

# LONDON MATHEMATICAL SOCIETY

## Application Form for Grants for Joint Research Groups - Scheme 3

This version is dated 23/08/13, and should be used for new and full renewal applications.

<b>1. DETAILS OF APPLICANTS</b>	
<b>a. GRANT-HOLDER</b>	
Name: (Please include title)	Dr Kirill Cherednichenko
Address:	Cardiff School of Mathematics, Cardiff University, Senghenydd Road, Cardiff CF24 4AG
Email address:	cherednichenkokd@cf.ac.uk
Telephone number:	029 2087 5540
Fax number:	029 2087 4199
<b>b. SUPPORTER 1</b>	
Name: (Please include title)	Dr Zeev Sobol
Department & Institution:	Department of Mathematics, Swansea University, Singleton Park, Swansea SA2 8PP
<b>c. SUPPORTER 2</b>	
Name: (Please include title)	Prof Gennady Mishuris
Department & Institution:	Institute of Mathematics and Physics, Aberystwyth University, Ceredigion SY23 3BZ
<b>d. Please indicate the overall title of your research group:</b>	
Analysis Cluster of the Wales Institute of Mathematical and Computational Sciences	
<b>e. Please provide the website link for your group:</b>	
<a href="http://www.wimcs.ac.uk/cluster_analysis.html">http://www.wimcs.ac.uk/cluster_analysis.html</a>	
<b>f. If this application is for the renewal of an existing or previous Scheme 3 grant please ensure the financial and academic reports are attached* and quote your reference number:</b>	
<p>* Your Financial and Academic Reports must be submitted on a form which may be downloaded from the Scheme 3 web page (<a href="http://www.lms.ac.uk/grants/joint-research-groups-uk-scheme-3">http://www.lms.ac.uk/grants/joint-research-groups-uk-scheme-3</a>).</p>	
<b>2. DETAILS OF PROPOSED PARTICIPANTS</b>	
Names:	Departments & Institutions:
Rob Douglas	Aberystwyth
Rolf Gohm	Aberystwyth
John Gough	Aberystwyth
Gennady Mishuris	Aberystwyth
Sergey Rogosin	Aberystwyth
Adam Vellender	Aberystwyth
Alexander Balinsky	Cardiff
Malcolm Brown	Cardiff
Mikhail Cherdantsev	Cardiff
Kirill Cherednichenko	Cardiff
Nicolas Dirr	Cardiff

Federica Dragoni	Cardiff
W. Des Evans	Cardiff
Martin Huxley	Cardiff
Matthew Lettington	Cardiff
Angela Mihai	Cardiff
Juan Reyes	Cardiff
Karl Michael Schmidt	Cardiff
Uzy Smilansky	Cardiff and Weizmann
Elaine Crooks	Swansea
Prof Norman Dancer	Swansea and Sydney
Mark Kelbert	Swansea
Vitaly Moroz	Swansea
Zeev Sobol	Swansea
Carlo Mercury	Swansea

**(ii) Participation of Women speakers**

The Society expects that the organisers of conferences and activities who are seeking grants from the Society will: invite both male and female speakers, or explain why this is not appropriate or possible, and give consideration to the provision of mechanisms to enable participation by people with children or family responsibilities. The full statement of the Society's policy on Women in Mathematics is available at: <http://www.lms.ac.uk/women-mathematics>

The list of participants who are members of the three departments includes, unfortunately, only three women, Dr Elaine Crooks (Swansea), Dr Federica Dragoni (Cardiff) and Dr Angela Mihai (Cardiff); there may be female PhD students.

We have budgeted childcare costs for Dragoni. We have also budgeted childcare costs for Dirr, as his wife is a mathematician (in fact Dragoni) and so additional childcare costs are also incurred if Dirr is away at a meeting.

### **3. DETAILS OF PROPOSED ACTIVITIES**

**a. Brief statement of the object of the meetings:**

The overall objective of these meetings is to enhance the research collaboration between mathematicians in Aberystwyth, Cardiff and Swansea who work in the areas of analysis and applied analysis. The Wales Institute of Mathematical and Computational Sciences has agreed to provide £2000 in funding for the meetings.

External speakers will be invited where we feel that their work is of particular interest to the project participants, or vice versa, but will always be a minority of the speakers. The meetings will be open to all.

An important feature of each of the three proposed meetings is that the host institution has stood back from the process of choosing the speakers. The other two institutions chose the speakers they would find most interesting and these will be supplemented by local speakers if time permits. This unusual algorithm is designed to encourage participants to travel even when this is time-consuming and inconvenient.

Beyond the overall objectives, each individual meeting has some particular special objectives.

1. The meeting in Swansea will showcase talks by ECRs: new talent in mathematical analysis. Most of these speakers have not met each other before.
2. The meeting in Cardiff will highlight techniques at the interface between nonlinear and linear analysis.
3. The meeting in Aberystwyth will highlight topics in applications of analysis, including materials science.

The number of invited speakers from other UK and overseas universities is small, as is appropriate for a Scheme 3 grant. Nevertheless we expect that these meetings will be of wide interest and they will be extensively publicized. The timings will also be carefully chosen; for instance the first meeting in Cardiff takes place on the day immediately before the SIAM 2014 Chapter Day in Cardiff.

**b. Planned programme of events:**

Please indicate for each event the topics, location, names of likely speakers, estimated number of participants. Note: the maximum grant awarded is currently £2,000; this is awarded where four meetings per year are held, or there is an equivalent level of activity. It is important that you note the Society's policy on female speakers and participants.

Meeting of ECRs in Swansea (speakers proposed by Aberystwyth and Cardiff): SEPTEMBER 24<sup>th</sup>, 2014

Dr Jonathan Eckhard (Austrian Presidential Fellow, Vienna and Cardiff)  
Dr Michael Nieves (Lecturer, Liverpool)  
Dr Federica Dragoni (Lecturer, Cardiff)  
Dr Juan Reyes (PDRA, Cardiff)  
Dr Sergey Rogosin (Marie Curie Fellow, Aberystwyth)  
Dr Adam Vellender (Lecturer, Aberystwyth)

Meeting on Applied Analysis in Aberystwyth (speakers proposed by Cardiff and Swansea): MAY 7<sup>th</sup>, 2014

Dr Kirill Cherednichenko (Cardiff)  
Prof Norman Dancer (Swansea and Sydney)  
Dr Nicolas Dirr (Cardiff)  
Prof Victor Galaktionov (Bath)  
Dr Angela Mihai (Cardiff)

Meeting on the Linear-Nonlinear Interface in Cardiff, JANUARY 16<sup>th</sup>, 2014.

Dr Elaine Crooks (Swansea)  
Prof Rolf Gohm (Aberystwyth)  
Prof Andrea Malchiodi (SISSA, Warwick)  
Prof Gennady Mishuris (Aberystwyth)  
Prof Vitaly Moroz (Swansea)

We estimate that the number of participants at each meeting will be approximately 16.

c. Will the meeting be open to all or only to invited participants? Please tick one box.

All	X	Invited participants only
-----	---	---------------------------

#### 4. FINANCIAL STATEMENT

##### a. Estimated expenditure for the programme outlined above:

Legitimate expenses are for example: subsistence and accommodation costs for speakers, travel costs for speakers, support for students and young mathematicians.

	Amount £
Costs are based on standard rail travel and the assumption that travel to/from Aberystwyth will involve one night in a hotel, for speakers, who need to start the day reasonably fresh. Hotels are costed at £70 per night.	
<b>Swansea Meeting</b>	
Dr Jonathan Eckhard (Austrian Presidential Fellow, Vienna and Cardiff) (travel only)	£20
Dr Michael Nieves (Lecturer, Liverpool) (travel + hotel)	£135
Dr Federica Dragoni (Lecturer, Cardiff) (travel only + 1 day's childcare at £60)	£80
Dr Juan Reyes (PDRA, Cardiff) (travel only)	£20
Dr Sergey Rogosin (Marie Curie Fellow, Aberystwyth) (travel + hotel)	£135
Dr Adam Vellender (Lecturer, Aberystwyth) (travel + hotel)	£135
4 participants from Cardiff (including up to 2 PhD students) (travel only)	£80
4 participants from Aberystwyth (including up to 2 PhD students) (travel only)	£260
<b>Aberystwyth Meeting</b>	
Dr Kirill Cherednichenko (Cardiff) (travel + hotel)	£135
Prof Norman Dancer (Swansea and Sydney) (travel + hotel)	£135
Dr Nicolas Dirr (Cardiff) (travel + hotel + 1 day's childcare at £60)	£195
Prof Victor Galaktionov (Bath) (travel + hotel)	£150
Dr Angela Mihai (Cardiff) (travel + hotel)	£135
4 participants from Cardiff (including up to 2 PhD students) (travel only)	£260
4 participants from Swansea (including up to 2 PhD students) (travel only)	£260
<b>Cardiff Meeting</b>	
Dr Elaine Crooks (Swansea) (travel only)	£20
Prof Rolf Gohm (Aberystwyth) (travel + hotel)	£135
Prof Andrea Malchiodi (Warwick and SISSA) (travel + hotel)	£150
Prof Gennady Mishuris (Aberystwyth) (travel + hotel)	£135
Prof Vitaly Moroz (Swansea) (travel only)	£20
4 participants from Swansea (including up to 2 PhD students) (travel only)	£80
4 participants from Aberystwyth (including up to 2 PhD students) (travel only)	£260
Coffee and Refreshments: £4 per participant per meeting, est. 16 participants per meeting	£192
Lunch at £6.50 per participant per meeting, est. 16 participants per meeting	£312
<b>Total</b>	<b>3439</b>

##### b. Estimated contributions from other sources:

	Amount £
Welsh Institute of Mathematical and Computational Sciences	2000
Note: in line with WIMCS practice, a registration fee will not be charged to members of the three collaborating departments, in view of the WIMCS funding.	
External participants who are not invited speakers will be asked to pay a small registration fee to cover the costs of refreshments and lunch.	
<b>Total</b>	<b>2000</b>

#### 5. APPLICATION

Precise amount applied for: £1439

This application is for a grant for the academic year, commencing on 1 October 2013

Signed by:

Grant-holder	K. Cherednichenko 	Date	12 September 2013	Member:	yes
--------------	---	------	-------------------	---------	-----

You must provide with your completed application confirmation from the two supporters, named in 1b and 1c, that they have seen the application and agreed to participate. They may either sign below or the confirmation may be in the form of printouts of emails, if that is most convenient.

Supporter 1	Z. Sobol (email enclosed)	Date	12 September 2013	Member:	yes
-------------	---------------------------	------	-------------------	---------	-----

Supporter 2	G. Mischuris (email enclosed)	Date	11 September 2013	Member:	no
-------------	-------------------------------	------	-------------------	---------	----

If none of the applicants are members of the London Mathematical Society then this application form should be signed by a member who is prepared to support the application.

Name of member		Signed		Date	
----------------	--	--------	--	------	--

**From:** "Sobol Z." <Z.Sobol@swansea.ac.uk>  
**To:** "Kirill Cherednichenko" <CHEREDNICHENKOKD@cardiff.ac.uk>

---

**Date:** Thursday, 12 September, 2013 11:34  
**Subject:** RE: LMS Scheme 3 Grant application

---

Dear Kirill,

It seems the same application you mentioned in your previous message. Well, I still approve it.

Regards,  
Zeev

Zeev Sobol  
Department of Mathematics  
Swansea University  
Singleton Park  
Swansea  
SA2 8PP  
Wales  
UK

-----Original Message-----

From: Kirill Cherednichenko [<mailto:CHEREDNICHENKOKD@cardiff.ac.uk>]  
Sent: Wed 11/09/2013 21:52  
To: Sobol Z.  
Subject: LMS Scheme 3 Grant application

Dear Zeev,

Could I ask you to please email me by return your approval of the LMS Scheme 3 Grant application, which we have been putting together. The completed application form is attached.

Best regards,  
Kirill

Kirill Cherednichenko  
School of Mathematics  
Cardiff University, UK

**From:** "Gennady Mishuris [ggm]" <ggm@aber.ac.uk>  
**To:** Kirill Cherednichenko <CHEREDNICHENKOKD@cardiff.ac.uk>

---

**Date:** Wednesday, 11 September, 2013 16:19

**Subject:** RE: LMS Scheme 3 Grant application

History:  This message has been replied to.

---

Dear Kirill

I do fully support the proposal.

Could you please change Adam Vellender from PDRA to lecturer  
(I have mentioned this to Marco on the previous stage)

He should be added to the members of Aber team from he very beginning.

many thanks again for your efforts

Gennady

--  
Professor Gennady Mishuris  
Wales Institute of Mathematical and Computational Sciences  
Institute of Mathematics and Physics  
Aberystwyth University  
Ceredigion SY23 3BZ  
Wales UK

Telephone UK: +44 (0)1970-622753

Fax UK: +44 (0)1970-622826

Email: ggm@aber.ac.uk

---

**From:** Kirill Cherednichenko [CHEREDNICHENKOKD@cardiff.ac.uk]

**Sent:** 11 September 2013 16:00

**To:** Gennady Mishuris [ggm]

**Subject:** LMS Scheme 3 Grant application

Dear Gennady,

Could I ask you to please email me by return your approval of the LMS Scheme 3 Grant application, which we have been putting together. The completed application form is attached.

Best regards,  
Kirill

Kirill Cherednichenko  
School of Mathematics  
Cardiff University, UK