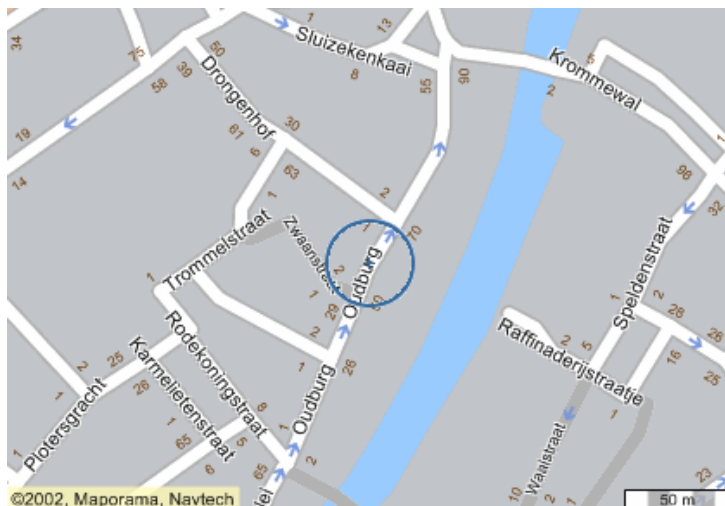
Wednesday evening meeting place:

Aba Jour (Pub and snack restaurant (meals are served at least till 23h, later one can always get a spaghetti or something)) (09/234 07 29)

Oudburg 20
9000 Gent

How to get there: via tram from Gent-Sint-Pieters, leave the tram near the Gravensteen (a medieval castle in the city centre, close to the Korenmarkt (500 m)). At the Gravensteen you will see a Mexican restaurant (Pablo's) at the border of a canal. Take that road along the canal, this is the Oudburg road. The Aba Jour Pub is 500 meters from Pablo's.

Some bad maps try to illustrate this...



Site of the Meetings at **Thursday and Friday:**

Café Rotonde

Kortrijksesteenweg 1

9000 Gent

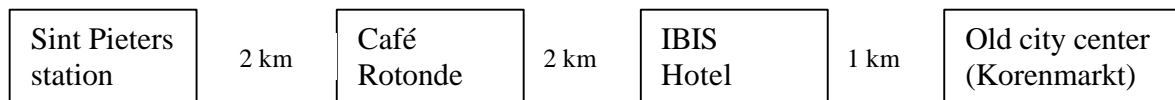
Tel: +32 (0)9 222 34 43

Fax: +32 (0)9 368 22 67

How to get there: via tram from Gent-Sint-Pieters station, Korenmarkt or the IBIS Hotel.

The tram stops very close to the Meeting place. It is at the corner of the main road (the Ring) in Gent.

A little tram scheme tries to illustrate the distance between the places:



More details will follow for the restaurants and pubs in the evenings

Programme

December 11:

Arrival of delegates, dinner and social event in the evening (drinking beers while having intensive warming up scaling discussions!). From 19h30 on in the Aba Jour pub.

December 12:

Introduction

- 09:00 Arrival and check in at the conference place Café Rotonde
09:15 Welcome and practical information by local organiser by Péter Goethals.
09:25 Election of “Scaling topics” chairman and meeting rapporteur. Short discussion on common goals for this meeting, by Harm Duel.
09:40 Report from other WG activities and Small Group Meeting on editing our state-of-the-art report, by Atle Harby.

Presentation of ongoing research relevant to scaling

- 09:50 An overview of scale-related problems in the water science and available tools (models, GIS, etc), by Tor Haakon Bakken.
10:15 Morpho-hydraulic characterizations using volume/surface percentage of depth and current velocity cross-classification. The interest of this approach for upscaling, by Yann LeCoarer.
10:40 Coffee break
11:00 Development of a decision support system for fish management at different spatial scales in the Scheldt river basin, by Peter Goethals.
11:25 Validating meso-scale mapping using detailed spatial hydraulic measurements. British experiences by Mike Dunbar.
11:50 Validating meso-scale mapping using detailed spatial hydraulic measurements. Norwegian experiences by Péter Borsányi.
12:15 Lunch break
13:15 Use of scaling methods for environmental flow determination in Slovenia, by Natasa Smolar-Zvanut.
13:40 Relations between structural characteristics and macro invertebrate communities in the Zwalm river basin at different spatial scales, by Veronique Adriaenssens, Tom D'heygere, Andy Dedecker & Niels De Pauw.
13:55 Effects of hydraulic changes on invertebrates: Predictions at a reach scale from local observations, by Sylvie Merigoux.
14:20 Coffee break
14:40 Habitat modeling with CASIMIR: Development of a meso-scale model extension using visually assessed parameters, by Franz Kerle.

- 15:05 Scaling salmon and trout microhabitat modelling of small river reaches to large rivers. Strategies and application, by Atle Harby.
- 15:30 Evaluation of stream restoration options using habitat simulation, by Diego García de Jalón.
- 15:55 Coffee break

Discussions

- 16:15 Definition of "Scale terminology" and discussions. Introduction and preparation by Péter Borsanyi.
- 18:00 End of session
- 19:30 Common dinner at local restaurant.

December 13:

Presentations continues

- 09:00 Invited speaker: Piotr Parasiewicz, Cornell University, USA:
Habitat modelling across the scales using MesoHABSIM.
- 09:45 Illustrations of the impact of different spatial scales on model based ecosystem valuation outcomes in the Zwalm river basin, by Jan Jaap Bouma and Peter Goethals.
- 10:30 Coffee break
- 10:45 Hydraulic and habitat modelling at different scales – a problem or an advantage? Kjetil Arne Vaskinn.
- 11:15 Linkages between physical habitats and macroinvertebrates: The importance of scale, by Nikolai Feilberg.
- 11:45 Lunch

Discussions

- 13:00 Examples for scaling problems based on the presentations earlier today, discussions and categorizations of scaling problems. Preparation by Harm Duel.
- 15:00 Coffee break
- 15:20 Discussion in three small groups on the topics:
- Uncertainty in scaling.
- Is the scaling of different taxa (invertebrates, juvenile fish, adult fish) with same methodology possible?

- Downscaling from catchments to local data. A scientific method or just inverse integration?
- 16:40 Report and discussion from group work in plenary session.
- 17:00 Identification of collaboration within the topic of scaling. Proposed collaborative research for COST 626 members. Discussion and conclusion
- 19:00 End of meeting.

December 14:

Excursions and social events organized by the local organizer.

11h30 Kastard

12h30 Leaving to Bruges

13h30 till 17h Beer trip

17h00 till 19h free time in Bruges

20h00 Spare ribs in Gent

Format abstracts of oral presentations

Ecological informatics applications in water management: state-of-the-art

Peter Goethals & Niels De Pauw

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Ecological Informatics is defined as an interdisciplinary framework promoting the use of advanced computational technology for the elucidation of principles of information processing at and between all levels of complexity of ecosystems, and aiding transparent decision-making in relation to important issues in ecology such as sustainability, biodiversity and global warming (Recknagel, 2002, <http://www.waite.adelaide.edu.au/ISEI/>). Ecological informatics is becoming in particular important in relation to water management. The implementation of the European Water Framework Directive for example entails high needs on a reliable data and information management as well as modelling tools to support decision making on the restoration of water systems all over Europe.

During this presentations, an analysis will be made of the contemporary strengths, weaknesses, opportunities and threats (SWOT-analysis) of the application of ecological informatics in water management.

Participants

The participants for the meeting will be:

Denmark	Nikolai Feilberg
Belgium	Veronique Adriaenssens Andy Dedecker Tom D'heygere Peter Goethals Niels de Pauw
France	Yann leCoarer Sylvie Merigoux
Germany	Franz Kerle
Netherlands	Jan Jaap Bouma Harm Duel
Norway	Tor Haakon Bakken Péter Borsányi Atle Harby Kjetil Arne Vaskinn
Slovenia	Natasa Smolar-Zvanut
Spain	Diego García de Jálón
United Kingdom	Mike Dunbar
USA	Piotr Parasiewicz