The Collection IX

Editor: Dr. Irene Sciriha

Assistant Editor: Ian G. Walker

Department of Mathematics

Faculty of Science

University of Malta

Proceedings of Workshop held on the 9th March 2004

Contents

Foreward

The Science and Society Directorate of the European Commission published a DVD called "Femmes de tête". The stories of established women astrophysicists, microbiologists, mathematicians, geologists and genetic engineers working on edge-cutting research in Europe are told in a witty way, highlighting the great hurdles they managed to overcome and the unfailing support of their family and colleagues. One of the protagonists Prof. Ene Ergma who is an astrophysicist and now an active MP in the Estonian Parliament acknowledged that to be a scientist is "madness" in today's world when other easier routes lead to much higher financial gain. However scientists persist in their dedicated work because "the soul sings" as they wade through the rocky paths of research. I can vouch for this exulting feeling from my experience in mathematical research. However what lifts my spirits to higher levels is when our students contract this urge for mathematical discovery.

Encounters such as we have in the "*Collection*" workshops certainly foster the aspirations of our budding mathematicians. In this session the talents of students, other than in mathematics, have also been encouraged. Romina Mamo, a local established singer and mathematics student elicited a smile from all present as she sang with great charm the lyrics of fellow student Clinton P. Cilia. The message of the song may sound negative; however it is a hard reality that the path which our students tread till graduation is adorned with thorny challenges.

Dr Irene Sciriha

The Collection IX

Faculty of Science

Department of Mathematics

Date: 9th March 2004

Time: 1500 – 1700

Venue: LC 119

A seminar/workshop is being held on Tuesday 9th March 2004 at 1500. Students and staff from the Department of Mathematics, Faculty of Science will present ideas from various fields of mathematics.

Keynote speakers:

Professor S. Fiorini *On Singular Trees*

Elaine Chetcuti *The Euler Phi Function for Powers of Primes*

Andrew Duncan *The Powers of Matrices and the Walk Matrix*

Angela Lombardi *The Eigenvalues of Self Complementary Graphs*

Romina Mamo *A Song for Mathematics*
Paul Clinton Cilia *Lyrics*

We shall end with a brief session for spontaneous problem posing. You are cordially invited to attend.

Abstracts of possible proofs or conjectures which you wish to share with us in this meeting, or in a future one, may be sent to Dr. I. Sciriha or Ms. A. Attard, Department of Mathematics, (marked The Collection), at any time of the year.

Dr. I. Sciriha

Organiser