



# AIMSSEC

THE AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES SCHOOLS ENRICHMENT CENTRE

*New skills, new hopes, new horizons  
for mathematics in African schools*



### P3 / WHAT WE DO

“Educational opportunities should be equal for all.”



### P7 / WHO WE HELP

What students say about our courses.



### P8 / WHO WE ARE

Meet the staff, lecturers and tutors.

## INTRODUCTION

The African Institute for Mathematical Sciences Schools Enrichment Centre (AIMSSEC) was established in 2003. The main objectives of the AIMSSEC programme are to advance educational opportunities for disadvantaged communities, to introduce new skills to teaching and learning mathematics and to raise the standards of mathematics teaching in Africa.

**To spread the benefits more widely, AIMSSEC runs seven professional development courses for teachers from disadvantaged rural and township schools to empower them to teach more effectively and to train other teachers in their areas. AIMSSEC blended learning courses for primary and secondary teachers, subject advisers and teacher trainers from South Africa and East Africa combine residential units, home-study, assignments, online learning and examinations for qualifications awarded by AIMS and for professional development points endorsed by SACE.**

Around 2000 teachers have taken the AIMSSEC three-month Mathematical Thinking (MT) course. All AIMSSEC courses combine pedagogy, advancement of subject knowledge and IT. The MT course acts as a prerequisite for the other six courses which focus on Language and Communication, Differentiation and Inclusion, Competences for the 21st Century, Conceptual Development, Action Research and Subject Leader Training.



*AIMSSEC promotes active inquiry based learning, mathematical thinking, communication and problem solving skills.*

AIMSSEC runs world-class courses staffed by a strong local African team with a large international team of mathematics education experts who write teaching materials and lecture as unpaid volunteers.

The four AIMSSEC alumni who lecture on the MT courses, and the many alumni who act as teaching assistants, make a valuable contribution to the courses.



## WHAT WE DO?

### EDUCATION IN RURAL SCHOOLS

Typically learners walk long distances to school, many parents work far away in the cities and some are AIDS orphans. School buildings and resources are often inadequate. Mathematics teachers often have weak mastery of the subject. AIMSSEC offers support, courses and resources.

In 2010 the Eastern Cape Government commissioned AIMSSEC to train 12 subject leaders for every school district: 4 primary, 4 lower secondary and 4 upper secondary. These districts cover wide geographical areas, with poor roads.

Teams work together to support other teachers and to improve teaching of mathematics across the district.

Thanks to generous sponsorship from private donors, the SA National Skills Fund and Comburs, and earlier from the Zenex Foundation, Datatec, Rand Merchant Bank and Old Mutual, AIMSSEC runs courses for teachers free of charge. With growing involvement in offering quality courses to young and old and to prospective teachers in South Africa, AIMSSEC needs more seed funding to build capacity to meet the growing demand.

*“Education is the most powerful weapon which you can use to change the world.”*

*Nelson Mandela*



### RESPONDING TO THE NEED AND DEMAND FOR PROFESSIONAL DEVELOPMENT

South Africa is ranked 128<sup>th</sup> out of 137 countries for the quality of its school mathematics and science education (Global Competitiveness Report, World Economic Forum 2017/2018) and urgently needs training for mathematics teachers.

AIMSSEC has more 600 teachers on its waiting list and it must build capacity in order to meet the pressing demand from teachers for professional development, and to give more learners in South Africa their entitlement to a good mathematical education.

To reach all the provinces in South Africa, AIMSSEC has expanded its professional development programmes for mathematics teachers. By training chosen teachers to be subject leaders, and grooming them to run workshops for other teachers in their home areas, the benefits are spread more widely, reaching more teachers and impacting on more learners.

*“The activities and resources are realistic and I think each one of us who attended will be able to use them in his/her daily teaching.”*



*Moroke Matiadi (MT IP 2014)*



## PROFESSIONAL DEVELOPMENT FOR MATHEMATICS TEACHERS AND SUBJECT ADVISERS

### The Mathematical Thinking (MT) Course

Nine-day residential course followed by three months blended learning), has been taught 30 times between 2004 and 2019 for over 2000 teachers, subject advisers and teacher trainers. They learn mathematics through practical activities, problem solving, group work and discussion and they become proficient in using technology for teaching.

“ By the time I completed this course I was enriched not just in mathematics but teaching as a whole.”



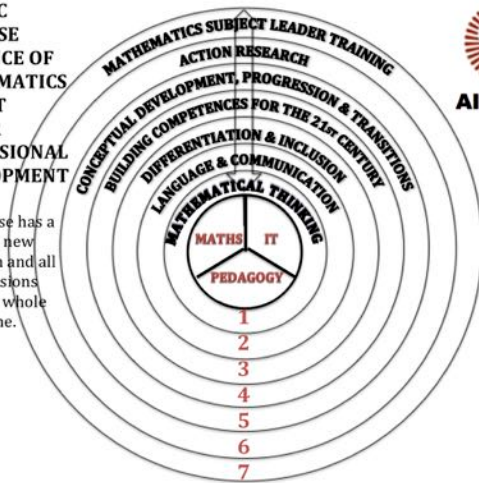
Jacky Johnson (MT FP 2014)



These photos show the first group of Mathematical Thinking students in 2004 (left) and the 21<sup>st</sup> group in 2014 (right).

AIMSSEC  
7-COURSE  
SEQUENCE OF  
MATHEMATICS  
SUBJECT  
LEADER  
PROFESSIONAL  
DEVELOPMENT

Each course has a focus on a new dimension and all the dimensions infuse the whole programme.



AIMSSEC offers a 2+ year programme of professional development courses for teachers in 7 modules to train teachers to be mathematics subject leaders.

You can take one or more modules or all seven. Each module has a residential component followed by 3 months or 6 months distance learning.

Do you want to be a really effective Head of Department? Or do you work as a teacher trainer for an NGO or a subject adviser for local government? You might find that AIMSSEC has the course you need.

## BLENDED LEARNING

Blended learning includes: residential modules, action research, distance learning managed through an online course management system and guided throughout by your tutor, online forums (for discussion, sharing ideas and getting help), and home study with monthly assignments.



The photo shows the 51 teachers and teacher trainers, students on the AIMSSEC MT course in Makerere University, Kampala in January 2019. In the front row Dr Jennie Golding, Margaret Babirye Lwebegu, Dr Kedrace Turyagyenda, Director of Education Standards Uganda Ministry of Education, Professor Noble Banadda, The Chancellor of Makerere University Professor Ezra Suruma, Toni Beardon, Professor Alan Beardon, Dr Barrie Barnard, Christine Hopkins, Dr Alan Winter.

## THE AIMSSEC STYLE OF TEACHING IS TRANSFORMATIVE

Learning is through guided discovery, with an emphasis on understanding, mathematical thinking, discussion, collaborative and project-based learning with challenges, rather than mechanical practice. Motivation and interest as well as learning how to learn are of paramount importance.

“*The problem solving approach I have been taught helped me a lot in solving problems I never thought I could be able to solve. Visualisation is going to help my learners too.*”

*Thobeka Thelma Bobo-Gqibitole (ACE IP 2014)*



## RESEARCH

In addition professional development for teachers, AIMSSEC is also involved in research.

The first major research project being undertaken is called ‘Improving Progress through Formative Assessment in Science and Mathematics Education (FaSMEd).

The project, which began in January 2014 and ended in December 2016, was funded by the European Union under the 7<sup>th</sup> Framework Programme (FP7) and involves eight partners from European countries and one South African partner (AIMSSEC).

This was a research project with two main research components.

A design research phase (January to December 2015) to develop a “toolkit” comprising classroom activities with an emphasis on formative assessment (tasks, lesson plans and guidance for teachers). This involves working closely with between six and eight teachers, from three or four schools, from January to September 2015 to understand what works for them, using instruments such as interviews, questionnaires and classroom observation (using video and observation schedules).

In the case study phase (January to September 2016) between 20 and 30 other teachers used the toolkit developed in the design phase in their classrooms. For the teachers this involved working through the guidebook and any other supporting materials to prepare for the lesson, and then teaching the lesson using the activities in the toolkit. The research focussed on what happens in the classroom, and in particular changes in teachers’ practice and learner responses to activities.

A synthesis phase followed in which all case studies are analysed to draw out key messages to inform policy.

The project was underpinned by:

- a commitment to respecting the local contexts of participating teachers and learners (e.g. taking into account the need to follow the CAPS pace setters in South Africa);
- a belief that taking part in the research contributes in significant ways to the professional learning of teachers;
- wide experience of working with teachers, designing materials for including classroom tasks and professional development activities, classroom research.



- Well-developed theoretical and research background related to professional development for teachers of mathematics, the design of tasks for mathematical learning and formative assessment in mathematics.

Marie Joubert is the Principal Investigator for the AIMSSEC partner, and was assisted by Ingrid Mostert and others from the AIMSSEC staff.

This project received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration.



## EVALUATION OF AIMSSEC FORT HARE ACE COURSE (2011-2013)

The Zenex Foundation sponsored a full 3-year independent evaluation of the AIMSSEC ACE course (2011-2013) to train Subject Leaders taught in partnership with Fort Hare University. The evaluation was conducted by Nicky Roberts of Kelello Consulting with Professor Jill Adler, University of the Witwatersrand, as adviser. The aim was to determine how the graduates put into practice in their teaching what they had learnt on the course and also to investigate the effects on the attainments of their learners. The evaluation focused on:

- reflections on strengths & weaknesses of different elements of the model;
- measurement of the impact of the programme in relation to the learning gains in the mathematics content knowledge of the teachers participating in the programme;
- measurement of any shifts in teaching practice for case study teachers.

*Quotations from the report are in italics in red.*

*"In November 2012 the teacher ratings of the ACE programme as a whole, as well as the overall quality of the programme materials was overwhelmingly positive with more than 80% of teachers responding describing these as excellent or good."*

The final report on 13 February 2014 showed that over the 2-year ACE course, the Grade 7 to 12 teachers showed an average improvement of 12%, while the Grade 4 to 6 teachers improved by an impressive 33%.

*"The vast majority of teachers rated the relevance of the programme highly, with more than 95% of teachers considering its relevance to be 'excellent' or 'good'. This was with regard to all aspects of relevance reported on: knowledge of mathematics, improving classroom teaching, instructional and subject leadership skills and sensitivity to classroom realities."*

## Centre for Excellence in Science And Mathematics Education (CESAME)

The project is for the whole African, Mediterranean and European (AME) region in order to support and improve school science and mathematics education from grades 1 - 9. The objective is to build up a network of international centres for the professional development training of in-service teachers. Experts agree that science and mathematics are often inadequately taught in schools, hence not raising learners' interest.

Renovating science education is an important part of the Sustainable Development Goals (SDG) of the United Nations for 2015 - 2030: **"inclusive and equitable quality education for all"**.

We have formed an **Inquiry Based Science and Mathematics Education (IBSME)** interest group in the Western Cape with these partners:

- AIMSSEC
- Western Cape Education Department
- Primary Science Project
- University of Cape Town
- University of the Western Cape
- Stellenbosch University
- Cape Peninsula of Technology

## OTHER AIMSSEC ACTIVITIES

### DISTRIBUTION OF FREE TEACHING AND LEARNING RESOURCES

The **AIMING HIGH Teacher Network** [aiminghigh.aimssec.ac.za](http://aiminghigh.aimssec.ac.za) supports **lifelong learning, offers lesson resources for inquiry based learning and workshop guides to empower teachers to run their own workshops and share ideas.** The forum enables teachers to ask for help and advice and to support each other.

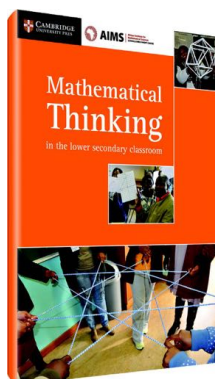
### THE AIMSSEC APP

All the AIMSSEC resources, learning activities, solutions, suggestions for teaching and workshop guides are freely available under a creative commons license via the website and can be downloaded with the AIMSSEC App and used offline. Just go to **GooglePlay** and search for **AIMSSEC**.

### AIMING HIGH BOOK

#### MATHEMATICAL THINKING IN THE LOWER SECONDARY CLASSROOM

The book and workshop guides on the Aiming High Teacher Network website support the cascade model of teacher professional development and empower teachers to run their own collaborative learning professional development workshops.



Over 700 workshops have been run by teachers in their schools without the need of an expert leader, using the material from the book and Workshop Guides from the Aiming High Teacher Network website.

Reports from teachers help the writing team to improve the workshop guides.

Community involvement  
AIMSSEC is involved in running teacher workshops, master classes for learners, mathematics clubs and public lectures.

The South African Independent Examination Board **Advanced Programme Mathematics** bridges the content gap between matric mathematics and school leaving qualifications in other African countries and internationally. Many South African mathematics teachers are not yet comfortable with this additional content so AIMSSEC helps by incorporating this content in courses 6 and 7 of the AIMSSEC 7-course Subject Leader Training programme.



Tutoring & Mentoring of school students by AIMS students is done in local schools on Saturday mornings.

## WHO WE HELP?

### *Hubert February 2010*

“AIMSSEC and the ACE course made a huge positive impact on my maths knowledge as well as my teaching. The lecturers at AIMSSEC are not only experts in what they are doing, but they are really passionate about mathematics. Each of my colleagues and I sensed this from the beginning and we knew this was going to be one tough, but special course.

The course not only made me confident in maths, but made me an overall confident teacher. There were a few chapters I was struggling with and had real diffi-

culty in teaching in the classroom. The ACE course gave new meaning to those chapters and I can teach them with so much confidence now.

The CAPS documents bring back geometry and probability. At this moment there are so many teachers worried and stressed out about having to teach these topics. The ACE course made us experts in these topics and I can help so many teachers in understanding probability. I can't wait to implement my knowledge.

Most importantly, this course has made me a life-long reflective teacher. It gave me the chance to research my potential

in the classroom. It has made a huge impact on how I approach almost everything in class - always looking for better strategies that will benefit the learner. The ACE course not only made me a good maths teacher, but I really can say that it moulded me into a mathematician. The results show this at my school, but it is not only about the results – my learners also love their maths.

All over South Africa we have struggling maths teachers. We need an organisation like AIMSSEC. I definitely know many others will benefit from the short course and the ACE course.”

### *Mohammad Hassan 2014*

“I have been lecturing mathematics at university and school level and currently mathematical literacy at FET colleges. I am now an Education Specialist for Maths and Mathematical Literacy for NCV and NATED programmes at an FET college.

I have also been on many maths workshops previously and I have never found any other programme as intensive, fun and interesting as the AIMSSEC

programme. It was really an eye-opener for me to see the many ways mathematics can be presented with activities that really make you think critically and out of the box. The activities provide for real life situations that one can use in classrooms and I have used some of the activities in my lectures with amazing results.

Furthermore, the emphasis is not only on mathematics, but the educator's reflection on how learners learn and what their knowledge and prior knowledge is. It

also gives valuable insight and reflection on you as an educator and your attitude towards the subject and how you can improve your perspective.

The course itself allowed me to meet other lecturers across the country and share ideas as well as discuss contemporary issues related to maths. I would recommend any maths educator/lecturer at school or FET college to attend if he/she is passionate and interested in making a difference.”

### *Herholdt Bezuidenhout 2011*

“Thanks to AIMSSEC I was afforded the opportunity to complete my ACE in FET Mathematical Leadership at Stellenbosch in 2011. The aim was to develop leaders in Mathematics Education. I am a testament that this can be achieved. Completing the course allowed me to move from a Mathematics Teacher to The Head of Mathematics at my school in 2013.

I gave a poster presentation on the “Statistical Process” at the National AMESA Conference in 2013. I also gave

a presentation at the Education Students' Regional Conference held in 2013 at Stellenbosch University on: “Research and Statistical Literacy: A proposed strategy to guide students' statistical thinking and reasoning”.

I subsequently completed my BEd Honours (Cum Laude) in Mathematics Didactics in November 2013 at Stellenbosch and started with my Master's thesis this year. I was afforded a bursary to do so and this will allow me to visit the ICOTS9 Conference in June 2014 at Flagstaff Arizona (USA).

Today I am not just a normal Mathematics teacher, but would like to believe that I am becoming a leader in Mathematics because I was granted this opportunity. I would like to take this opportunity to thank everyone at AIMSSEC for the role which they played directly and indirectly in my development. If it was not for Prof Neil Turok's vision or even the nameless cleaner's selfless work while you marked my assignments and all the inspiring lessons from guest lectures, I would probably not be in this position.”



## WHO WE ARE?

### LECTURERS



*AIMSSEC was awarded the UNESCO-Hamdan Bin Rashid Al-Maktoum Prize for Outstanding Practice and Performance in Enhancing the Effectiveness of Teachers, at a ceremony in Dubai on 24 April 2012.*

**Dr Barrie Barnard**, has a D Ed degree in Mathematics Education, 32 years teaching experience as a mathematics teacher, 19 years as head of a mathematics department and 7 years as deputy principal. For ten years he was a provincial examiner and also served as a panel member setting the national examination for grade 12 mathematics for five years. As the AIMSSEC Academic Manager, he is responsible for designing course material and organising training courses for mathematics teachers.

He has made meaningful contributions to the improvement of mathematics

education through various presentations at congresses, conferences and at local teacher centres and he has co-presented in-service training of mathematics teachers. His mission in life is to alleviate the shortage of skilled mathematics teachers in South Africa. He has received awards for service excellence by the Cape Education Department and by the SAOU for his exceptional contribution to curriculum development in mathematics.

“We have optimistic plans for the future. The AIMSSEC programme is scalable to larger numbers and to higher level courses for teachers.”

**Mrs Toni Beardon** founded AIMSSEC in 2003 after retiring from the Cambridge University Millennium Mathematics Project and receiving an OBE for services to Mathematics Education in the UK.

Concerned that so many South African children are severely disadvantaged educationally, Toni and the AIMSSEC team of mathematics educationists from all over the world work as unpaid volunteers to empower South African teachers to improve mathematics teaching in schools.

“As a school teacher, teacher trainer, school inspector, project leader, web author and innovator, in a career of over 57 years, my aim has always been to help others to gain confidence in their own mathematical ability, to enjoy learning mathematics and to appreciate both its usefulness and its beauty.”



**Ms Elizabeth Turok** has worked as a part time lecturer for AIMSSEC since 2010. She began teaching mathematics in Scotland in 1985 and continued with this until she came to South Africa in 2008. She then taught in a high school in Muizenberg for two years working mostly with grades 9-12.

“As a school teacher in Scotland I worked with many children from disadvantaged backgrounds. I am aware of the challenges we face to motivate and encourage these children so that they can see how mathematics is relevant to them.

I joined AIMS-SEC so that I could share with teachers here some of my ideas on teaching maths and to learn from them through their experiences.”

**Dr Mpfareleni Rejoyce Gavhi** is the House of Science Manager for AIMS and responsible for setting up the AIMS/AIMSSEC Centre of Excellence in Science And Mathematics Education (CESAME) where AIMSSEC will add the training of science teachers in inquiry based learning to its current work in mathematics.

Rejoyce joined AIMS in June 2013 wanting to make a difference to the educational opportunities for children and young people in South Africa.

Rejoyce is an inspirational role model for young women with a dream to make a difference. She comes from Khalavha village in the province of Limpopo in South Africa where poverty severely limits access to educational institutions, especially those of higher learning. She obtained a BSc from the University of Venda in 2004 and Hons, Master's and PhD degrees in Mathematics from Stellenbosch University.





**Mrs Tejumade Ogundipe** is an AIMSSEC Lecturer, the IT Manager and a researcher, currently pursuing a PhD in Information Systems with the University of Cape Town (UCT). She holds a Master's degree in Information Systems also from UCT, as well as a Bachelor of Technology (Honours) from Ladoke Akintola University of Technology, Nigeria. Her research area includes but is not limited to Competency-Based Education, Curriculum Development, Learning Environment Designing and student engagement. In her spare time, she provides mentorship for students and she is passionate about people, technology, education, Mathematics; and how to bring all these elements together for the greater good of humanity.



"AIMSSEC courses are fun and empowering... You do not study mathematics because it helps you build a bridge. You study mathematics because it is the poetry of the universe. Its beauty transcends mere things."



**Ms Ingrid Mostert** did a BSc (Hons) in Mathematics at Stellenbosch University (SU) before teaching Mathematics and Science in High School and then teaching at SU on a bridging programme while completing her Masters in Education. She worked with IMSTUS and AIMSSEC as Coordinator of the ACE course for Senior and FET phase teachers and especially those from rural areas across South Africa. She explored the ways in which technology can be used to support teaching both in the classroom and for in-service teacher training for teachers in remote locations.

Ingrid loves travel and she spent two years travelling in South America and then East Africa.

She worked for 3 years as a researcher for the EU FaSMEd Programme.

She is now working in the Eastern Cape with Foundation Phase teachers and doing research for her PhD in Mathematics Education.

**Dr Jennie Golding** is Associate Professor in Mathematics Education at University College London. From research in pure mathematics at Oxford University, she spent most of her career based in classroom teaching and learning with young people 5-18+, and working in parallel in teacher education and school improvement. She now works in maths education research and is passionate about every person's potential to engage in mathematics in meaningful, exciting and satisfying ways, and about supporting teachers to achieve that.

Jennie first taught for AIMSSEC in 2009, and she currently writes and edits materials for use with the AIMSSEC App. and coordinates research for AIMSSEC with teacher trainers in East Africa. Jennie has worked with policymakers on curriculum, teacher education and mathematics learning in at least six low-resource countries, and has had the privilege of working directly with teachers in all of those. Jennie was President of The UK Mathematical Association 2016-17 and is now Treasurer of the Joint Mathematical Council (JMC).



**Chris Clarke** is a teacher, trainer and developer from the UK who now works most of his time in Africa. After graduating in mathematics from the University of Warwick and teaching as a volunteer in Johannesburg for 2 months, Chris worked for AIMSSEC for 18 months and set up the AIMSSEC IT training programme and established it on a firm foundation. He also wrote the AIMSSEC App.



Chris often works with the African Mathematics Initiative (AMI) in Kenya and other African countries. He has a Master's in Mathematics Education, specializes in the use of games and technology for learning, and is a keen mobile app developer. He is currently a director of SAMI (Supporting African Maths Initiatives) a UK charity which works closely with AMI.

**Christine Hopkins** studied mathematics at Cambridge University and then became fascinated by the teaching of mathematics. She has worked as a teacher with children from 9 - 18 years of age and found at all ages the same spark of excitement at solving a problem or understanding something that seemed too difficult.

Christine was the principal editor of the AIMSSEC book 'Mathematical Thinking in the Lower Secondary Classroom'.

Christine worked as a teacher trainer in England at Roehampton University, and in Cambodia and Africa, trying to identify the skills and approaches which we can use and share as teachers to improve the understanding and enjoyment of mathematics by those we teach.



Cynthia Fries did a Mathematics degree at the University of Warwick and then worked as a business manager in the fashion industry for some years. She then re-qualified and started a new career as a secondary mathematics teacher. As a teacher in Cambridge Cynthia played a leading role in the Royal Institution Mathematics Masterclasses programme for many years.

Since her retirement Cynthia works as a volunteer for AIMSSEC. She has been a tower of strength as an organiser, lecturer and writer-developer of teaching materials for lower secondary teachers.



**Corinne Angier** has taught on many AIMSSEC courses. For twenty years, Corinne alternated between teaching mathematics in secondary schools in England and working as a teacher trainer. She has worked on a national development project for primary teachers and with the charity Teach First. She now works as a mathematics consultant for a trust which trains teachers, hosts a Maths Hub to promote teacher development and is the home of White Rose mathematics:  
<https://www.tes.com/teaching-resources/teaching-for-mastery-in-primary-maths/whiterosemaths>

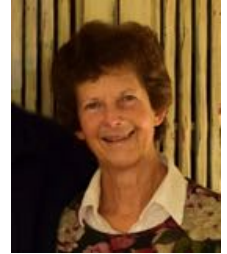
Corinne now teaches in a vocational college where her students are preparing to re-sit the mathematics papers in the General Certificate of Secondary Education (GCSE) because they have done badly in their previous attempts. The GCSE is the public examination taken by secondary-school students of about age 16 in England, Wales, and Northern Ireland.

**Other people who have taught for AIMSSEC:**

- Caroline Ainslie
- Bob Anghileri
- Lyndon Baker
- Marilyn Buchanan, University of California, Channel Islands, USA
- Alison Clarke Wilson, University College London Institute of Education
- Tandi Clausen May
- Jane Courtney
- Geoff Faux
- Wai Yi Feng
- Jenni Gage
- Ray Huntley
- Margaret Jones
- Vinay Kathotia
- John Mason, Open University, UK
- Tom Macintyre, University of Edinburgh, Scotland
- Lynne McClure, Director Cambridge Mathematics
- Cherri Moseley
- Lucy Muthoni, Strathmore University, Nairobi, Kenya
- Chris Olley, Kings College, London
- Alan Parr
- Nicky Roberts, University of Johannesburg
- Kosie Smit, University of Stellenbosch
- Sari Smit, University of Stellenbosch
- John Suffolk
- Jenni Way, University of Sidney, Australia
- Helen Williams
- and many more

**Of the 215 teachers who have completed the AIMSSEC subject leader training by doing the MT and ACE courses, about 50 of them have worked as Teaching Assistants on the MT course and 5 have been lecturers.**

**Liezel du Toit** taught mathematics at secondary schools in South Africa for more than 20 years. She now works as a freelancer and enjoys the different opportunities to be involved in mathematics and the teaching of mathematics. She often teaches at AIMSSEC courses, and she trains and mentors mathematics teachers, tutors groups of secondary school learners, teaches artisan students and writes textbooks.

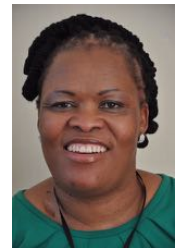


**Sagree Pillay** is an AIMSSEC alumna and a primary school teacher from KZN who now teaches regularly for AIMSSEC having done the MT course in 2009 the ACE in 2012 and 2013.

"It has always been my passion to be involved with teacher training, as I feel that teachers need to learn and teach more than just content alone. They need to teach hope and bring joy to the classroom. That comes with confidence and genuine self-enjoyment. So, it was a dream-come-true when AIMSSEC invited me to attend to lecture on the MT course!"



**Zikona Ntlonti** is an AIMSSEC alumna from the Eastern Cape, born in Ngcobo district, who teaches on the AIMSSEC MT course having done the MT course in 2012 and the ACE in 2013 and 2014. This led to her presenting workshops for educators and InterSen mentoring sessions in her district, piloting with 2 circuits, each with 30 schools, conducting a Grade 9 Spring School for the pilot circuit and coordinating the National Intervention 1+4 program for Grades 8 and 9 in the 2 circuits.. She shares the strategies learnt at AIMSSEC with teachers pointing out that, "Mathematics is not about formulae; it is about relating concepts for better understanding."



**Dr Julia Anghileri** teaches regularly for AIMSSEC and has played a leading role in developing the courses for primary teachers. She led the mathematics education team at Homerton College and lectured at the University of Cambridge in mathematics and mathematics education on undergraduate and postgraduate courses and worked in partnership with local schools. She has extensive experience with both pre-service and in-service teachers. As a writer and editor, she has written and contributed to numerous publications in Britain and the USA. In her internationally recognised research she employed a variety of methods including classroom observation, use of video for data collection, and development of CD-rom for dissemination of research findings. As a consultant she worked for the National Numeracy Strategy (NNS) and for the Qualifications and Curriculum Authority (QCA) as well as a number of Local Education Agencies.



**Dr Mary McAteer** teaches regularly for AIMSSEC. She has been a secondary maths and physics teacher, primary maths, science and technology consultant, lecturer in Educational Leadership, and leader of an MA in Education. In 2000 she joined the staff of the University of Ulster and taught on an MSc Educational Management programme, then joined Edge Hill University in 2005. She is Director of a Primary Mathematics Specialist Teacher (MaST) programme. Mary has a particular interest in practitioner research methodologies, and has carried out and supervised research in many practice contexts with particular emphasis on action research, narrative and (auto)biographical approaches. She is a member of the Collaborative Action Research Network (CARN) coordinating group.

## ADMINISTRATIVE STAFF



**Mrs Najwa Chellan** started at AIMSSEC in July 2010 as an Administrative Officer. In her previous employment she held the position of Office Manager/PA to the CEO of an Occupational Health and Safety company and she is a registered Assessor in Occupational Health and Safety.

"My goal is to assist AIMSSEC to grow and develop further and improve the standard of Mathematics Education in South Africa and put AIMSSEC on the map."



**Ms Virginia Davidson** (Office Manager/ IT Co-ordinator) joined AIMSSEC in July 2012, she was previously employed as a Placement Officer in the disability sector, sourcing suitable employment opportunities for individuals with disabilities.

Virginia embraces new challenges. With her vast administrative experience and interpersonal skills she adds even more value to AIMSSEC's projects. "I firmly believe in AIMSSEC's vision, of empowering teachers with new skills and hope and raising the standard of education in South Africa for the next generation."



**Thanks to the generosity of sponsors, donors and volunteers,  
AIMSSEC courses are entirely free to South African school  
teachers from disadvantaged communities.**

**Please donate to AIMSSEC through  
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or <http://bit.ly/MtK2013ZAR>**

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or [aimssec.ac.za](http://aimssec.ac.za)  
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[barrie@aims.ac.za](mailto:barrie@aims.ac.za) or 021 787 9326**