



Exploratory Workshop Scheme

Scientific Review Group for Physical and
Engineering Sciences

Scientific Review Group for the Humanities

ESF Exploratory Workshop on **MATHS MEETS MYTHS**

Coventry (England), 10-13 September 2014

Convened by:
Ralph Kenna ^①

^① Coventry University (AMRC, Centre for Theoretical Physics, Fluid Dynamics & Control, Coventry University, GB)





The European Science Foundation (ESF) was established in 1974 to provide a common platform for its Member Organisations to advance European research collaboration and explore new directions for research. Currently it is an independent organisation, owned by 67 Member Organisations, which are research funding organisations, research performing organisations and academies from 29 countries.

ESF is in a period of transition; the ESF Member Organisations (MO's) have indicated that they would like to wind down certain ESF activities, such as EUROCORES, RNP's, ECRP's and Forward Looks by the end of 2015, but ESF will continue to honour its existing commitments until the projects are finalised.

In 2013 the only research instrument that will have a call for proposals is the Exploratory Workshops. The focus of the Exploratory Workshops scheme is on workshops aiming to explore an emerging and/or innovative field of research or research infrastructure, also of interdisciplinary character. Workshops are expected to open up new directions in research or new domains. It is expected that a workshop shall conclude with plans for follow-up research activities and/or collaborative actions or other specific outputs at international level.

ESF is also currently exploring new areas where we could serve the science community. Services we have identified that would leverage our expertise and experience and provide added-value to the science community are: peer review, evaluation, research conferences and career tracking.

Please check our website (www.esf.org) for regular updates regarding ESF and its future developments.

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Main Objectives of the Workshop:

In recent years, physicists at the Centre for Theoretical Physics, Fluid Dynamics and Control at Coventry University (formerly known as the Applied Mathematics Research Centre) have been developing a new, mathematical approach to the analysis of ancient texts. Our first foray into this humanities field focussed on comparative mythology. Our first publication, a pilot study [Pádraig Mac Carron and Ralph Kenna, Universal properties of mythological networks, EPL 99 (2012) 28002], generated enormous interest and impact worldwide, including interviews (e.g., "BBC Radio 4") and newspaper articles (e.g., in the "New York Times").

Subsequent publications have appeared, which also generated a lot of impact [Network analysis of the *islendinga sögur* - the Sagas of Icelanders, European Physical Journal B 86 (2013) 407]. In the past couple of years, we have become aware of excellent work taking place around the world. This includes traditional approaches to comparative mythology, folktales and to epic literature. A significant amount of data has been gathered and we think that these are amenable to new mathematical/statistical/computational approaches. On the latter side, there are new phylogenetic investigations of folktales, quantitative investigations of ancient annals and other fascinating approaches. We wish, therefore, to deepen and broaden investigations into mythology, annals and folktales. To do this, we need to learn from, and collaborate with experts nationally and internationally. We need people who understand humanities and people who understand the new quantitative approaches. To bring it all together, we will require further funding.

The objective is to bring together natural scientists and humanities scholars to explore the applicability of mathematical sciences to current and past cultures. In particular, we wish to explore quantitative modelling for the understanding of textual narratives. Although for us, mathematics and mythology are where we started (hence the title of the workshop), we also wish to explore how to broaden the scope of the project to other disciplines if that is possible.

An international team is being assembled, including physicists from Brazil and Ukraine, humanities scholars from Britain, Ireland and Russia ESF countries. A focus of the workshop will be to generate momentum towards obtaining further funding from a suitable source. The aim of such funding will be to support a large scale project over the coming years.



PRELIMINARY PROGRAMME

Wednesday 10 September 2014

20:00 *Arrival*
Get-together at the Establishment, Bayley Lane, Coventry CV1 5RN

Thursday 11 September 2014

09.00-09.10 **Welcome by Convenor**
Ralph Kenna (Coventry University)

09.10-09.30 **Presentation of the European Science Foundation (ESF)**
Professor Mats Gyllenberg (Scientific Review Group for Physical and Engineering Sciences)

09.30-13:00 **Morning Session:**

09.30-10.00 **Presentation**
Pádraig Mac Carron (University of Oxford, England)

10.00-10.30 **Presentation**
Louie Milne (University of Edinburgh, Scotland)

10.30-10.30 **Presentation**
Silvio Dahmen (University of Rio Grande do Sul, Brasil)

11.00-11.30 *Coffee / Tea Break*

11.30-12.00 **Presentation**
Tom Birkett (National University of Ireland, Cork)

12.00-12.30 **Presentation**
Johanna Katrin Fridriksdottir (The Árni Magnússon Institute for Icelandic Studies, Iceland)

12.30-13.00 **Presentation**
Jo Story (University of Leicester, England)

13.00-13.05 **Conference Photo**

13.05-14.00 *Lunch*

14.00-18:00 **Afternoon Session:**

14.00-14.30 **Presentation**
Jamshid Tehrani (University of Durham, England)

14.30-15.00 **Presentation**
Robert Gramsch (Universität Jena, Germany)

15.00-15.30 **Presentation**
Stefan Thurner (Medical University of Vienna, Austria)

15.30-16.00 *Coffee / tea break*

16.00-18.00 **Discussion**

19.00 *Dinner*



Friday 12 September 2014

09.30-13:00	Morning Session:
09.30-10.00	Presentation David Weiss (University of Tübingen, Germany)
10.00-10.30	Presentation Daniel McCarthy (Trinity College Dublin, Ireland)
10.30-10.30	Presentation Maria Magdolna Tatár (University of Oslo, Norway)
11.00-11.30	<i>Coffee / Tea Break</i>
11.30-12.00	Presentation Robin Dunbar (University of Oxford, England)
12.00-12.30	Presentation Máirín Mac Carron (National University of Ireland, Galway)
12.30-13.00	Presentation Olesya Mryglod (National Academy of Sciences, Ukraine)
13:00-14.00	<i>Lunch</i>
14.00-18:00	Afternoon Session:
14.00-14.30	Presentation Emer Purcell (National University of Ireland, Cork)
14.30-15.00	Presentation Katja Ritari (University of Helsinki, Finland)
15.00-15.30	Presentation Owen Roberson (University of Leicester, England)
15.30-16.00	<i>Coffee / tea break</i>
16.00-18.00	Discussion on follow-up activities/networking/collaboration
19.00	<i>Dinner</i>

Saturday 13 September 2014

Morning *Departure*



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Objectives of the ESF Scientific Review Group for the Physical and Engineering Sciences

The **ESF Scientific Review Group for Physical and Engineering Sciences** covers a broad number of fields from physics, chemistry, mathematics, informatics and computer sciences, to engineering, material and technical sciences. The ESF Scientific Review Group for Physical and Engineering Sciences has the following responsibilities and tasks:

- to develop scientific initiatives within the ESF operational framework;
- to undertake studies on large research facilities and assist in the evaluations and assessments and other special reviews requested by Member Organisations;
- to provide specialist advice and input on a wide range of ESF actions, and
- where appropriate, to work with other Scientific Review Groups and groups in promoting multidisciplinary and interdisciplinary activities.

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Objectives of the ESF Scientific Review Group for the Humanities

The main tasks of the **ESF Scientific Review Group for the Humanities** are:

- to encourage interdisciplinary work through the independent evaluation of collaborative research proposals emanating from the scholarly community;
- to identify priority research areas and to play an integrative and co-ordinating role by creating links between research communities which in the Humanities are often small and fragmented.
- to provide expert advice on science policy actions at the European level in the field of its responsibilities.

The Scientific Review Group is well aware that the ESF is the only European Agency where the Humanities have a place next to the other sciences and where European projects are reviewed, developed and subsequently operated.

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