

Newsletter No. 192
March, 2003

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M.A.V. Publications
61 Blyth Street
Brunswick VIC 3056
ABN: 34 004 892 755

Telephone: 03-9380 2399
Facsimile: 03-9389 0399

Email: office@mav.vic.edu.au
Website: www.mav.vic.edu.au

Office hours: 8.30am – 5.00pm
Monday to Friday

President: Dr Max Stephens

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A date for your diary

The MAV Regional in Service Conference (MAVRIC) is being held at Mildura on Friday 16, May 2003. More details will be available on our website during the next few weeks.

Annual Conference 2003 Call for options

4–5 December 2003

You will find a Call for Options form included in this mailout. All presentations are scheduled for one hour.

Presenting entitles you to a free registration for up to 2 people, so you don't have to present alone!

Remember the best presentations often come from good teaching and research practice which can help others, and that presentation may be yours.

2nd time lucky

After the recent Monash VCE Mathematics Teachers' Day, the MAV was left with an unclaimed door prize. No one came forward to claim the winning ticket, so we held a redraw. Congratulations to Leon Sjolund at Colac High School who won a TI-83+ Silver calculator, kindly provided by Texas Instruments.

2003 Membership Subscriptions

2003 Membership information and application forms were included with the November 2002 mailout. **To renew your membership for 2003 you will need to complete the new application form.** If you haven't received your copy, please contact the MAV office on 9380 2399 or download it at:

<http://www.mav.vic.edu.au/assinfo/member.htm>

Membership renewal payments (together with your completed application form) for the 2003 subscription period (1 January–31 December) are **due by Friday 28th March, 2003.**

Missed out on the VCE Mathematics Teachers' Days?

MAV will be running after school **SACs sessions** for those who missed out on the VCE days. Check the PD Calender at www.mav.vic.edu.au for times and dates or contact the office to register your interest.

PD OPPORTUNITIES

Refer to PD timetable on page 10
Bookings are essential.

From the President

Road testing professional teaching standards

I am delighted to announce that the MAV is a partner in an Australian Research Council (ARC) funded, collaborative research project between Monash University, Victorian Institute of Teaching, and the Victorian Association for the Teaching of English. The project is called: *Developing portfolio assessment in Mathematics and English: Insider and outsider perspectives on the implementation of professional teaching standards*.

In two previous ARC projects the national subject associations in Mathematics and English/Literacy developed professional standards for excellence in teaching. This led to the development by the AAMT of the *Standards for Excellence in Teaching Mathematics in Australian Schools*. This current research project, with the Victorian Institute of Teaching, will study both the preparation of portfolio items by groups of 'outsider' teachers who played no part in the development of the *Standards*, together with the evaluation of their portfolios by groups of 'insider' assessors from the relevant subject associations.

From our point of view, this project will involve a small number of teachers and produce an in-depth analysis of the development and assessment of portfolios. Participants will be asked to develop portfolio items to demonstrate their accomplishments as teachers against the AAMT *Standards*. A team of assessors nominated by MAV will assess the portfolio items. Interviews (at school or by phone) will be conducted during the two years of the project and discussions at the end of the process will involve both assessors and contributors.

The teachers involved will submit portfolio items for assessment, and the research team will explore the ways their assessors reach judgements about the validity of those items as evidence of accomplished teaching. Data from this project will contribute to validating the *Standards*, to clarifying the issues of subject-specific/generic professional standards and to understanding the assessment process from the perspective of practising teachers.

How do teachers of Mathematics interpret and apply professional standards developed for them by their professional associations? The project has a vital role in "road testing" the *Standards* with a group of highly experienced teachers. How clearly do the *Standards* speak to experienced and talented teachers? How can these teachers best present evidence of their accomplishments? How can they do this in ways that do justice to their achievements and yet avoid excessive amounts of time in assembling and presenting evidence? How can an assessing agency advise teachers in practical terms of what they need to do without making things too standardised? Can teachers exercise creativity in presenting their accomplishments to a group of assessors who need to show consistency in their judgements? How do we promote *Standards for Excellence in Teaching Mathematics* and not discourage experienced and talented teachers who may hesitate to think of their own practice as excellent or outstanding?

Time lines:

Term 1, 2003: Selection of teachers
 Term 2, 2003: Initial interviews and planning
 Term 3 & 4, 2003, Term 1, 2004: Development of portfolio items and interim interviews
 Term 2, 2004: Submission of items
 Term 3, 2004: Interviews and focus group meetings.

Continued...

What are the likely benefits of the project for the teachers involved and for the wider membership of the MAV? Teachers involved in developing the AAMT *Standards* all say they experienced rich professional growth. The workshops and focus group discussions in which they participated gave them an opportunity to reflect on what highly accomplished professional practice meant for them and their colleagues. They also found it rewarding to produce accounts of their teaching for a wider audience.

I am confident that teachers involved in this project will find it a valuable source of professional development. There will be stimulating conversations with peers. They will be making an important contribution to research on the validity of developing portfolio items as accounts of their professional knowledge and practice. The results of this research will help to shape future directions both for the VIT and the MAV.

An expression of interest form will be sent from the VIT to all Victorian schools in the next few weeks. Experienced teachers of Mathematics, both primary and secondary, are eligible to apply. Teachers participating in the project can earn credit towards a Master of Education (by course work or thesis) at Monash University. Their schools will be provided with a small grant for teacher release to assist in the development of items and to attend meetings and interviews. Please note that applications will be processed by the Victorian Institute of Teaching. (Please don't send an expression of interest to the MAV office.)

Max Stephens
President

Hassle Free PD!

You will find a Hassle Free PD faxback form on the back page of this issue.

Our Hassle Free PD service gives you a chance to provide staff with high quality professional development without the fuss. We organise the presenter/s for you.

Our goal is:

- researching and organising the best presenter available for your PD

Programs can be individually designed to suit you. For more details regarding the cost of this service, refer to the back page.

FREE BOOKS!

A collector's dream is waiting at the MAV library. Due to space and resources we are inviting members to browse our extensive collection of treasured maths books and choose some for your personal library. From popular to more obscure texts, we're sure you'll find something to suit you.

Where: Cliveden, 61 Blyth Street
Brunswick VIC 3056

When: 9am–5.00pm Monday to Friday

Remember the MAV library is an excellent reference for mathematics teachers and education students. It is open to members between 9.00am–5.00pm Monday to Friday.

Celebrate Innovation–2003 Victoria Prize and Fellowships

Nominate someone today.

The Department of Innovation, Industry and Regional Development annually awards the prestigious \$50,000 Vic prize and six \$15,000 Vic Fellowship international study grants. Nominations and applications are now open. Applications are sought from a wide range of innovators working in science, engineering and technology.

Application forms are available at www.innovation.vic.gov.au or contact Ms Ylva Carosone on 03 9651 9228. Applications close 3 April 2003

The VCE Maths Teachers' day at Bendigo on Monday 24 February attracted a large crowd of teachers from surrounding districts and Melbourne.



Browsing the many different publications on offer

Delegates agreed presenters offered valuable information and that overall the day was well organised.

The timing and venue also proved convenient. Country Victorians did not have to travel too far while many Melburnians turned it into a weekend away.

To complete the series the MAV is currently planning full Day PDs for Middle Years and Primary. Both of these days will be repeated in country and metropolitan locations.

CAS-CAT CHAT

The VCE CAS Teachers' Forum is at Cliveden, MAV Office on 31st March, 2003 from 5.30pm–7.00pm.

Teachers will report on their experience of grappling with changes arising from students and teachers having unlimited access to CAS calculators. This forum gives you the opportunity to share your implementation strategies and issues associated with the new course.

Cost: \$20 (members) \$25 (non members)
To register go to
www.mav.vic.edu.au/pd/pd2003.htm#VCE

Host a PD!

Would your school like to host an after school series for 40 people? Or perhaps you know a venue that could cater for full day programs for 150 people (with 4 to 5 break out rooms for individual sessions)?

We are particularly interested in inner and outer Melbourne (north, south, east, west) and country regions including Bairnsdale, Benalla, Camperdown, Shepparton, Bendigo, Seymour and Albury. But we will always consider changing to a different location.

If you are interested in volunteering a venue or have any suggestions contact Mary Walkinshaw on: 9380 2399 or mwalkinshaw@mav.vic.edu.au

Common Denominator Deadlines – 2003

Receipt of copy: Monday 10th March, 2003

Receipt of inserts: Monday 24th March, 2003

For mailing on: Monday 31st March 2003

Products and services advertised and opinions expressed are not necessarily those of the Editor or the MAV.

Footy tipping competition

Interested in probability theory? Are you teaching students graph plotting, elementary statistical concepts or very elementary calculus? Enter Monash University' Probabilistic Footy Tipping Competition 2003.

Not only can you enter a team to win, you can also enter its probability of winning. Entry is free and primary and secondary students are eligible for \$512 in prizes (probabilistic competition only). Hurry enter now!

Visit <http://www.csse.monash.edu.au/~footy/>

CAPITAL M

An excerpt from Michael Lieu's (Penleigh & Essendon Grammar School) report on NMSS 2003

The 2003 National Mathematics Summer School (NMSS) at the ANU in Canberra gave me a good chance to meet new people and go sightseeing in the national capital.

Maths lectures were conducted by Professors Terry Gagen (head of NMSS), Steve Lack and Leon Poladian who talked about Number, Game and Chaos theory, respectively. All professors kept our attention and entertained us with splashes of humour by telling stories. The camp was far from just mathematics. It included tennis, badminton, indoor soccer and a variety of tourist destinations.

"It enriched and stimulated my interest in mathematics, introducing material I'd never come across before."

Terry introduced Euclid's Algorithm, modular arithmetic and axioms of rings while Game theory involved an investigation of how the winner of certain games could be predicted simply by noting who started first.

Chaos theory explored the effects of multiple iterations of certain functions and was linked to how a washing machine cycles when cleaning clothes.

We were given the opportunity to apply skills we attained and practise related problems in our tutorials, not just listening but actively participating in tutorials.

By the time the camp ended, it was time to say goodbye to the friendships I'd developed during the two weeks at NMSS.

It was emotional for all, particularly because the camp was enriching in mathematics and no one wanted to leave.

It has implanted a lasting impression on me and I will never forget the vivid and treasured memories of the NMMS.



NMSS, new friends, new sights and new ways of learning maths

Problem of the month

A Certain Number

There is a number consisting of three digits, it is equal to 36 times the sum of its digits.

7 times the digit on the left plus 9 is equal to 5 times the sum of the remaining digits.

8 times the second digit minus 9 is equal to the sum of the first and third digits.

What is the number?

Last month's solution:

Ann solved 18 puzzles correctly; therefore, at 2 points a puzzle, she earned 36 points. But Ann failed to solve 12 correctly; therefore, at 3 points a puzzle, she lost 36 points.

Web Review

International Year of Fresh Water 2003

<http://www.unesco.org/water/iyfw2/index.shtml>

Jump in! Wet your feet! Make a splash. Together we can make a difference.

"The year offers a wonderful opportunity to raise awareness about water issues and to motivate people of all ages to get involved. Schools, the private sector, youth and community associations—each has something to contribute," says Alberto Tejada-Guibert, the UNESCO Coordinator for IYFW.

This is an appropriate site for use in Victorian schools with drought and water usage at the forefront across the state. The site provides basic ideas for use in the classroom, supported by access to video materials, facts and figures, etc. This UNESCO site provides ideas about water conservation and usage at many levels, providing links to:

How to get involved?

- first steps
- in your everyday life
- in your community
- at school

Education corner

- by theme

Facts and figures

- water use
- water and health
- ecosystems
- droughts and floods

***Remember 'World Water Day',
22 March, 2003***

New Maths Courses



Are you a secondary teacher currently teaching in another subject area who would like to qualify to be able to teach maths?

Or are you already a secondary maths teacher but feel that you would like to upgrade your skills?

Are you passionate in doing something to help alleviate the increasing shortage of qualified maths teachers?

Monash would like to hear from you.

Monash University is planning for 2004 a new Graduate Certificate in Mathematics Studies. This unique certificate will provide existing teachers with a course specifically designed to upgrade their mathematics qualifications.

This course will not only include the relevant mathematics content required but also integrates pedagogy in mathematics teaching and learning. It is aimed to prepare teachers of mathematics for the 21st century classroom, and as such, it will incorporate the use of current software such as maths and statistics packages and computer algebra systems (CAS) technology.

The certificate will comprise four units, and would normally be completed over two years, however acceleration may be possible.

Due to Monash University's extensive network of campuses, the course will be available in both rural and metropolitan areas.

So, if you're a potential student of such a course or simply want to have your say, we'd like to hear from you.

Email us at: etraining@maths.monash.edu.au

Or access our website at:

www.maths.monash.edu.au/retraining

MATHS GAMES DAY 2003

Year 5

Venue: St Catherine's School, Toorak
Date: Wednesday 21 May, 2003-02-28
Contact: Karen McAsey, karen.mcasey@stcatherines.net.au

Year 7—Choose a city or country venue!

Venues: St Paul's Anglican Grammar School, Warragul
 20 teams max.)
Date: Monday 1 September, 2003 9.30–3.00pm
Contact: Heather Steenholdt, hsteenholdt@stpaulswgl.vic.edu.au

OR

Scotch College, Hawthorn (38 teams max.)
Contact: Michele Linossier, michele.linossier@scotch.vic.edu.au

Year 10

Venue: Methodist Ladies' College
Date: Tuesday 12 August, 2003-02-28
Contact: Allason McNamara, mcnamaam@mlc.vic.edu.au

VC 2003

First Announcement—A Virtual Conference

Springboards into numeracy - jumping in

Following on from the hugely successful Springboards National Numeracy Conference held in Hobart in October 2002, the AAMT offers you the chance to get involved in *Springboards*, the Association's major focus on numeracy education in primary and middle schooling.

- Learn about the work of outstanding teachers from around the country
- Hear from other leaders in the field
- Discuss and debate the issues and directions identified in Hobart
- Help drive the AAM and wider agendas on numeracy education

Date: Friday 16 May—Monday 8 June, 2003
Registration: Member: \$55.00 Non-member: \$77.00

What should you do next?

Visit the VC2003 website www.aamt.edu.au/vc2003 Register for VC 2003 Springboards into Numeracy - Jumping in! www.aamt.edu.au Contact the AAMT for further information office@aamt.edu.au or phone 08 8363 0288 fax 08 8362 9288

“Neap.
advancing education

New VCE Mathematics Resources for 2003

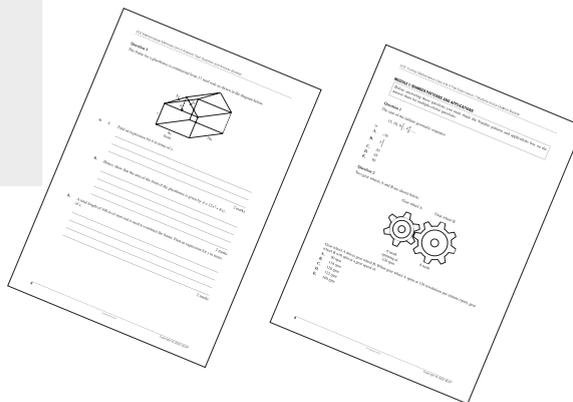
NEAP has a long history of supporting teachers and students through the development of new resources. In 2003 NEAP will provide teachers with an additional 6 trial exam papers for Mathematical Methods Computer Algebra System (CAS) Units 1, 2, 3 & 4. Two new Smartstudy® guides, specifically written for students of MM (CAS), will also be available in 2003.



Trial Examinations 2003

Maths Methods - Units 1, 2, 3 & 4
Maths Methods CAS - Units 1, 2, 3 & 4 (NEW)
Further Maths - Units 3 & 4
Specialist Maths - Units 3 & 4

- Exams for Units 1 & 2 are ideally suited to be used by teachers for their final testing of students.
- Exams for Units 3 & 4 allow teachers to prepare their students for the style and difficulty of the final exams.
- All Trial Exams are supplied with fully worked solutions and mark schemes.

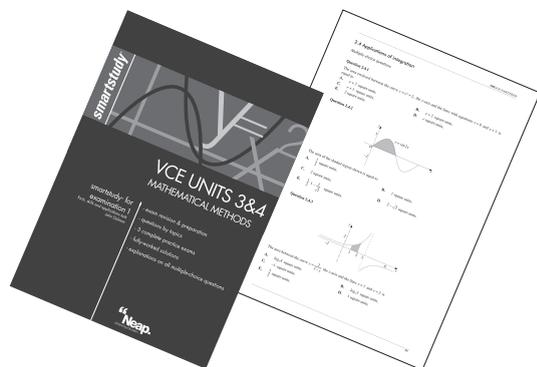


Smartstudy® Revision & Exam Guides

Maths Methods - Exam 1 & Exam 2 (2 Books)
Maths Methods CAS - Exam 1 & Exam 2 (2 Books)
Specialist Maths - Exam 1 & Exam 2 (2 Books)
Further Maths - Exam 1 & Exam 2 (2 Books)

Smartstudy® revision and exam preparation guides for VCE are a series of books designed to help students maximize their study time. There are 2 books per subject covering both Units 3 & 4. They provide a complete revision package in an easy-to-follow layout. All books contain:

- material ideal for ongoing revision throughout the semester.
- exam-style questions organized by topic and area of study.
- fully worked solutions to all questions, including explanations on multiple-choice answers.
- 3 complete practice exams which reflect the current VCE exam format.
- new and original questions written for the current VCE courses.



Diagnostic Topic Tests - Year 2000 Edition

Maths Methods - Units 1, 2, 3 & 4
Further Maths - Units 3 & 4
Specialist Maths - Units 3 & 4

Diagnostic Topic Tests:

- are specifically written for the currently accredited VCE Maths courses.
- monitor & identify students' strengths & weaknesses throughout the year.
- contain fully worked solutions, diagnostic comments & mark allocation.
- contain questions that develop skills & competencies appropriate to each topic.
- include approaches to answering questions.
- identify concepts being tested.
- identify rules and formulas to be applied.
- offer advice and hints on effective examination techniques.

NEAP VCE resources are also available in Biology, Chemistry, Physics, Psychology, Accounting, Business Management, Economics, Legal Studies & English.

For further information or to be placed on the NEAP teacher mailing list, contact:
National Educational Advancement Programs (NEAP) Pty Ltd
58 Pelham Street Carlton Vic 3053 Tel 03 9663 2523 Fax 03 9663 7182 www.neap.com.au

The Decidable and the Undecidable in Mathematics Education

Announcing...

The Mathematics Education into the 21st Century Project has just completed its fifth successful international conference in Sicily, following conferences in Egypt, Jordan, Poland and Australia.

The next conference is in Brno, Czech Republic from September 19-25, 2003. The conference will be held in the heart of the historic city of Brno, the regional capital of Moravia, famous for its beautiful countryside, castles, wine and cuisine.

Brno is the second largest city in the Czech Republic and is easily accessible in Europe by plane, car, bus or train. Participants arriving on international flights at Vienna and Prague airports will be transported directly to Brno.

Professor Ivan Meznik, Technical University of Brno is the Chairman of the Local Organising Committee. The title of the conference is 'The Decidable and the Undecidable in Mathematics Education', a tribute to Kurt Godel who was born and educated in Brno. Plenary speakers include Nicolina Malara & Filippo Spagnolo.

Call for Papers

Papers are invited on all innovative aspects of mathematics including:

- Statistics education
- Gender & equity
- Ethnomathematics
- Rich learning tasks
- Problem solving
- Applications
- Research on teaching & learning
- Technology in the classroom
- Computer graphics & teacher education

Moravian hospitality is renowned and during the conference there will be an excursion from 9am to midnight with lunch and dinner and also visits to:

- the famous Macocha caves
- local castles
- wine cellars
- theatres

The conference will close with a special gala dinner for all attendants. In addition, there will be social programs for additional travellers including a wide range of pre and post European tours. For further information contact Alan Rogerson arogerson@vsg.du.au

2003 Professional Development

During 2003 we will host a variety of full day events, as well as after school PDs and series—details will be made available in The Common Denominator and on our website www.mav.vic.edu.au as events are finalised.

Term 1 PD

Date/Venue/Time	Description	Cost
Mon 31 March 5.30pm -7.00pm 'Cliveden', 61 Blyth Street, BRUNSWICK	<p>VCE CAS TEACHERS' FORUM CAS-CAT CHAT</p> <p>Listen to reports from teachers who piloted a new VCE Mathematics (CAS) course and share your implementation strategies with other participants.</p> <p>To register contact the MAV office or visit our website at http://www.mav.vic.edu.au/pd/pd2003.htm#VCE</p>	<p>\$20 per person for members</p> <p>\$25 per person for non-members</p> <p>(all prices include GST)</p>

Free Maths Talent Quest PDs

The 2003 Maths Talent Quest is a fantastic way to motivate and challenge students to take part in maths investigations. These **FREE** sessions will include examples of students' work, how to get started, topic ideas, time management, resourcing, type of entries, and how to incorporate MTQ into the school reporting system. **Bookings are essential.**

Date/Venue/Time	Description	Cost
Wed 5 th Mar, 4:30-6pm Ashby PS, Geelong West	<p>Primary (P-6) Maths Talent Quest PD</p> <p>presented by Rhonda Santuccione, Ashby PS</p>	<p>FREE</p> <p>Bookings essential.</p>
Wed 5 th Mar, 4:30-6pm Werribee Secondary College, Werribee	<p>Secondary (7-12) Maths Talent Quest PD</p> <p>presented by Robyn Crockett, Camberwell Grammar</p>	<p>FREE</p> <p>Bookings essential.</p>
Tue 11 th Mar, 4:30-6pm Ivanhoe Boys' Grammar Junior School, Ivanhoe	<p>Primary/Middle Years (P-8) Maths Talent Quest PD</p> <p>presented by Jennie Droge, Head Judge, 2002 MTQ</p>	<p>FREE</p> <p>Bookings essential.</p>
Thur 13 th Mar, 4:30-6pm Mackellar Primary School, Delahey	<p>Primary (P-8) Maths Talent Quest PD</p> <p>presented by June Penney, Darley Primary School</p>	<p>FREE</p> <p>Bookings essential.</p>
Mon 17 th Mar, 4:30-6pm Brighton Sec College, East Brighton	<p>Secondary (7-12) Maths Talent Quest PD</p> <p>presented by Gerard Cameron, Brighton Secondary College</p>	<p>FREE</p> <p>Bookings essential.</p>



The Mathematical Association of Victoria



Professional Development Application Form **TAX INVOICE**

School: _____

Address: _____

Postcode: _____

Telephone: _____ Fax: _____

Principal's Endorsement (if required): _____

MAV Membership: Institutional Individual Non-member

JCSAN Member: If member, name of Association: _____

Please note that school/institutional members can send up to 4 people at the member's rate. Any more attendees must pay the non-member rate.

Please reserve places for the following:

Date	Title of Session	Name of Attendees	Cost (inc. GST)
TOTAL COST INC. GST			

Method of Payment:

I enclose a cheque/money order/purchase order for \$_____ (made payable to MAV)

Purchase Order No. _____

OR

Please charge \$_____ to my:

Bankcard Mastercard VISA card

Card Number:

Name on card: _____

Expiry Date: _____ Signature: _____

Please return this form to:

The Mathematical Association of Victoria (ABN 34 004 892 755)

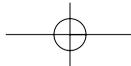
Cliveden, 61 Blyth Street, BRUNSWICK VIC 3056, Tel. 9380 2399, Fax. 9389 0399

ACKNOWLEDGEMENT LETTERS

Letters of acknowledgment are only sent out to attendees for the full day professional development sessions. Those people attending after school professional development sessions will only be notified if a place is not available.

CANCELLATION:

If you are unable to attend a session that you have booked into, refunds will not be issued if you cancel your booking less than 48 hours prior to the session.



HASSLE FREE PD FAXBACK

Do you need to organise a day, half day, or session of PD for your school? The MAV can help! **Fill in this Hassle Free PD Faxback Form**, or contact Mary Walkinshaw on 03 9389 0303 or at mwalkinshaw@mav.vic.edu.au

FAX: 03 9389 0399 Attention: Mary Walkinshaw

SCHOOL/ORGANISATION NAME: _____

ADDRESS: _____

PCODE: _____

PHONE: _____ FAX: _____

EMAIL: _____

CONTACT NAME: _____

DATES & TIMES OF PROFESSIONAL DEVELOPMENT SESSION(S):

VENUE: _____

DISTANCE AWAY FROM MELBOURNE METRO. AREA (KM): _____

The MAV also has two training rooms available at Cliveden from \$100 for half a day to \$165 for a full day. Please tick the following box if you would like more information & a booking form:

Topic(s) to be covered. Please be as specific as possible:

Preferred presenter(s)

Estimated Budget: \$ _____

**Members' cost is \$50 per presenter, Non-members' cost is \$100 per presenter. Clients will also be responsible for the presenters' fee/s, and any travel or accommodation costs (plus GST).

