Mathematical Biology Newsletter

Society for Mathematical Biology Volume 8, Number 2 September, 1995

Dear SMB Members,

This issue of the newsletter is brought to you from Vancouver, the site of its temporary editorial office. I would like to thank contributors who responded quickly to requests for information or text for this issue. I call on other SMB members to contribute articles, commentary, interviews, announcements, or any other information (about conferences, workshops, etc.) of interest to our members.

This issue contains news of conferences, reports of SMB business meetings, and of our 1995 annual meeting in Oaxtepec, Mexico (pp 4-5). It also brings sad news of a tragic accident that has widowed one of our esteemed young members, Ramit Mehr. I hope you will contribute generously to a fund being set up in her name. (See p 8).

With this issue, I would like to begin more frequent and up-to-date newsletters, with a target of 3-4 issues per year. This target can only be met if SMB members are sufficiently interested in the newsletter to contribute to it. Communication by email (to keshet@math.ubc.ca) is preferable to avoid retyping, but mail or fax will also be greatly appreciated. To make this newsletter more current, an emphasis will be placed on punctuality and on rapid dissemination of information. Please help by observing deadlines for submission. Material not received by the deadlines will be published in later issues of the newsletter, if still relevant.

With many thanks,

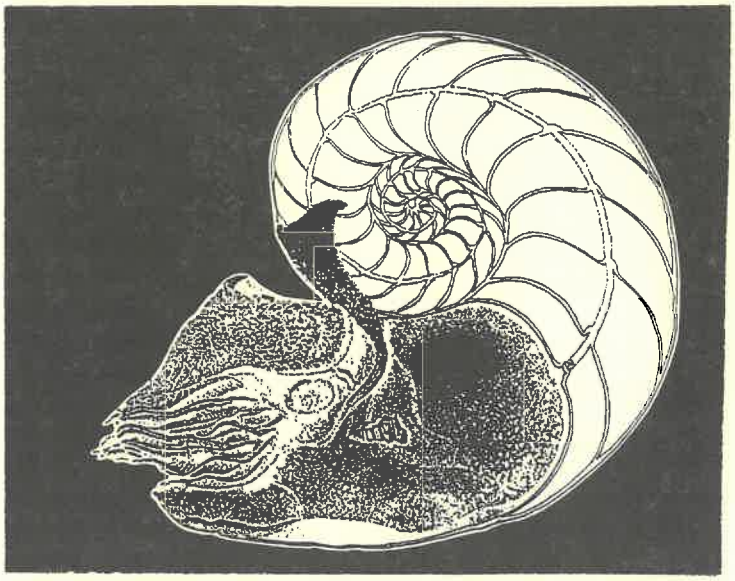
Leah Edelstein-Keshet
president, SMB

ABOUT THE NEXT ISSUE:

Deadline for submissions:	Dec 1, 1995
Publication date:	Jan 1, 1996

A NEW LOGO FOR SMB ?

In a previous issue of this newsletter, members were asked to contribute designs for an SMB logo. At the recent SMB meeting (in Oaxtepec, Mexico) the design of the nautilus shown below was favored by SMB members, who felt that it symbolizes a harmony of mathematical and biological form. This logo was designed in the Instituto de Quimica, UNAM in the group of Dr. F Lara-Ochoa. This design, or some suitably modified version is being considered for our new SMB logo.



SPECIAL YEAR IN MATHEMATICAL BIOLOGY
SEPTEMBER 1995-JUNE 1996

UNIVERSITY OF UTAH
DEPARTMENT OF MATHEMATICS

The Department of Mathematics at the University of Utah is holding a Special Year in Mathematical Biology, funded by NSF with support from the University of Utah. The object of the Special Year is to train scientists in mathematical modeling applied to biological problems. The program will include a full year course `Mathematical Modeling in Biology', a weekly seminar series, one three day minisymposium per quarter and an informal student/post doc seminar. Visitors will include principal lecturers, post-doctoral fellows, visiting graduate students, short- term visitors and minisymposium participants. The Special Year will be run in cooperation with the Departments of Biology, Bioengineering, and Human Genetics, and the Cardiovascular Research and Training Institute at the University of Utah. The Mathematics Department currently has seven faculty (Fred Adler, Bill Coles, Aaron Fogelson, Jim Keener, Mark Lewis, Hans Othmer and Silvia Veronese) and over 15 graduate students who are actively involved in mathematical biology research.

ORGANIZATION

Ecology and Evolution (September 27 -- December 8 1995)
Principal lecturers include Odo Diekmann (Amsterdam), Steve Ellner (NC State), Simon Levin (Princeton), Robert Holt & Richard Gomulkiewicz (U. Kansas), Roger Nisbet (UCSB) and Simon Tavare (USC). The minisymposium on competition for space and territoriality is organized by Deborah Gordon (Stanford).

Physiology and Cell Biology (January 3 -- March 8 1996)
Principal lecturers include Michael Mackey (McGill), John Milton (Chicago), Hans Othmer (Utah), Arthur Sherman (NIH), and John Tyson (Virginia Tech). The minisymposium on Calcium Dynamics is organized by Joel Keiser (UC Davis).

Cardiovascular Physiology and Biofluids
(Mar 25 -- May 31, 1996)
Principal lecturers include Leon Glass (McGill), Nick Hill (Leeds), Wanda Krassowska (Duke), Ed Pate (Washington State) and Charles Peskin (Courant). The minisymposium on experimental methods in electrocardiographic mapping is organized by Robert Lux (Utah).

The application deadline for graduate student and postdoctoral positions has now passed. However, those interested in attending the minisymposia can contact mathbio@math.utah.edu. As information is updated it will be available via anonymous ftp from ftp.math.utah.edu in the directory pub/mathbio. Or contact Mark Lewis, Special Year in Mathematical Biology, Department of Mathematics, JWB233, University of Utah, SLC, UT, 84112 USA, tel: 801-581-6195, fax: (801) 581-4148, mlewis@math.utah.edu.

PRODYNAMICS '96
PROgress in Theory and Applications of Modelling Aquatic Population DYNAMICS

March 5-9, 1996
GKSS Research Centre Geesthacht & Univ. of Hamburg

AIMS & SCOPE: This interdisciplinary meeting will promote the exchange of recent results and ideas on complex temporal, spatial and spatio-temporal structures in dynamics of aquatic populations. Theoretical studies of aquatic biological, chemical and physical processes and of their interactions and applications will be presented.

CONFERENCE SESSIONS (tentative)
1 Theoretical aspects of ecodynamics: Complexity, stability concepts, feedbacks, extremal principles.

2 Modelling processes, patterns, and scales in the aquatic environment: Ecohydrodynamics: Modelling physical effects on aquatic biogeochemistry, dominance and feedbacks.

3 Theoretical concepts of nonlinear dynamics and self-organization in modelling aquatic communities.

4 Water-quality and ecosystem modelling of specific lakes, rivers, estuaries, coast lines and seas

5 Pollution: Effects of changing inputs of nutrients and contaminants on aquatic populations and biodiversity.

6 Modelling the management of aquatic environments

To present a talk or a poster, please submit the title and abstract (not to exceed 1 page) by October 27, 1995.

REGISTRATION FEE: (about DEM 150,00) includes conference materials, abstract booklet, and conference dinner. Students and young scientists may apply for support.

DEADLINES:

Title and abstract	October 27, 1995.
Final registration and payment	January 31, 1996.

CONTACT ADDRESS:
Horst Malchow Internet: Malchow@GKSS.de
Institute of Hydrophysics, GKSS Research Centre Geesthacht
P.O.B. 1160 Phone:+49-4152-87 1846
D-21494 Geesthacht, Germany Fax:+49-4152-87 1888

DON'T FORGET:
Renew your SMB membership, and keep your SMB address, and status current every year.
(See SMB homepage for membership forms or contact Torcom Chorbajian at jchorbaj@mines.edu)

INTERNATIONAL CONFERENCE ON SPATIAL HETEROGENEITY AND TEMPORAL COMPLEXITY IN BIOLOGICAL SYSTEMS

University of Bath, England, April 1-4, 1996 (tentative)

ORGANISERS: Nigel Franks and Mark Chaplain,
Centre for Mathematical Biology,
University of Bath, Bath BA2 7AY, UK
majc@maths.bath.ac.uk, bssnrf@midge.bath.ac.uk

We propose a conference on Spatial Heterogeneity and Temporal Complexity in Biological Systems to explore the generation of shape, form and pattern over a wide range of biological systems. We plan to hold the conference in Bath, with a target date of 1st - 4th April 1996 (a possible backup date is September 1996.)

Invited speakers: L. Wolpert (Middlesex Hospital), B. Goodwin (Open University), P. Maini (Oxford), G. Oster (Berkeley), L. Segel (Weizmann Institute), A. McLean (Paris), M. Nowak (Oxford), V. Kuznetsov (Moscow), R. May (Oxford), S. Levin (Princeton), B. Shorrocks (Leeds), M. Hassel (Imperial College), T. Pedley (Cambridge), A. Goldbeter (Brussels), J-L Deneubourg (Brussels), N. Kopell (Boston), L. Keshet (UBC).

Topics: Developmental Biology, Immunology, Ecology/Population Biology, Patterns and Rhythms.

Conference Structure, Planning, and Other Support: The programme will consist of plenary talks, workshop sessions, poster presentations and discussion sessions. As far as possible, half of the plenary talks will be given by biologists with the remaining half being given by biomathematicians. We strongly encourage the participation of graduate students and post-doctoral researchers.

INTERNATIONAL CONGRESS ON BIOMATHEMATICS
Buenos Aires, Argentina, October 23-27, 1995.

The Latin American Association on Biomathematics (ALAB) is organizing the Seventh International Congress on Biomathematics, which will meet in Buenos Aires, Argentina, on October 23-27, 1995. Manuscripts to be presented at the Congress must be approved by an International Scientific Committee and will be published in the Proceedings. Two awards are offered: a)The Nicholas Rashevsky Award to the best work in Biomathematics during the last two years. b) The Best Paper Award, to be presented to the contributor of the best paper presented at the Congress.

For more information, please contact:
Carlos A. Leguizamon, Departamento de Radiobiologia, Comision Nacional de Energia Atomica, Av. del Libertador 8250, (1429) Buenos Aires, Argentina, Phone and FAX: (54-1) 787-3118, email: legbiom@mate.dm.uba.are

More information about conferences: continued on p 7.

The Society for Mathematical Biology has a New HOMEPAGE
by Athan Spiros (UBC)

SMB now has a home page on the World Wide Web. While still under construction, this can be viewed at the URL:

http://www.iam.ubc.ca/spider/spiros/smb/index.html

How to access the new homepage:

Netscape should be used for best viewing, but any web browser will do. Currently, our home page contains information on the Society for Mathematical Biology and an online membership form. It also has links to the SMB gopher menu. In the near future we plan to incorporate an easy-to-use survey of sites of mathematical and theoretical biology research throughout the world, information about books related to the field, as well as conferences such as the annual SMB meeting. The planned release date of this page to all the web search engines is September 19, 1995. If you have information that you would like to display on the home page, questions, comments, or suggestions, please contact Athan Spiros via e-mail at spiros@math.ubc.ca.

Other Home Pages:

The **Canadian Society for Theoretical Biology** also has a home page at http://biome.bio.ns.ca/science/cstb/cstb.html . For more information about the society, please contact William Silvert, Habitat Ecology Section, Habitat Science Division, Bedford Institute of Oceanography, POB 1006, Dartmouth, NS, CANADA B2Y 4A2. (Silvert@scotia.dfo.ca), Tel: (902)426-1577, FAX: (902)426-2256.

The Society for Canadian Women in Science and Technology, SCWIST, has a new homepage at the following URL: http://www.harbour.sfu.ca/scwist/Page1.html

ABOUT THE NEXT ISSUE OF THIS NEWSLETTER:

Articles and information about our sister societies: the European and the Canadian Societies of Mathematical and/or Theoretical Biology, and information about memberships, plus reports on other recent 1995 conferences.
Submit your original articles, comments, or information today for inclusion in our January issue. (Deadline for submission: Dec 1, 1995; email: keshet@math.ubc.ca)

Report on the SMB Annual Meeting,

Oaxtepec, Morelos, Mexico, May 27-31, 1995
(prepared by an annonymous contributor)

From the moment we landed in the busy airport, we knew we were in Mexico. We gathered around an SMB banner prominently displayed by Johnny Snyder, anxiously awaiting others soon to join us from several incoming flights. Our little group clustered at the airport door, exchanging news, hugs, or handshakes - it felt like an old highschool reunion, or an annual picnic.

Stormy skies gathered above us as we stuffed our luggage and crowded into a miniature van that arrived to collect us. (It already seemed like "maniana"). Thunderbolts flashed across the dramatic landscape as we slowly wound our way to the resort known as Oaxtepec. We arrived at a tropical paradise, glistening in the dim lights of cottages, and surrounded by exotic vegetation, palms, swimming pools, and grottos.

As we were greeted by the warm handshake of Francisco Lara-Ochoa, and registered by his capable and efficient daughter, our cares and worries vanished: we were in good hands, our dinner at the Tepozteco Hotel had been kept warm for us, and our every need or concern was to be attended-to over the next few days of business, science, and pleasure. We felt a little sheepish asking for "the bottled water, please". But with little exception, we had no worries. All the details had been looked after by our hosts.

The Scientific program at Oaxtepec included sessions on Cell biology, molecular biology and immunology (organizers: A Perelson, F Lara Ochoa, G Cocho), Ecological and environmental issues (S Levin), Epidemiology and evolutionary biology (C Castillo-Chavez, K Hadeler, C Vargas), Developmental biology, physiology and neurobiology (R Miura, R Perez Pascual, H Carrillo Calvet), and Public Health Policy (C Santos-Burgoa).

Invited speakers included Sally Blower (Prophylactic vaccines, risk behaviour, and HIV in San Francisco), Ben Bolker (Spatial stochastic models for plant competition), Dan Grunbaum (Scaling from individuals to aggregates in marine systems), Karl Hadeler (Reaction telegraph equations and random walk systems). Marco V Jose talked about rotavirus infection, Marek Kimmel told us about DNA repeat polymorphisms, and Denise Kirschner gave some immunological insights into the TB epidemic. Nancy Kopell described reduction of Hodgkin Huxley networks to Poincare maps, and Harold Layton talked about renal modelling. Other

Participants in the 1995 Annual Meeting of the Society of Math

invited speakers included Simon Levin, Catherine Macken, Gustavo Martinez-Mekler (Modeling the AIDS virus genetic evolution), Beatriz Munoz (Dynamic transmission and progression of trachoma in hyperendemic areas), Gilbert Walter (Using wavelets for scaling in ecosystem models), and Carla Wofsy.

Contributed talks included those by L Esteva (A model for dengue disease) and J Velasco-Hernandez (Superinfection patterns leading to coexistence of competing species). We heard talks on nonlinear dynamics by H Othmer (Frequency encoding in forced excitable systems) and L Glass (Cardiac arrhythmias). Other speakers were E Afenya (Destruction of the granulopoietic system in acute leukemia), R Meija (Urine osmolality and collecting duct water permeability), T Sekimura (Phylotaxis and light capture by leaves), R Mehr-Grossman (Regulation of thymic and peripheral T cells), J Jungck (Complex food webs) and many other local, North American, and international participants. The talks were well-received, and followed by vigorous discussions over coffee, drinks, or dinner (often by romantic candle-light, as the frequent evening thunderstorms caused several power shortages). Many of the participants also took advantage of the attractive sightseeing, hikes, swims, or relaxing comfort of the Tepozteco Hotel. Of particular note was the spectacular Mexican grill dinner, organized specifically for SMB on Monday night. Many of us left Mexico with a great longing to return once again to this exotic and fascinating land. It was a wonderful meeting, not to be forgotten. For this we thank Francisco Lara-Ochoa, Carlos Castillo-Chavez, and countless other local organizers.

MINUTES OF SMB BOARD MEETING

Oaxtepec Mexico, 28 May 95
Recorded by John Tyson

John Tyson presided over the meeting. Board Members present: Leah Edelstein-Keshet (President-elect), Leon Glass, Robert Miura, Carlos Castillo-Chavez, Ray Mejia. (Absent: Jim Keener, Steve Ellner). Invited guests: Torcom Chorbajian (Treasurer), Alan Perelson and Simon Levin (past presidents).

ITEM 1. Problem of the succession. John Tyson was elected in the second year of the term of the preceeding president, Alan Perelson, and so never spent a full year as a president-elect. This was also true for Leah Edelstein-Keshet. To correct this problem, it was decided that the next president should be elected during the first term of office of the current president, i.e. during the election to be held in Spring, 1996.

ical Biology in Oaxtepec, Morelos, Mexico. May 27-31, 1995.

ITEM 2. Nominating committee. Tyson asked Edelstein to chair the nominations committee (whose role is to nominate suitable candidates for the presidency and the board of directors). The nominating committee includes Ray Mejia, Jim Keener, Michael Conrad and Denise Kirschner.

ITEM 3. Financial report. Torcom Chorbajian summarized a report prepared by an external auditor, detailing the finances of SMB.

REVENUES (1994)	
...from Pergamon	$59,863
...Contr to Busenberg Fund	$ 6,473
...Interest on accts	$ 5,317
...Total	$71,653
EXPENSES (1994)	
...BMB editorial	$ 9,756
...Office	$10,053
...Annual meeting	$ 2,357
...Travel	$ 2,796
...Landahl travel grants	$ 1,800
...Total	$26,762

ITEM 4. Next meetings. There were three suggestions for a joint meeting in 1996: with AIBS in Seattle in August, with the Pacific Northwest Workshop on Mathematical Biology (may not be held in 1996), or with SIAM in Kansas in July. *At the general meeting next evening the consensus was strongly for joining AIBS in 96.* There were two suggestions for a meeting site in 1997: at NC State University (host: Steve Ellner) and at the University of Massachusets (Daniel Bentil volunteered to act as host). Since Ellner's offer had been made one year ago, the consensus was to give him the option. In a telephone conversation after the meeting, he agreed to pursue plans for an SMB meeting in NC in 1997.

ITEM 5. Home page. There was strong support at the Board meeting and at the members' meeting for the establishment of a Home Page for SMB on the World Wide Web. (See detailed announcement on p 3 of this newsletter).

ITEM 6. Logo. Several designs had been submitted and had been discussed. No clear winner was decided upon. However, participants of the Mexico SMB meeting expressed an interest in the "Nautilus" logo used by the organizing committee for this meeting. Tyson will ask a professional graphic artist to come up with several variations on the Nautilus design for further consideration by the Board.

ITEM 7. Newsletter. It was unanimously decided that the Newsletter should appear more regularly.

ITEM 8. Secretarial duties and billing of dues. Charlie Smith of NC State U has agreed to take on the office of Secretary of the Society. The Secretary's main responsibility is to keep track of the membership of the Society and to handle all communication by non-electronic mail. This job is closely related to billing of dues for the Society, which is currently handled by Pergamon Press. It was agreed that eventually, the new secretary should undertake the job of billing for dues and journal subscriptions.

ITEM 9. SIAM initiative for an Activity Group in Math Biology. Robert Miura suggested that SMB "operate" the SIAG-MB, so that there would not be two competing organizations. The Board did not reach a clear consensus and the matter was forwarded to the members' meeting next evening. The members clearly preferred some option stronger than our current position (two separate organizations with friendly cooperation) and weaker than the one proposed by Tyson and Miura (one organization with two faces). The discussion was then passed to a committee chaired by Carlos Castillo-Chavez for further review.

About the Next SMB Annual Meeting in 1996:

The 1996 Annual SMB meeting is to be held in conjunction with the American Institute of Biological Sciences meeting in Seattle, August 4-8 1996. Contributed sessions and talks are now being sought. See upcoming issues of the newsletter for more information, or contact keshet@math.ubc.ca or Donna Haegele at AIBS@GWUVM.GWU.EDU .

Other access to SMB information:

You can receive the SMB Digest via email. To subscribe, send mail to LISTSERV@fconvx.ncifcrf.gov with the line "subscribe SMBnet <your-personal-name>" in the body of the mail.

Submissions for SMB Digest should be mailed to SMBnet@fconvx.ncifcrf.gov.
Anonymous ftp archive: fconvx.ncifcrf.gov (129.43.51.13). Information about the Society for Mathematical Biology and an application for membership may be found in v95i01 and in file mb/pubs/SMB_Membership_Application in the ftp archive.

The SMB Digest is available via gopher under "Grants and Research Information" in the National Institutes of Health (NIH) Gopher at gopher.nih.gov port 70, as well as via the World Wide Web under Society for Mathematical Biology, URL: gopher://gopher.nih.gov/11/res/SMBdigest. Back issues of the Digest are also available via anonymous ftp in directory smb/digest. Other files that are available in the Society for Mathematical Biology gopher and WWW node are available for ftp in directory smb/WWW_mirror.

See p 3 for information about the new SMB homepage.

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GORDON RESEARCH CONFERENCE
ON MATHEMATICAL AND THEORETICAL BIOLOGY
June 9-14 1996 Tilton, NH

Lisa Fauci, Department of Mathematics, Tulane University
ljf@math.tulane.edu

G Bard Ermentrout, Dept of Mathematics, U. of Pittsburgh
bard@mthbard.math.pitt.edu

The program will include sessions on neuroscience (L. Abbott, J. Miller), Molecular Motors (G. Oster), Microbial Motility (R. Dillon), Calcium Dynamics (A. Sherman), Pattern Formation (S. Lubkin), Biological Fluid Dynamics (A. Fogelson), Organismal Biology (M. Koehl), Mathematical Ecology (tba). Other details of the program are still pending. For more information regarding participation, financial assistance, etc, please contact one of the chairs at the above addresses.

Kyoto Conference on Mathematical Biology (KCMB '96)
June 9-13, 1996, Kyoto, Japan

Communicated by Nanako Shigesada, Chair

AIM & SCOPE: The aim of the meeting is to exchange information and discussion on new developments in mathematical biology. The meeting will focus on studies on population dynamics, ecosystem processes, evolutionary ecology and pattern formation. A broad range of topics, from theoretical to applied, will be presented and discussed.

ADVISORY BOARD: E. Teramoto (Kyoto), A. Okubo (Stony Brook), S.A. Levin (Princeton), H. Matsuda (Fukuoka).

ORGANIZING COMMITTEE: N. Shigesada (chair), D. DeAngelis, O. Diekmann, L. Edelstein-Keshet, C. Godfray, A. Hastings, M, Mimura, N. Yamamura, H. Nakajima, K. Kawasaki, T. Namba, Y. Iwasa, M. Shimada, M. Higashi, H. Matsuda, H. Seno, F. Takasu.

SCHEDULE:

June 9, 1996 (evening)	registration & reception
June 10-12	conference
June 13	optional excursion

During the Congress there will be an Exhibition of hardware and software related to modelling and simulation.

Enquiries should be directed to
KCMB96 Secretariat, H. Seno,
Department of Information and Computer Sciences,
Nara Women's University,
Kita-uoya Nishimachi, Nara 630, Japan
telephone. & FAX: +81-(0)742-203442
email: seno@ics.nara-wu.ac.jp

FEDERATION OF EUROPEAN SIMULATION SOCIETIES
(EUROSIM) Simulation Congress is meeting Sept 11 - 15, 1995, at the Technical University of Vienna in Austria.

EUROSIM, the Federation of European Simulation Societies, was set up in 1989. The purpose of EUROSIM is to provide a European forum for regional and national simulation societies to promote the advancement of modelling and simulation in industry, research, and development.

The scientific programme includes: simulation languages, tools, and methodologies, parallel simulation, molecular modelling and simulation, modelling and simulation in economics and in social sciences, applications in engineering, natural sciences, biotechnology, biology, medicine, sociology, and others.

The invited speakers include: B. Buchberger (A): Mathematical Software Systems - Current State of Technology, E.R. Carson (GB): Metabolic Modelling: Past, Present and Future, M. Gervautz (A): Animation - Current Status and Trends, D.P.F. Moeller (D): Fuzzy Systems in Modelling and Simulation, D. Murray-Smith (GB): Advances in Simulation Model Validation, and others.

Tutorials are being held on state-of-the-art topics such as HDL-A, VHDL-based analog and mixed signal modeling description language, Optical Processing and Networking, Communications Network Planning Through Object-Oriented Simulation, Object- Oriented Simulation of Discrete Systems with Applications, Animation and Visualization

For more information contact:
EUROSIM '95, Computing Services / E020
Technical University of Vienna
Wiedner Hauptstr. 8-10, A - 1040 Vienna, Austria
Tel.: +43-1-58801-5386 or -5374 or -5484,
Fax: +43-1-5874211 E-mail: eurosim95@email.tuwien.ac.at
On-line information is available on the EUROSIM information server eurosim.tuwien.ac.at, or via anonymous ftp from simserv.tuwien.ac.at (change to directory eurosim95).
URL:gopher://eurosim.tuwien.ac.at ftp://simserv.tuwien.ac.at

Good News / Good News

The good news is that ***Mathematical Biosciences*** will publish 16 issues per year (currently 12) starting in 1996; the good news is that the subscription price will remain the same as it is now.

More Good News ! The SMB society membership dues will remain the same for 1996: $50 for regular and $25 for student members. Please tell your students, colleagues, and friends about the benefits of joining SMB. Application forms may be obtained from Torcom Chorbajian or Leah Edelstein-Keshet (addresses on p 1) or via the SMB home page (see p 3).

LITERARY EVENTS

The Handbook of Brain Theory and Neural Networks, Michael Arbib. The MIT Press, 1995 /1152 pp., 1,200 illus. $175.00

*** Artificial Life: An Overview,*** Christopher Langton. The MIT Press, 1995 / 336 pp. $42.00

Introduction to Computational Biology, Michael Waterman. Chapman & Hall, 1995 / 450 pp. $49.95

Recombination, Variability, and Evolution: Algorithms of Estimation and Population-Genetic Models, A.B. Korol, Chapman & Hall. 1995 / 376 pp. $115.00

*** Dynamical Disease: Mathematical Analysis of Human Illness***, edited by Jacques Belair, Leon Glass, Uwe an der Heiden, and John Milton. AIP Press, 1995 / 220 pp. $40.00

*** At Home in the Universe,*** Stuart Kauffman. Oxford University Press, 1995 / 321 pp. $25.00

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Report on Mathematical Biology at ICIAM 95 (The International Conference for Industrial and Applied Mathematics), July, 1995
Communicated by Raymond Mejia

The Third International Congress on Industrial and Applied Mathematics was held in Hamburg during the first week of July. There were several invited talks, minisymposia, contributed talks and posters of special interest.

Alan Perelson (Mathematical modeling of the immune system in health and disease) and Charles Peskin (The immersed boundary method for biological fluid dynamics) gave invited talks.

Among the minisymposia, Mathematics in Physiology (organized by P. Lory) included one session on recent kidney models and another session on flow in collapsible tubes, large arteries, tumor growth and uses of localized nuclear magnetic resonance. Mathematical Models in Epidemiology (organized by V. Capasso and P. van den Driessche) emphasized statistical models as well as deterministic models that give rise to nonlinear dynamical systems.

Theoretical Immunology (organized by L. Segel and R. de Boer) featured various modeling strategies including exploitation of analogies with neural networks, uses of probability and control theory to model affinity maturation and "super- phenomenological" approach to model auto-immune disease.

Towards the Understanding of Chemical Pattern Formation (organized by M. Mimura) sought to show how experimental results can be explained by current mathematical models.

Nonlinear Waves in Physiology (organized by J. Sneyd) presented a variety of problems with wave behaviour, including applications in cardiology, calcium waves, acoustics and wound healing. Harnessing Chaos (organized by M. Yamaguti) included attempts at application of deterministic chaos in neural networks.

Contributed and poster presentations included applications of mathematics in diverse areas of biology and medicine, including molecular biology, population dynamics, and the visual system.
The Invited Lectures as well as the lectures of the Minisymposia and the Contributed Presentations will be published by Akademie-Verlag to appear in early 1996.

Our Deepest Condolences

On August 1, of this year, a valued member of our community, Ramit Mehr-Grossman, lost her husband of ten years, Tal Grossman, in a car accident. Tal is survived by Ramit, and their two small children, Marva and Arbel.

It is with great sadness that I share this news, as both Ramit and Tal have been close friends of mine. I am sure we cannot imagine what she will be going through in the months and years to come. The support from her colleagues, friends and family has been a crucial part of dealing with the tragedy. This can and should continue in the future. Friends from Los Alamos were at Ramit's side immediately to help with many details concerning the sad trip to Israel, to join the rest of their family in a period of mourning. Since the accident, Ramit has been flooded with e-mails expressing concern and support from people all over the world. I am proud to be a part of such a caring community, dedicated not only to science but also to their fellow members.

A fund has been established to help defray some of the expenses that Ramit and her children are facing at this time and in the uncertain future. Please send your tax-deductible contributions, no later than December 1, 1995, to:

SMB/Mehr-Grossman Fund, c/o Denise Kirschner, 2908 Cortez Court, College Station, TX 77845, USA
phone: 409-845-7955, email: dek@math.tamu.edu

While Ramit is in Israel she welcomes your communication. She can be reached via email at: ramit@t10.lanl.gov or ramit@ wisdom.weizmann.ac.il.

Communicated by Denise Kirschner