# EUROPEAN WOMEN IN MATHEMATICS

## Newsletter 10

### Edited by Gryshko Y.

**2003**

# Contents

# I
# EWM PUBLICATIONS

## Do EWM publications get read by nonmembers?

At one stage or another, we probably ask ourselves this question. I just want to quote a few instances where I know that they are being read by others (e.g. men).  I want to say this, not as a self-advertisement, but to point out that we should not be hesitant about submitting articles to EWM publications for fear that they will be lost to the general (mathematical) public.

First in historical order. The electronic publishers for the EWM Workshop on Moduli Spaces (Oxford, July 1998), edited by Kirwan, Paycha and Tsou, have finally decided to print a paper version! What is wonderful is that they will use the original cover design (by Chan, a woman bioinformatician), using the picture of a Riemann surface by the well known sculptor Barbara Hepworth (entitled Oval Sculpture (number 2) 1943). You will be informed when this is finally available.  Meanwhile, I still have some copies of a `home-made' version which I am happy to send to anybody who is interested.

I have seen several references to papers in this workshop also. In fact, I `sold' a copy to an American mathematician which led later to our co-editing an encyclopaedia (in mathematical physics) – we are still doing it now.

The Malta EWM meeting (August, 2001) is being published by World Scientific, edited by Mezzetti and Paycha.  That will certainly be available world-wide. I have used an article by Asia Weiss there (with her permission of course) for an undergraduate project here at Oxford.

But perhaps the most amazing experience is that, very recently, I was contacted by a businessman in Malaysia, who said he read my article on symmetry in the proceedings of the EWM Trieste meeting, December 1997, edited by Fainsilber and Hobbs.  He even recommends it to his staff to read!!

*Tsou Sheung Tsun*
*Oxford*

**EUROPEAN WOMEN IN MATHEMATICS**
**Proceedings of the Tenth General Meeting**
**Malta 24 - 30 August 2001**

edited by Emilia Mezzetti (Universita di Trieste, Italy) & Sylvie Paycha (Université Clermont-Ferrand II, France)



http://www.wspc.com/books/mathematics/5124.html
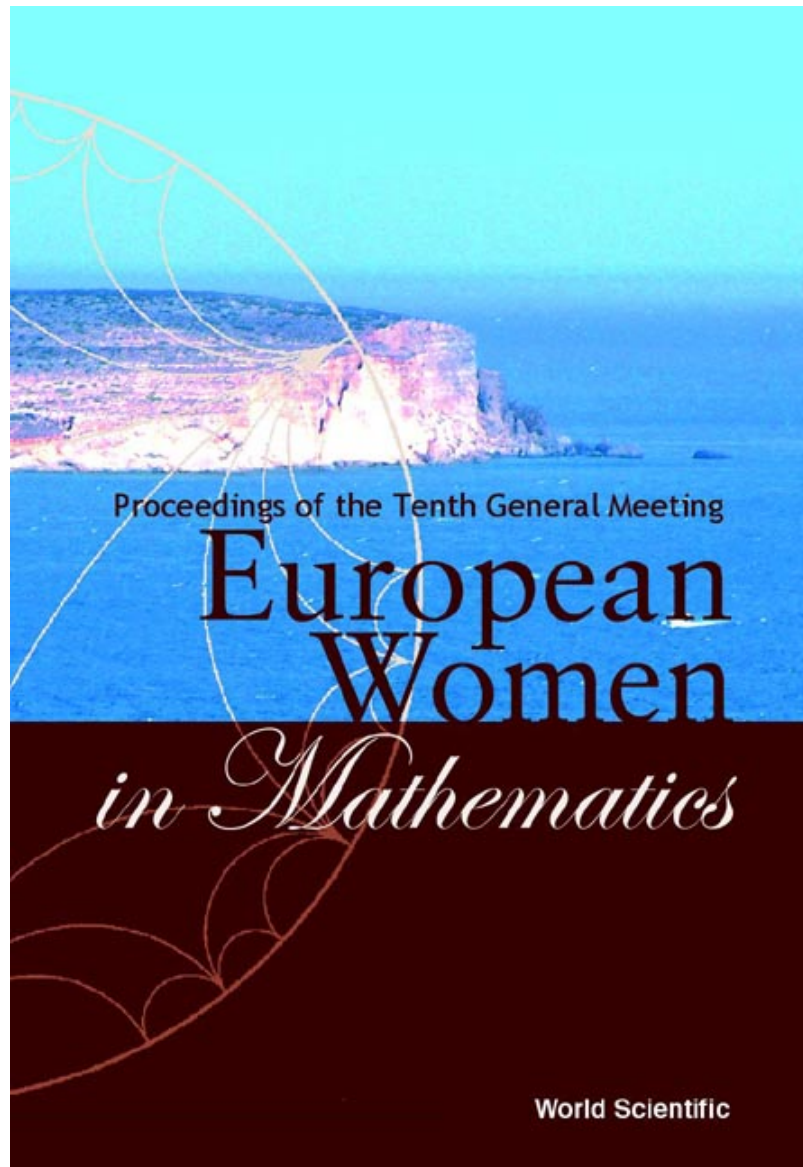
This volume can be divided into two parts: a purely mathematical part with contributions on finance mathematics, interactions between geometry and physics and different areas of mathematics; another part on the popularization of mathematics and the situation of women in mathematics.

# C O N T E N T S:

# II
# INTERNATIONAL WORKSHOP
# ON GROUPS AND GRAPHS

## Varna, Bulgaria, August 31 - September 6, 2002



http://www.moi.math.bas.bg/EWM02/

# REPORT

## Daniela Nikolova

An EWM Workshop on Groups and Graphs took place in the International Home of Scientists "Fr.J.Curie" in Varna, Bulgaria, from August 31 till September 6, 2002. The Program Committee was international:

I.      Cheryl Praeger, President,  University of Western Australia;
II.     Jennifer D. Key,  Clemson University, South Carolina, USA;
III.    Valerie Berthe,  University of Marseille, France;
IV.     Sarah Rees,  University of Newcastle, UK;
V.      Karin Gatermann,  Konrad-Zuse-Zentrum, Berlin, Germany.

The Local Organizing Committee was from the Institute of Mathematics and Informatics, Bulgarian Academy of Sciences:

I.      Daniela Nikolova – President;
II.     Svetlana Topalova – Secretary;
III.    Milena Dobreva;
IV.     Blajka Radeva.

An interesting feature was that the Invited Speakers were women only, specialists in the field from Canada, Australia, Germany, Great Britain, France, Italy, Malta, and Bulgaria:

 * Professor Irene Sciriha, Univ. of Malta, Malta,  (Polynomial Reconstruction-
   Old and New  Techniques);
 * Professor Dr. Wendy Myrvold, University of Victoria, Canada (Counting
   Small Latin Squares);
 * Associate Prof. Dr. Valerie Berthe, University of Marseille, France
   (Free Group Automorphisms and Tilings);
 * Associate Prof. Dr. Sarah Rees, University of Newcastle, UK (How Hard
   is the Word Problem?);
 * Associate Prof. Dr. Karin Gatermann, Konrad-Zuse-Zentrum, Germany
   (Graph Theory Applications in Chemistry);
 * Associate Prof. Dr. Rachel Camina, University of Cambridge, UK
   (Linearity of pro-p groups);
 * Associate Prof. Dr. Daniela Nikolova, Institute of Mathematics and
   Informatics, Bulgaria (Finally Presented Groups);
 * Associate Prof. Dr. Stefka Bouyuklieva, Veliko Tarnovo University,
   Bulgaria (Automorphism groups and self-dual codes);
 * Associate Prof. Dr. Svetlana Topalova, Institute of Mathematics and
   Informatics, Bulgaria (Groups of automorphisms and enumeration of
   combinatorial designs).

Each one of the Invited speakers was a Chair of a Session, where talks were given by representatives of the two genders. The scientific programme was most interesting. It was devoted to recent results and approaches in Group Theory and Graph Theory. The contributed talks contained original unpublished results. An accent was given to the various applications in related subjects such as Combinatorics, Coding Theory, Cryptography, Number Theory, Applied

Mathematics, Chemistry, etc. A special session was devoted to the contemporary subject Gender Studies, recently developed in the European countries, in which the interests, the number, and the realization of the two genders are analysed. The representatives from Malta, France, Germany, Great Britain and Bulgaria shared their experience in the field.

The conference succeeded to attract leading experts in the area such as Prof. Ted Hurley (Ireland), Prof. Christoph Hering (Germany), Prof. Reinhard Laue (Germany), Prof. Leonid Potyagailo (France), as well as young mathematicians. There were 28 lectures from 11 countries, which is very promising for the future intensifying of the research contacts and for the elaboration of a scientific network between the participating institutes and centres.

The Proceedings of the conference were published before the beginning of the conference (ISBN 954-8986-11-6).

The Organizers also succeeded to acquaint the participants (most of them being for the first time in Bulgaria) with the history, the places of interest, and the traditions of the country: an excursion to the Palace of the Rumanian Queen in Balchik and the botanic gardens, a boat trip and a dinner with traditional dancing over glowing embers took place. The weather was more than friendly permitting the guests to enjoy the sea atmosphere, the park, and the mineral water springs of this region of the  Bulgarian Black sea coast. A friendly celebration was organized on the occasion of Daniela Nikolova's 50th birthday.

Announcements and reports about the event already appeared in the EMS Newsletter, 44, 2002, in the UK Women in Mathematics' Newsletter, September 2002, and in The Journal of The Bulgarian Academy of Sciences, 1, 2003. Special thanks go to UNESCO (UVO-ROSTE), the Union of Bulgarian Mathematicians, EWM, and the UK branch of EWM who supported this meeting, as well as to the Administration of the International Home of Scientists for their help in the organization and the nice accommodation.

# REPORT

## Christine Charretton

        The European Women in Mathematics International Workshop on Groups and Graphs took place near Varna in Bulgaria from August 31 to September 6th 2002. Varna is an important bulgarian harbour of the Black Sea; the conference was located in the Frederic Joliot-Curie Centre, a place in a beach resort for scientific meetings and for holidays of scientists. The conference has been organized by women colleagues of the Institute of Mathematics and Informatics of the Bulgarian Academy of Science. The topics were groups and graphs with problems in coding theory or in combinatorics like designs; some lectures were very theoretical and others more applied to several fields as computer science or even chemistry.

        About fifty people were attending the conference – women or men; they came from several parts of Europe as Belgium, Bulgaria, France, Germany, Malta and UK... For most of the non-bulgarian people, it was the first time to discover the Black Sea; with our hotel being very close to the sea, during the free moments we could go to have a swim or a walk along the sea. Despite the difficulties of the scientists in Bulgaria the conference was perfectly organized; good scientific lectures as well as very pleasant and warm atmosphere permitted many exchanges about maths or simply about the life!

        One afternoon was devoted to the "Women in Maths and Science" subject. Situation in western part and eastern part of Europe are quite different. In the former socialist Bulgaria, science was very popular; boys and girls were attracted to maths by means of mathematical clubs, games and competitions.  Many women came to science in academic positions or as engineers in industry in such great number that it could have appeared, in a first glance, to western people as an "equal opportunities" enjoyable situation, especially in this moment where less and less students come to science in western Europe.  But reality was of course not so pleasant: there were difficult work conditions, especially in industrial plants, and this permanent ceiling glass which was keeping most of the women very low in the hierarchy even when they were numerous as in Bulgaria. The nowadays situation of bulgarian women in science suffers of the present economical difficulties of the country: on one side they are still a very strong part of the academic life but, due to the very low salaries, going on their scientific work means – for men and women – to be obliged to take two or three different jobs to support their families or even survive.

# II
# OTHER MEETINGS

On the 30th October 2002, a seminar was held in the Department of Mathematics, University of Malta with the aim to arouse awareness of EWM activities and train students in disseminating their original work. On the mathematical side, lecturers, students and others interested in mathematics discussed new proofs and posed new problems on Hilbert#8217's Problem, Data Reduction and Eigenvalues, Fibonacci Sequence & The Golden Ratio, Representation of Group Automorphisms, Adjacency Matrices and a Geometry On a Triangular Grid. The proceedings will be published shortly. The attendance was most encouraging and another event is planned for the second month of 2003.

*Irene Sciriha*
*University of Malta*

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## EWM Mentoring Website

The European Women in Maths mentoring site was launched with great success at Oxford Brookes University, UK on 15th November 2002. The afternoon commenced with a workshop attended by mathematics postdoctoral and PhD students on themes in mentoring. The workshop presented an excellent opportunity to discuss the current issues applicable to women in mathematics today.

The evening session, which was attended by mathematicians from many universities, commenced with introductions from the deputy vice-chancellor of Oxford Brookes University, Professor Linda Challis, and from Eryl MacNally, Member of the European Parliament for East of England. Eryl McNally has been very involved in the Framework 5 and Framework 6 research programmes of the EU, and is particularly interested in women in science.

Dr Catherine Hobbs demonstrated the web site and took questions. This was followed by a panel discussion. The panel comprised of Professor Ursula Martin (St Andrews, Scotland), Professor Frances Kirwan (Oxford, UK) and Professor Bodil Branner (Technical University of Denmark) who described their own career histories in mathematics and answered questions from the floor. They all mentioned how useful it would have been to have mentors available to them when they were starting their career.

The website is available to all at  http://ewm.brookes.ac.uk

Both mentors and mentees can sign up on the site. There is also information about careers and other issues for women in mathematics. Do visit the site yourself, and please tell other colleagues about it.

*Catherine Hobbs*
*Oxford Brookes University*

# Russian public women associations and Voronezh regional section activities

The first enthusiastic period of activities of Russian public associations "Women-mathematics" and "Women in Science and Education" was described in [1]. At present time these associations are continuing to initiate series of international scientific conferences.

I *"Mathematics. Computer. Education"*: Dubna (1994, 1996, 1998, 2000, 2002), Puschino (1995, 1997, 1999, 2001, 2003);

II *"Women-Mathematicians"*: Suzdal (1993), Puschino (1994), Voronezh ("Mathematics. Modelling. Ecology", 1995), Volgograd ("Mathematics. Modelling. Ecology", 1996), Novorossiisk ("Mathematics. Economics", 1997), Cheboksary ("Mathematics. Education. Economics", 1998), Novorosiisk ("Mathematics. Economics. Ecology. Education", 1999), Voronezh ("Mathematics. Informatics. Education. Gender problems", 2000), Cheboksary ("Mathematics. Education. Economics. Ecology", 2001), Novorossiisk ("Mathematics. Economics. Education", 2002), Voronezh ("Mathematics. Education. Ecology. Gender problems", 2003).

III *"Nonlinear World"*: Suzdal ("Criteria of Selforganization in Phisical, Chemical and Biological Systems", 1995), Voronezh ("Ecological Education and Nonlinear Mentality", 1997), Moscow ("Theoretical Biophisics", 1999), Astrahan ("Informatics. Education. Ecology and Health of Man", 2000), Krasnodar ("Ecology and Health of Man. Ecological Education. Mathematical Models. Informational Technologies", 2001), Astrahan ("Education. Ecology. Economics", 2002), Astrahan ("Education. Ecology. Economics", 2003).



Elena Ulyanova, Olga Kounakovskaia, Galina Riznichenko, Nadezhda Barchenkova, Tamara Smagina

More than 60 volumes of proceedings of these conferences were published. In [2] one can find information about Cheboksary's conference in 2001.

Here we are concentrating on last Voronezh' conference (Voronezh State University, May 22 – 27, 2000). The conference was an 8th international conference in the series "Women-Mathematicians" and was titled "Mathematics. Education. Ecology. Gender problems". Official languages were English and Russian.

The Organizing Committee of the conference consisted of G.Yu. Riznichenko, S.P. Kurdyumov, I.S. Surovtsev, I.I. Borisov, I.S. Gudovich – cochairs, and E.V. Abramova, N.A. Barchenkova, L.A. Bityutskaya, I.V. Gorskaia, L.V. Dorogan', E.Yu. Krasova, V.A. Krovyakova, O.V. Kounakovskaia, L.V. Nikitchenko, T.Yu. Pljusnina, S.O. Strygina, V.P. Trofimov, O.F. Uskova, I.Yu. Shurupova, I.N. Shchepina, V.V. Yurgelas, N.D. Yanson.

The International Scientific Committee of the conference consisted of V.G. Artyuhov, N.B. Bayeva, N.A. Vinokurova, H.A. Guvelikyan, I.S. Yemelyanova, Yu.I. Zhuravlev, Z.I. Zhuravleva, V.G. Zadorozhnii, E.I. Kikteva, Yu.L. Klimontovich, S.P. Kurdyumov, V.A. Kuznetsova, G.G. Malinetskii, N.I. Merlina, O.P. Negrobov, Yu.V. Pokornii, N.H. Rozov, Yu.I. Sapronov, V.I. Selyutin, V.V. Strygin, O.A. Hasbulatova, V.V. Shakin, L.N. Hitsova, K.F. Hmelev – Russia, G.J. Campbell – Ireland, G. Vincent, J.C. Willson – USA, V.A. Shlyk – Belorussia, N.L. Ulanova – Latvia.

In the programme of the conference there were 5 sections and 2 interdisciplinary seminars.

Sections:

1. Mathematical modelling in humanitarian and natural sciences.
2. Computer technologies in humanitarian sciences and education.
3. Mathematical models in economics and management.
4. Modern approaches in ecological education and upbringing.
5. High and secondary schools: problems of continuity and interactions.

Interdisciplinary seminars:

1. Gender problems in science and education in changing Russia.
2. Nonlinear models of complicated systems.

More than 360 participants from 26 Russian cities (and from Ukraine and Livan) presented their reports on the conference. Proceedings of the conference were published in 2 volumes [3, 4]. It is significant that the women-organizers of this conference did not mention the word "women" in its title. Therefore men-scientists took part in the conference as equals. This led to very interesting and fruitful work. The Russian Fund of Fundamental Researches, the Russian Humanitarian Scientific Fund, the Environment Protection Committee of Voronezh Administration, the S.G. Krein's Fund were sponsors of the conference.

Irina Gudovich, Nadezhda Barchenkova, Olga Kounakovskaia

## REFERENCES

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2. Merlina N. International conference "Mathematics. Education. Economics. Ecology". Cheboksary, Chuvash State University, May 28 - June 2, 2001 // European Women in Mathematics. Newsletter. Number 9, 2002, pp. 10 -14.

3. Mathematics. Education. Ecology. Gender problems. Proceedings of the International Conference. Voronezh, May 22 -27, 2000. V. 1. (Eds. I.S. Gudovich, S.O. Strygina) - Voronezh, "Interlingva", 2000. - 304 p.

4. Mathematics. Education. Ecology. Gender problems. Proceedings of the International Conference. Voronezh, May 22 -27, 2000. V. 2. (Ed. I.S. Gudovich) - Moscow, "Progress-Traditsia", 2001. - 487 p.

*I.S. Gudovich, O.V. Kounakovskaia*

# III
# FUTURE ACTIVITIES OF EWM

### Meeting of the British Women in Mathematics

The next meeting of the BWM will be held at De Morgan House in London on May 6th. The organiser is Alice Rogers (alice.rogers@kcl.ac.uk). It is hoped to include talks both by established mathematicians and also by younger post-docs and research students and is intended to be of interest to a wide range of mathematicians. Previous meetings have been greatly enjoyed and we are grateful to the London Mathematical Society for their support.

*Rachel Camina*
*Cambridge University*

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### The Annually International Conference of Russian Association "Women-mathematicians". 11th International conference Mathematics. Education. Ecology. Gender problems. Voronezh State University, 26 - 30 May, 2003.

The conference will take place in Voronezh in 2003 from Monday, May 26 (arrival day) to Friday, May 30 (departure day). The conference is open to members and non-members of EWM.  Official languages are English and Russian.

**Organizing Committee:** G.Yu. Riznichenko, S.P. Kurdyumov, I.I. Borisov, I.S. Gudovich – cochairs, E.V. Abramova, N.A. Barchenkova, L.A. Bityutskaya, E.Yu. Krasova, V.A. Krovyakova, O.V. Kounakovskaia, L.V. Nikitchenko, T.V. Potapova, S.O. Strygina, L.Ya. Tarasova, O.F. Uskova, I.Yu. Shurupova, I.N. Shchepina, N.D. Yanson.

**International Scientific Committee:** V.G. Artyuhov, N.B. Bayeva, A.G. Baskakov, N. A. Grishayeva, H.A. Guvelikyan, I.S. Yemelyanova, Yu.I. Zhuravlev, Z.I. Zhuravleva, S.A. Zapryagayev, M.I. Kamenskii, A.V. Kirilina, Yu.L. Klimontovich, V.A. Kostin, V.A. Kuznetsova, S.E. Landsberg, G.G. Malinetskii, N.I. Merlina, S.M. Moor, O.P. Negrobov, L.V. Novikova, V.N. Pervushina, A.S. Potapov, N.H. Rozov, Yu.I. Sapronov, A.S. Sidorkin, S.A. Sklyadnev, V.V. Strygin, V.P. Trofimov, O.A. Hasbulatova, V.V. Shakin, L.N. Hitsova – Russia, G.J. Campbell – Ireland, J.C. Willson – USA, L. Thurne – Sweden, M. Popovic – Serbia, V.A. Shlyk – Belorussia, N.L. Ulanova – Latvia, N.D. Gernet, I.I. Kovtun – Ukraine.

**Sections:**
1. Calculating methods and mathematical modelling.
2. Computer technologies in science and education.
3. Mathematical models in economics and ecology.
4. Modern approaches in ecological education and upbringing.
5. Humanitarian and natural science education.

**Interdisciplinary seminars:**
1. Nonlinear models of complicated systems.
2. Gender problems in science and education in changing Russia.
3. Gender researches: prosperity or a crisis?

**Round tables:**
1. Women public organizations: about support of science and education.
2. The culture space of Russia: books, journals, conferences, Internet.

More information you can see at
http://mars.biophys.msu.ru/awse,
http://www.vsu.ru

Contact address:     Russia, 394693, Voronezh,
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                     eva@kvm.vsu.ru,
                     goudovitch@mail.ru,
                     ovk@alg.vsu.ru


*I.S. Gudovich, O.V. Kounakovskaia*

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## The 11th International meeting of EWM, 3-7 November, 2003

## CIRM, Luminy, Marseille, France

The conference is open to members and non-members of EWM. We hope to meet you there. We are planning 4 sessions: **the pure session** will be devoted to Functional analysis and spectral theory, **the applied session** will be devoted to Biomathematics, **the interdisciplinary session** will be devoted to Numerical Methods, and at last, **the socio-political session** to Social Culture differences.

**Members of the Organizing committee are:**

| | |
|---|---|
| Berthé, Valérie (France) | berthe@iml.univ-mrs.fr |
| Fainsilber, Laura (Sweden, chair) | laura@math.chalmers.se |
| Ivanova, Tatiana (Russia) | ita@thsun1.jinr.ru |
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| Tsou, Sheung Tsun (UK) | tsou@maths.ox.ac.uk |

The Cirm (http://www.cirm.univ-mrs.fr) is both a conference center and an hotel. It is located on the campus of  Luminy where one can find The Math Department of the Aix-Marseille II University.


*Valérie Berthé*
*France*

# IV
# MISCELLANEOUS LINKS

## Job

Lecturer A/B in Pure Mathematics, University of Leicester, UK
Department of Mathematics and Computer Science
Available from 1 September 2003
Ref: A5550

Applications are invited for an open-ended Lectureship A/B in Pure Mathematics. This new position is given by the University in response to the grade 5 obtained by Pure Mathematics in the 2001 Research Assessment Exercise. Applicants should have a PhD in some area of Pure Mathematics. Candidates, who should have teaching experience and be engaged in a strong research programme, are encouraged from all areas of Pure Mathematics, though preference may be given to applicants whose research interests complement and extend those of existing members of the group, for example in algebra, geometry, K-theory, Lie theory, number theory, representation theory and topology. The successful applicant will be expected to contribute to the teaching of the Department within Pure Mathematics. The post is available from 1 September 2003.

Closing date for applications: 14 April
See http://www.le.ac.uk/personnel/jobs/a5550.html for details.

Professor Steffen Koenig (sck5@mcs.le.ac.uk)
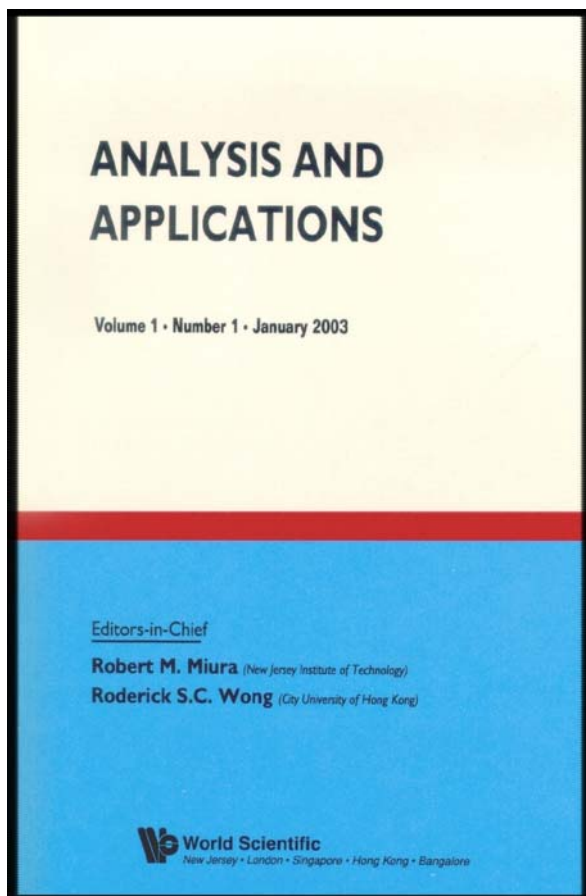Department of Mathematics and Computer Science
University of Leicester

## Women in Science

**European Careers Report: Women in Science** will be published in *Science* magazine on the 4 April 2003. This article will focus on the progress of women scientists in academic careers in Europe. It will examine the reasons why women are rarely found in senior academic positions, most notably the belief among many young women that they must choose between having a family and embarking on a high-flying scientific career. The report will outline how academic organisations are striving to help women scientists make steady progress up the academic career ladder. The report will also provide organisations with the opportunity to promote themselves or their research positions and fellowships etc available to women through an advert in the special advertising section immediately following the article. Relevant full page ads can be placed within the pages of the article.

Richard Walters (rwalters@science-int.co.uk)
Senior Account Manager
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# A New Journal: Analysis and Applications

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**ANALYSIS AND APPLICATIONS**

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