

First Network Meeting for Sida- and ISP-funded PhD Students in Mathematics

Stockholm 7th-8th March 2017

Organizers: Linköping University and the International Science Programme, Uppsala University

Sponsors: The bilateral programmes in Rwanda, Tanzania and Uganda and the International Science Programme

Objectives of the meeting: The purpose of the meeting is to bring together PhD students and postdocs in mathematics supported by Sida and ISP to build networks, to share experiences and visions and to learn about each other's research.

Dates: 7th-8th March 2017 (lunch to late afternoon)

Venue: Sida headquarters, Vallhallavägen 199, Stockholm

Participants:

- PhD students in mathematics in the Sida-funded bilateral programmes in Rwanda, Tanzania, Uganda and Mozambique
- PhD students in mathematics in the ISP core programme
- Postdoctoral fellows from African partner universities
- Coordinators from the bilateral programmes and ISP core programme
- Representatives from ISP
- Representatives from Sida
- Representatives from Linköping University

Invited speakers:

- Prof. Christer Kiselman, Uppsala University
- Prof. Michel Waldschmidt, Université P. et M. Curie (Paris VI)
- Mr. Anders Wändahl, Karolinska Institutet

Registration: Deadline for registration is 15 January 2017.

Organizing committee:

- Meaza Abebe, LiU
- Leif Abrahamsson, ISP, UU
- Pravina Gajjar, ISP, UU
- Theresa Lagali, LiU

- Bengt Ove Turesson, LiU
- Paul Vaderlind, LiU & SU

Further information: Please contact

- Leif Abrahamsson
Email: leif.abrahamsson@isp.uu.se
Phone: +46 (0) 18-471 35 77
- Bengt Ove Turesson
Email: bengt-ove.turesson@liu.se
Phone: +46(0) 13-28 14 36
- Paul Vaderlind
Email: paul@math.su.se
Phone: +46(0)70-089 54 99



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Hotel: Best Western, Hotel Karlaplan, Skeppargatan 82, Stockholm

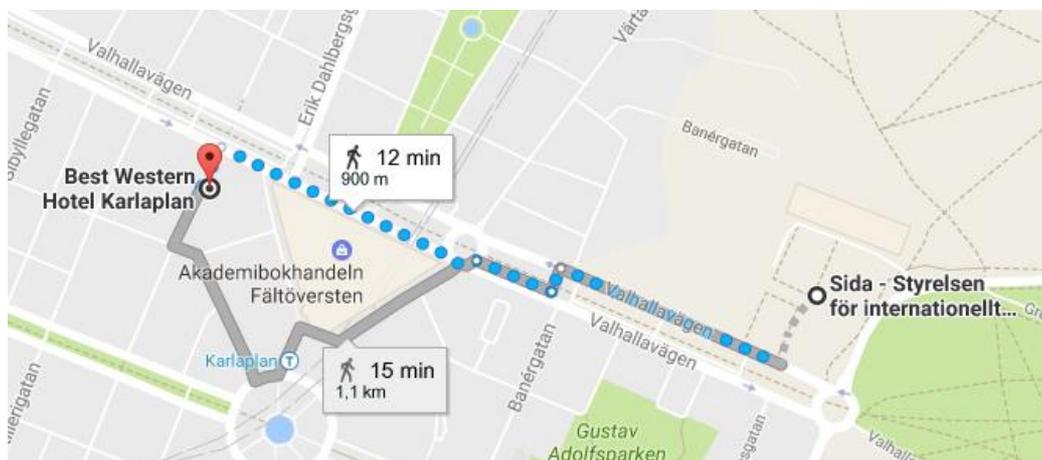
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Map



Programme day 1

First network meeting for Sida- and ISP-funded PhD students in mathematics

Tuesday 7 March, Sida Headquarters, room Hörsalen		
Time	Activity	Moderator(s)
12:00–13:00	Lunch in Oasen, Sida Headquarters	
13:00–13:15	Welcome note by Sida representative	Leif Abrahamsson (ISP) and Bengt-Ove Turesson (Linköping University)
13:15–13:30	Presentation of participants	
13:30–13:45	Welcome note by Leif Abrahamsson (ISP) and Bengt-Ove Turesson (Linköping University)	
13:45–14:30	Some of the most famous open problems in number theory Lecture by Prof. Michel Waldschmidt	
14:30–15:00	Refreshment break in Hörsalen	
15:00–15:45	Discretization and tropicalization: How are they related? Lecture by Prof. Christer Kiselman	Jared Ongaro (University of Nairobi)
15:45–16:15	Presentation by Alex Tumwesigye (Makerere University/MdH) on studies in the sandwich mode	
16:15–16:30	Iara Cristina Alvarinho Goncalves – Eduardo Mondlane University/SU	
16:30–16:45	Dennis Wokiyi - Makerere University/ LiU	
16:45–17:00	Emanuel Evarest Sinkwembe - University of Dar es Salaam/ LiU	
17:00–17:15	Adama Kone - University of Bamako	
17:15	Closure of day 1	
18:00 –	Dinner at restaurant Karavanen, Sida headquarters <i>After dinner speech by Prof. John Mango, Makerere University</i>	

Programme day 2

First network meeting for Sida- and ISP-funded PhD students in mathematics

Wednesday 8 March, Sida Headquarters, room Asante		
Time	Activity	Moderator
09:00–09:45	Selecting a journal where to publish... do it right and avoid the pitfalls! Lecture by Anders Wändahl	John Mango Magero (Makerere University)
09:45–10:00	Betty Kivumbi Nannyonga - Makerere University	
10:00–10:30	Refreshment break in Oasen (outside Asante)	
10:30–10:45	John Musonda - University of Zambia/MdH	Sylvester Rugeihyamu (University of Dar es Salaam)
10:45–11:00	Tin Nwe Aye - Mandalay University/MdH	
11:00–11:15	Yaya Youssuf - UGB University of Saint-Louis / UU	
11:15–11:30	Adson Banda - University of Zambia/LiU	
11:30–11:45	Andongwisye (Ando) John Mwakasisile - Univerisity of Dar es Salaam/ LiU	
11:45–12:45	Discussion on common issues	John Mango Magero (Makerere University)
12:45–13:45	Lunch in Oasen, Sida headquarters	
13:45–14:45	Evaluation of the EAUMP network Presentation by Dr. Martin Singull	Rebecca Anderson (ISP)
14:45–15:00	Celestin Kurujiywami - University of Rwanda/ LiU	Eunice Mureithi (University of Dar es Salaam)
15:00–15:15	Stanislas Muhinyuza - University of Rwanda/SU	
15:15–15:30	Béatrice Byukusenge - University of Rwanda / LiU	
15:30–16:00	Refreshment break in Oasen (outside Asante)	
16:00–16:15	Innocent Ngaruye - University of Rwanda / LiU	David Sseviiri (Mak- erere University)
16:15–16:30	Venuste Nyagahakwa - University of Rwanda / LiU	
16:30–16:45	Abubakar Mwasu/Asaph Keikara Muhumuza/Benard Abola/Innocent Ndikubwayo /Yasin Kikabi	
16:45–17:00	Edward Ngailo/Pitos Biganda/Uledi Ngulo	
17:00	Closure of the meeting	

Abstracts invited speakers

Title: Some of the most famous open problems in number theory

Speaker: *Prof. Michel Waldschmidt, Université P. et M. Curie (Paris VI)*

Abstract: Problems in number theory are sometimes easy to state and often very hard to solve. We survey some of them. We start with prime numbers. The twin prime conjecture and the Goldbach conjecture are among the main challenges. The largest known prime numbers are Mersenne numbers. Are there infinitely many Mersenne (resp. Fermat) prime numbers? Mersenne prime numbers are also related with perfect numbers, a problem considered by Euclid and still unsolved. One the most famous open problems in mathematics is Riemann's hypothesis, which is now more than 150 years old.

Diophantine equations conceal plenty of mysteries. Fermat's Last Theorem has been proved by A. Wiles, but many more questions are waiting for an answer. We discuss a conjecture due to S.S. Pillai, as well as the *abc*-Conjecture of Oesterlé-Masser.

Kontsevich and Zagier introduced the notion of *periods* and suggested a far reaching statement which would solve a large number of open problems of irrationality and transcendence.

Finally we discuss open problems (initiated by E. Borel in 1905 and then in 1950) on the decimal (or binary) expansion of algebraic numbers. Almost nothing is known on this topic.

Title: Discretization and tropicalization: How are they related?

Speaker: *Prof. Christer Kiselman, Uppsala University*

Abstract: Discretization and tropicalization are two important procedures in contemporary mathematics. I will present them and motivate why they are important. Discrete objects, like carpets and mosaics, have been around for thousands of years, but the advent of computers and digital cameras has made them ubiquitous. Tropical mathematics is by comparison a relatively new branch of mathematics. I shall compare the two and also pose a philosophical/mathematical problem in relation to them.

Title: Selecting a journal where to publish... do it right and avoid the pitfalls!

Speaker: *Mr. Anders Wändahl, Karolinska Institutet*

Abstract: The choice of journal does influence the career of a researcher. This fact is the rationale of this presentation. The individual researcher will be ranked, measured and evaluated according to her/his publication list when it comes to tenure and promotion. On an aggregated level, institutions, research groups and research networks will also be evaluated in relation to the quality of the published articles. We will go through different ways to distinguish good journals from the abundant number of less good alternatives.

List of Participants

No	Name	Organization	Email address
1	Abubakar Mwasa	Busitema University/ LiU	a.mwasa@yahoo.com
2	Adama Kone	University of Bamako	adarouna@yahoo.fr
3	Adson Banda	University of Zambia/LiU	adsonbanda@gmail.com
4	Afzal Sher	Sida	afzal.sher@sida.se
5	Ahmed Al-Shujary	Linköping University	ahmed.al-shujary@liu.se
6	Alex Tumwesigye	Makerere University/MdH	atumwesi@gmail.com
7	Anders Wändahl**	Karolinska Institutet	anders@golonka.se
8	Andongwisye John	University of Dar es Salaam/ LiU	andongwisye.john@liu.se
9	Asaph Keikara Muhumuza	Busitema University /MdH	amuhumuza2000@yahoo.co.uk
10	Augustiino Isdory	University of Dar es Salaam/ UU	lukwea@yahoo.com
11	Béatrice Byukusenge	University of Rwanda/ LiU	beatrice.byukusenge@liu.se
12	Benard Abola**	Gulu University /MdH	benard.abola@mdh.se
13	Bengt Ove Turesson	Linköping University	bengt-ove.turesson@liu.se
14	Betty Kivumbi Nannyonga	Makerere University	bnkivumbi@gmail.com
15	Celestin Kurujyibwami	University of Rwanda/ LiU	celeku@yahoo.fr
16	Christer Kiselman	Uppsala University	christer.kiselman@it.uu.se
17	Claes Kjellström	Sida	claes.kjellstrom@sida.se
18	Claire Lyngå**	Sida	claire.lynga@sida.se
19	David Ssevviiri	Makerere University	ssevviiri@cns.mak.ac.ug
20	Dennis Wokiya	Makerere University/LiU	denwoks@gmail.com
21	Edward Ngailo	University of Dar es Salaam/ SU	edward.ngailo@math.su.se
22	Egbert Mujuni	University of Dar es Salaam	egbertmujuni@yahoo.com
23	Emanuel Evarest Sinkwembe	University of Dar es Salaam/ LiU	sinkwembe2001@yahoo.co.uk
24	Eunice Mureithi	University of Dar es Salaam	ewambui02@gmail.com
25	Froald Minani	University of Rwanda	F.MINANI@ur.ac.rw
26	Iara Cristina Alvarinho Goncalves*	Eduardo Mondlane University/SU	iara@math.su.se
27	Innocent Ndikubwayo	Makerere University/ SU	innocent@math.su.se
28	Innocent Ngaruye	University of Rwanda/ LiU	innocent.ngaruye@liu.se
29	Jared Ongaro	University of Nairobi	ongaro@uonbi.ac.ke
30	Johan Richter*	Mälardalen University	johan.richter@mdh.se
31	John Mango Magero	Makerere University	mango@cns.mak.ac.ug
32	John Musonda	University of Zambia/MdH	j.musonda@yahoo.com
33	Juma Kasozi	Makerere University	kasozi@cns.mak.ac.ug
34	Leif Abrahamsson	Uppsala University, ISP	leif.abrahamsson@isp.uu.se
35	Lukas Vikinge	Linköping University	lukas.vikinge@bjorkofriskola.se

No	Name	Organization	Email address
36	Martin Singull	Linköping University	martin.singull@liu.se
37	Meaza Abebe	Linköping University	Meaza.abebe@liu.se
38	Michel Waldschmidt	Université P. et M. Curie	michel.waldschmidt@imj-prg.fr
39	Nyimvua Shabani Mbare	University of Dar es Salaam	shabanmbare@gmail.com
40	Patrick Weke	University of Nairobi	pweke@uonbi.ac.ke
41	Paul Vaderlind	Stockholm University/LiU	paul@math.su.se
42	Peter Sundin	Uppsala University, ISP	Peter.Sundin@isp.uu.se
43	Pitos Biganda	University of Dar es Salaam/ MdH	pitosel@yahoo.com
44	Rebecca Andersson*	Uppsala University, ISP	Rebecca.Andersson@isp.uu.se
45	Sergei Silvestrov	Mälardalen University	sergei.silvestrov@mdh.se
46	Stanislas Muhinyuza	University of Rwanda/ SU	stanislas.muhinyuza@math.su.se
47	Sylvester Rugeihyamu	University of Dar es Salaam	rugeihyamu@yahoo.com
48	Theresa Lagali	Linköping University	theresa.lagali@liu.se
49	Tin Nwe Aye	University of Mandalay/MdH	tinnweaye211@gmail.com
50	Touch Hun	Royal University of Phnom Penh/ UU	huntouch@yahoo.com
51	Uledi Ngulo	University of Dar es Salaam/ LiU	uledi.ngulo@liu.se
52	Venuste Nyagahakwa	University of Rwanda/ LiU	venuste.nyagahakwa@liu.se
53	Wellars Banzi	University of Rwanda	banziwe10@yahoo.fr
54	Yasin Kikabi**	Makerere University/KTH	kikabi@kth.se
55	Yaya Youssouf	UGB University of Saint-Louis / UU	y.youssouf.47@gmail.com

*will be present only on 7/3

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