RESEARCH UNITS, CENTRES AND INSTITUTES

Annual Report Template

Please refer to the University of Auckland Policy on Research Units, Centres and Institutes for more information on reporting and accountability requirements. A copy of this policy is available from: Estabishing, reporting on, and review of units, centres and institutes

Section 1a – IDENTIFICATION INFORMATION:

<table>
<thead>
<tr>
<th>Title of Unit, Centre or Institute:</th>
<th>Centre for Mathematical Social Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Director:</td>
<td>Dr Mark C. Wilson; A/Prof Arkadii Slinko</td>
</tr>
</tbody>
</table>

Section 1b – ENDORSEMENT OF REPORT:

<table>
<thead>
<tr>
<th>Signatures:</th>
<th>Please sign in appropriate space below</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>(Required for all Units/Centres/Institutes)</td>
</tr>
<tr>
<td>Head of Department</td>
<td>(Required only for Department Units/Centres)</td>
</tr>
<tr>
<td>Dean</td>
<td>(Required for Faculty/University Centres/Institutes)</td>
</tr>
</tbody>
</table>

Section 2 – ADVISORY BOARDS AND MEETING DATES:

<table>
<thead>
<tr>
<th>Names of Advisory Board members (for Faculty Centres and University Centres and Institutes)</th>
<th>N/A (but see cmss.auckland.ac.nz if interested)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names of Management Committee Members (for University Centres and Institutes)</td>
<td>N/A</td>
</tr>
<tr>
<td>Dates of the meetings of the advisory board and management committees that took place during the year</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 3 – PARTICIPATING MEMBERS AND EMPLOYEES/STUDENTS:

| Names and Departments of participating members | Keyhaneh Keyhani  
PhD student (Department of Computer Science) |
|-----------------------------------------------|------------------------------------------|
|                                              | Tatiana Gvozdeva  
PhD student (Department of Mathematics)    |
|                                              | Ali Hameed  
PhD student (Department of Mathematics)    |
|                                              | Harshal Chitale  
PhD student (Department of Economics)       |

Section 4 – INTRODUCTION:

Provide here a brief introduction to the report (maximum of 300 words)

The centre’s second year of existence was productive, and its profile has been lifted substantially. Members worked closely on grant applications, outreach activities and workshop organization, and increasingly on publications.

Section 5 – AIMS, GOALS AND FUTURE PLANS:

<table>
<thead>
<tr>
<th>a. General Aims:</th>
<th>Briefly describe the general aims (plans and objectives/goals) of the Unit, Centre or Institute. Identify how they address the University and Faculty Strategic Plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The Centre for Mathematical Social Sciences is a group of researchers interested in applying mathematical and computational modeling to social sciences (particularly politics and economics), based at the University of Auckland. The central topic is mathematics of collective decisions made by a group of self-motivated agents.</td>
</tr>
<tr>
<td></td>
<td>The main goals of the centre are to serve as a focal point for seminars, workshops and other research collaboration, for postgraduate student training, and for public outreach. They obviously relate strongly to Objectives 1.3,4,5,6,11 of the UoA Strategic Plan 2005-2012, and to points 2,6,10 of the FoS Strategic Plan 2010-2015.</td>
</tr>
<tr>
<td>b. Goals for Reporting Year:</td>
<td>Increase profile of CMSS at UoA and more widely; increase links with similar overseas centres; obtain more secure funding.</td>
</tr>
</tbody>
</table>

The Centre for Mathematical Social Sciences is a group of researchers interested in applying mathematical and computational modeling to social sciences (particularly politics and economics), based at the University of Auckland. The central topic is mathematics of collective decisions made by a group of self-motivated agents. The main goals of the centre are to serve as a focal point for seminars, workshops and other research collaboration, for postgraduate student training, and for public outreach. They obviously relate strongly to Objectives 1.3,4,5,6,11 of the UoA Strategic Plan 2005-2012, and to points 2,6,10 of the FoS Strategic Plan 2010-2015.
goals for the reporting year.

C. Plans for Upcoming Year:
Outline the plans for the next year. Identify any resource implications.

More funding is critical. Ask UoA whether a more flexible structure is possible for a cross-faculty group such as ours. Work towards influencing undergraduate/postgraduate courses and degrees that will allow us to attract local students to the kind of interdisciplinary research we aim for at PhD level.

Section 6 – MAJOR ACHIEVEMENTS AND OTHER NOTABLE ACTIVITIES:

Report against the specific goals listed in Sb above

We were successful with a Seelye grant application for the visit of Prof Matthew Jackson (Stanford, Economics), the world’s top expert in social networks in economics. The visit is planned for early 2013 and we intend to make full use of it by arranging an appropriate workshop and using him as a drawcard.

CMSS members Pritchard and Wilson developed a simulator for the 2011 referendum, which elicited considerable publicity including an interview for a story in Metro magazine. This led to consulting work involving an electronic voting system.

A planned visit by Wilson to the Institute for Mathematical Behavioral Sciences at University of California-Irvine, in order to make formal links, was postponed owing to illness.

CMSS made a detailed submission to be a main focus of activity for NZIMA, as part of their plan for a new CoRE bid to TEC.

Pritchard and Wilson had a consulting activity involving voting. We have been approached by an investment company aiming to develop a working relationship with possible research and student support implications.

The “2011 summer workshop” was held in February 2012. It had 20 attendees including invited speakers from France, Poland, Singapore and Australia. The regular CMSS seminar had 10 speakers from Germany, Queensland, and Auckland. Mark Wilson gave a public talk in the CULMS/CMCT series on the Mathematics of Elections on 18 October.

Section 7 – Reviews

Date of last review N/A

Review Recommendations N/A

Section 8 – FINANCIAL REPORT

State whether the Unit, Centre or Institute has its own Activity Centre/s and list the Activity Centre/s being used

UoA Cross Faculty Fund 2010 $18200
Seelye Foundation 2011 (planned visit of Matthew Jackson) $10000
Department of Mathematics 2011 $8000
Department of Computer Science 2011 $1000
Personal PBRF allocation (A. Slinko)

List any significant resource allocation decisions taken by the Advisory Board during this reporting year (if applicable)

N/A – the biggest expenditure is on the annual workshop, most of that for the invited speakers.

Include a statement of financial performance (contact Faculty Accountant for assistance), or give a clear explanation of the reasons if there has been any financial activity

N/A (CMSS does not have its own Activity Centre, see above)

List the major research sources of funding (including additional funding, for example, from research funds from outside bodies, from the Department or Faculty, or other

UoA Cross Faculty Fund 2010 $18200
Seelye Foundation 2011 (planned visit of Matthew Jackson) $10000
Department of Mathematics 2011 $8000
Department of Computer Science 2011 $1000
Personal PBRF allocation (A. Slinko)

Section 9 – RESEARCH OUTPUTS

Include a list of publications and other research outputs

The CMSS does not have a separate research report series. Members publish in international conference proceedings and journals. A (probably incomplete) list of such publications follows. Talks in the CMSS seminar series are not listed. Nor are working papers/preprints (of which there are a large number), nor work not related to the Centre’s main activities.


M. Ryan and Rhema Vaithianathan. “Verifiability and Neologism-Proofness in a
Appendix 2

Girard, Patrick; Roy, Olivier; Marion, Mathieu (Eds.)

Please forward your report to your Head of Department or Faculty Office for endorsement (Section 1B above). Note: Annual Reports to be submitted to Research Committee must reach the Research Office by 28 February.