

newsletter

EUROPEAN SOCIETY OF BIOMECHANICS

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EDITORIAL

The Fourth Meeting of our Society has been an astonishing success both in terms of attendance and quality of papers presented. We all thank Stephen Perren and his collaborators for the brilliant organization and friendly atmosphere with which they have welcomed all of us in Davos.

There is no doubt that, as we all witnessed at the Meeting, research in Biomechanics has gained a great deal of momentum in Europe as well as in the rest of the world. It is now to be considered by all means an autonomous discipline with its specific methodologies and objectives. Attempts are now being made to formulate theories aimed at the systematic ordering of observed phenomena. Applicative protocols are being tested which will soon promote Biomechanics to a truly professional as well as research discipline.

Our Society is committed to work towards the maintenance of this positive trend and the achievement of an even more effective organizational framework which would support, facilitate and guide individual efforts. We must also be mindful of our interdisciplinary commitment. At this critical juncture it is incumbent upon us to either increase our power in order to remain in orbit or else fear the consequences of our loss of power and thereby burning up in the atmosphere.

Towards these ends a number of initiatives are launched by this Society as reported elsewhere in this Newsletter. But, again, I must emphasize that the success of anything the Society does relies on the active participation of the entire membership. So, please, do collaborate with the Council so that we can achieve and maintain greatness. Happy New Year!

Council:	Secretariat:	Treasury:	Editor:
S.Perren, President	R.Huiskes	D.H.van Campen	A.Cappozzo
A.Cappozzo, Vice-President	Biomechanics Lab.	Jonker Flirislân 11	Laboratory of Biomechanics
R.Huiskes, Secretary General	Dept. of Orthopaedics	5673 MK Nuenen	Istituto di Fisiologia Umana
D.v.Campen, Treasurer	University of Nijmegen	The Netherlands	Universita degli Studi
L.Claes, Meeting Committee	6500 HB Nijmegen	Phone: (0)40 838249	"La Sapienza"
R.Kolbel, Membership Committ.	The Netherlands		00185 Roma-Italy
B.Moyen, Statutes Liaison	Phone: (0)80-514476	Postal Giro Account	Phone: (06) 490673
N.Berme	Telex: 48232 aczhs nl	Number 5687453	
J.P.Paul			
J.Wagner			

The program will be highlighted by invited lectures on the following topics:

- *Biomechanics in Orthopaedics
- *Engineering Aspects of Biomechanics
- *Biomaterials for Orthopaedic Implants
- *Gait Analysis
- *Fracture Treatment
- *Sport and Biomechanics
- *Biomechanics of the Knee Joint

VENUE

The conference will be held from Monday, September 8, through Wednesday, September 10, 1986, at the Free University Berlin, Henry Ford Bau. The precourses will be on Sunday, September 7, 1986, also in the Henry Ford Bau. The Free University is located in the south of Berlin (Zehlendorf). The underground station Thielplatz is in walking distance.

CALL FOR PAPERS

Participants of the conference will have the opportunity to present their work during the conference. Abstracts, covering any of the previous mentioned topics, will be accepted in oral (max.15 min.) or poster presentations. Authors wishing to submit a paper must send a one-page abstract to the Conference Chairman, not later than January 15, 1986. The abstract must be typed on special abstract forms, that will be sent on request by the Conference Secretariat along with the Author's Guidelines.

All contributions will be reviewed and selected by the Conference Committee, assisted by the Program Advisory Board and the Council of the ESB. Authors will be notified of the committee's decision around April 1, 1986.

PUBLICATIONS

At the time of conference, all accepted abstracts will be available for the participants. A separate abstract of these papers will be published in the Journal of Biomechanics after the conference. The invited lectures and selected contributions will be published in full length after the conference by Martinus Nijhoff Publisher B.V. as Volume 3 of the series "Biomechanics: Principles and Applications". Authors of all accepted papers will be invited to submit a manuscript for this book not later than September 1, 1986.

TIME SCHEDULE

January 15, 1986	Deadline for submission of abstracts
April 1, 1986	Letter of acceptance
May 1, 1986	Deadline for early registration
August 1, 1986	Deadline for registration
September 7, 1986	Pre-course
Sept.8-10,1986	CONFERENCE
June, 1987	Conference Book published
	Abstracts in Journal of Biomechanics published

EXHIBITION

A scientific exhibition displaying scientific equipment, computers, books and related objects will be organized.

SOCIAL PROGRAM

A social program for participants as well as accompanying persons is being arranged.

- Visit of museums
- Theater and opera
- Sightseeing tour
- Rustical Buffet

Further details will be forwarded after registration.

After the conference, a visit of the Biomechanics Laboratory of the Dept. of Orthopaedics of the Free University Berlin (Oskar-Helene-Heim) may be organized.

ORGANIZATION

This conference is organized by the European Society of Biomechanics (E.S.B.) in collaboration with the Biomechanics Laboratory of the Dept. of Orthopaedics of the Free University Berlin (Oskar-Helene-Heim), Berlin (West), Germany.

THE CONFERENCE COMMITTEE

G.Bergmann, Berlin	Chairman, Editor
A.Rohlmann, Berlin	Secretary, Treasurer
R.Kolbel, Hamburg	Vice-Chairman
P.Brinckmann, Munster	
L.Claes, Ulm	
W.Plitz, Munich	
U.Rehder, Hamburg	
U.Soltesz, Freiburg	

For further information, please contact the

CONFERENCE SECRETARIAT
Oskar-Helene-Heim
Biomechanics Laboratory
c/o Dr.A.Rohlmann
Clayallee 229
D-1000 Berlin 33 (West)
Germany
Phone: (030) 81 004 373

PRE-COURSES

Stress Analysis in Bone

by H.J.C. Jacob, Orthop.Univ.Klinik Balgrist, Zurich, and K.W.J.Wright, London.

Biomechanics of the Upper Limb

by E.Y.S.Chao, Mayo Clinic, Rochester, MN, USA and Berme, The Ohio State University, Columbus, OH, USA.

Bone Remodeling

by R.Huiskes, University of Nijmegen, The Netherlands, and S.Perren, Swiss Research Institute, Davos, Switzerland.

Endoprosthetic Design

by P.Walker, Brigham and Women's Hospital, Boston, MA, USA, and P.Lawes, Howmedica International Inc., Limerick, Ireland.

ADVERTISEMENTS

NEW BOOKS!

Recently, a pre-announcement has been made of the Proceedings of the First China-Japan-USA Conference on Biomechanics, held in Wuhan, The People's Republic of China, from May 9-12, 1983.

This conference could be attended on invitation only. The Proceedings contain papers of 42 lectures, the authors being a.o.: Y.C.Fung, E.Fukada, J.L.Katz, J.J.Wang, S.Oka, K.Zhen-Huang, S.S.Sobin, M.Y.Jaffrin, S.Weinbaum, T.Azuma, R.M.Nerem, H.Niimi, T.Zu-Lai, R.Skalak, J.G.Pinto, N.H.C.Hwang, Xi Bao-Shu, Liu Zhaorong, N.Ohshima, Y.Isogai, Y.Seguchi, J.S.Lee, R.T.Yen, H.K.Chang, Y.Matsuzaki, V.C.Mow, D.H.van Campen, Shang Tien-Yu, Hu-Liang-Jun, E.Y.S.Chao, G.Lea, H.Abé, T.Taotsu Wu, K.Hayashi, H.Chen, Y.P.Wu, S.L.Y.Woo, T.Tateishi, E.R.Myers, Wu Wen-Zhou, Wang Bao Shiang, M.M.Gola.

If sufficient pre-subscriptions are made, the Proceedings can be obtained at a discount price of US\$ 20. - instead of US\$ 30.-. Pre-subscriptions can be made through the Treasurer of the ESB and should be made as soon as possible.

BIOMECHANICS OF NORMAL AND PATHOLOGICAL HUMAN ARTICULATING JOINTS

Edited by Berme, Engin and Correia da Silva

Proceedings of the NATO Advanced Study Institute held in Portugal - June 1983

This book provides the first comprehensive text on the advanced in biomechanics of both normal and pathological human joints. Biomechanical properties of joint tissues, lubrication of joints and physiology and biomechanics of muscles are reviewed. Significance of mathematical modelling, various modelling techniques and experimental methods are discussed. The text also covers clinical aspects of normal and pathological joints, biomechanics of joint replacement, as well as design, manufacture, standards and testing of endoprostheses. Each chapter is authored by an expert in that field, including the following: Andriacchi, Berme, Cappozzo, Engin, Evans, Huiskes, Lawes, Mulier, Paul, Renaudeau, and Correia da Silva. The book will be published by Martinus Nijhoff Publishers BV, P.O. Box 566, 2501 CN The Hague, The Netherlands.

RECAL

Rehabilitation Engineering Current Awareness List

Produced by

The National Centre for Training and Education in Prosthetics and Orthotics
University of Strathclyde - Curran Building - 131 St James' Road
Glasgow - Scotland

Current Awareness and Information Service

The National Centre for training and Education in Prosthetics and Orthotics maintains a library and information service which is now being offered to rehabilitation professionals outwith Glasgow through a fortnightly Current Awareness List.

The service consists of:

- a) bibliographic details of papers from over one hundred journals taken at the National Centre. The papers are listed under broad subject headings for ease of finding. A list of journals covered presently is shown overleaf - new titles are added as appropriate.
- b) literature searches. A notice of any searches carried out in the preceding fortnight is given with the number of references found. Sources used include Index Medicus, Excerpta Medica and the Centre's own material. Copies of these searches are available for £ 3.00. The original request is charged at £ 5.00.
- c) acquisitions. Details are provided of all new books, conference proceedings, standards etc acquired by the Centre library. These items are available on loan within the UK, although there may be a waiting list.

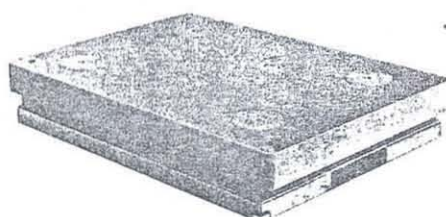
Subscription rates:

Individual £10 UK, £20 Overseas

Library/Institution/Company £15 UK, £25 Overseas

Cheques should be payable to University of Strathclyde and sent to the above address.

Introducing: the KISTLER desktop biomechanics computer system



... new compact price

The unmatched performance of KISTLER force plates teams up with the latest desktop computer of Data General, offering you:

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Instant video monitoring – no waiting for display

Instant video monitoring on 12 inch monitor with (640 x 240) resolution. Zooming available through single keystroke commands – much more comfortable than storage scopes. Plotting is possible while making measurements.

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Up to 20 000 measurements per second, error less than 0.05%. For an eight-channel force plate this means 2000 force vectors, points of force application and torques per second. Automatic triggering by force plate signals – with possibility to see what has happened even before triggering.

Easy operation and user friendly

No computer knowledge required for operation. Menu technique to initiate different tasks. The computer completely controls the charge amplifiers, without user intervention. System may be set up easily.

Professional scientific computer system

Data General's Desktop Generation Model 10sp, incorporating a dual processor system: microECLIPSE and Intel 8086. Main memory expandable to 768 kbyte, up to two 15 Mbyte Winchester disks and cartridge tape backup available. Professional worldwide service by Data General.

Potential to keep pace with your future needs

System expandable to be used with several force plates and other signals like EMG. Digital outputs for stimulation purposes. Possibility to communicate with host computers. May be used with five operating systems including CP/M-86 and virtually all high level languages.

Recommended configuration:

Desktop Generation Model 10sp, 256 kbyte RAM, 368 kbyte floppy disk drive, 15 Mbyte Winchester disk drive, 12 inch monitor (optional 13 inch color monitor available), printer, multicolor plotter.

Over 400 KISTLER force plates are used by leading institutions in 32 countries around the world.

Please ask for detailed information.
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KISTLER

Kistler Instrumente AG
Eulachstrasse 22
CH-8408 Winterthur, Switzerland
Tel (052) 83 11 11, Tx 76458, Fax (052) 25 72 00



EXECUTIVE NOTES

From the Secretary

The previous year has been very busy with the 4th General Meeting in Davos which, in all aspects, has been a great success. While in Davos, two Council Meetings and a General Assemblée were held. The minutes of the latter are to be found in this Newsletter.

Important matters were the decision on the location of the 5th General Meeting (September 1986, Berlin) and the election for new Council membership. Burny, Merckx and Hernandez-Ros retired from the Council. Berme, Huiskes, Perren and Wagner were re-elected for another 4-years term. Cappozzo, van Campen and Moyon remained to their terms. Elected in addition were the members Claes, (Ulm, BRD), Kolbel (Hamburg, BRD), and Paul (Glasgow, Scotland).

At the last Council Meeting the functions were divided as follows: Perren/President, Cappozzo/Vice-President and Newsletter Editor, Huiskes/Secretary, van Campen/Treasurer, Moyon/Statutes liaison, Claes/Meeting Committee, Kolbel/Membership Committee, and the Members at large: Berme, Paul and Wagner.

The following individuals were voted to Society Membership: C.G.Amstrong (Belfast, N.Ireland), B.Gasser (Bern, Switzerland), G.H.Gautschi (Zurich, Switzerland), D.Gebauer (Wuppertal, BRD), O.E.Pohler (Waldenburg, Switzerland), and K.Sarpyener (Istanbul, Turkey). Many others have applied for membership while in Davos.

The members Cappozzo and Paul were asked to represent the Society at the Biomaterials Meeting in Paris, September 1985. Ascenzi and Cappozzo were suggested as keynote Speakers at that Meeting.

The Council has been in contact with the U.S.National Committee of Biomechanics, which is enhancing international contacts.

The American Society of Mechanical Engineers will have its 1987 (June) Biomechanics Symposium in Cincinnati, Ohio. The U.S. Nat.Comm., together with the ASME, is looking for national and international Societies of Biomechanics to co-sponsor that meeting. In addition, the U.S. Nat.Comm. is enhancing the organization of a World meeting on Biomechanics in 1989. The Council of the ESB has decided to sponsor both these Meetings.

Finally, a word on the retirement of Franz Burny. I have been a Council member ever since Franz called us together in 1976 in Brussels, the 29 Founding Members, to discuss the incorporation of this Society. I have been a close witness, therefore, of his efforts to make this Society a success. All who have visited the consecutive General Meetings know how fast the Society has grown, and how the various activities have increased and improved. There is no doubt in my mind that Franz has been the prime "engineer" of these developments. The Society owes him a lot. I hope we will see him appear and present during our next Meetings, and be a witness to the further establishment and improvement of Biomechanics in Europe.

I wish you all a happy and fruitfull 1985, and I hope we will meet at the various Conferences, Symposia and Courses which are co-sponsored by our Society.

From the Treasurer

Approximately 145 ESB members paid their fee for 1984. ESB members who did not yet paid their fee for 1984 are urgently requested to fulfill this duty as soon as possible. Recently, Pergamon Press decided that they will stop providing us with back volumes of the J.of Biomechanics at reduced rates. So in January 1985 it will

not be possible any more to provide ESB members with issues of the 1984 and 1983 volumes at reduced rates.

At the recent Council Meeting in Davos it was decided that those ESB members who did not pay their fees for 1982, 1983 and 1984 will receive a registered letter asking for fulfillment of their financial duties. If they do not respond to this letter they are considered to be expelled. This matter concerns 40 ESB members.

Some months ago Pergamon Press has informed us that they want to increase the subscription fee for the J.Biomechanics to US\$ 30.00 per annum. At the recent ESB Council Meeting in Davos we decided to agree with the proposed rate increase, be it that we would like the subscription fee being paid in some European currency. It seems that Pergamon Press is willing to let the subscription fees being paid in UKf.

In view of the financially healthy situation of the ESB the Council decided not to increase the membership fee for 1985. Because of the above, the starting point for the 1985 ESB fee was the UKf equivalence of US\$ 40. - being about UKf 32.50. In order to reduce the money transfer costs a Postal Giro Account has been opened recently, its number being 5687453. All ESB members are herewith kindly invited to remit the amount of UKf 32.50 or its equivalence in some European currency or in US\$ to the above Postal Giro Account Number. Alternatively, but less preferably, payment by bank transfer or by cheque is also possible, but then only payment in UKf or in D.Fl. is allowed.

It should be noticed that the address of the Treasurer is changed, due to a job transfer to the Eindhoven University of Technology. All correspondence with respect to the treasurership should be addressed to

D.H. van Campen
Jonker Florislaan 11
5673 MK Nuenen
The Netherlands
Phone: (0) 40-838249

The day-to-day control of all administrative matters with respect to the ESB treasurership has been taken over by Mrs.A.C.van Campen-Stuurman, same address as above.

<u>Cash balance March 1984:</u>	Dfl.	US\$
Total amount on Dfl. account	17,294.57	5,708.--
Total amount on US\$ account	4,513.65	1,353.--
<u>Incomes:</u>		
Membership fees on Dfl. account	7,495.27	2,342.27
Interest	37.40	11.69
Membership fees on US\$ account	10,713.60	3,348.--
<u>Expenses:</u>		
Transfer costs bank account	PM	
Secretarial costs: treasurer	1,022.40	319.50
secretary	1,500.--	468.75
Invoices Pergamon fees J.Biomechanics		
for: 1983/1984	14,640.--	4,575.--
Invoice Martinus Nijhof Publishers	2,000.--	625.--

Cash Balance September 1984

Total amount on Dfl. account	104.84	32.76
Total amount on US\$ account	403.20	126.--
Total amount in deposits	20,200.--	6,312.--

From the Membership Committee

The membership statistics are (September 1984) as follows:

Austria	1	Ireland	1	Switzerland	30
Belgium	28	Italy	37	The Netherlands	33
Brazil	1	Liberia	1	Turkey	1
Canada	2	Nigeria	1	United Kingdom	14
Denmark	8	Portugal	1	U.S.A.	4
France	24	Spain	9	West Germany	11
Greece	11	Sweden	3	Yugoslavia	2

Total: 221 Members.

The recruiting campaign continues!

From the Meeting Committee

The Meeting Committee functions has a contact point between the organizers of scientific events relevant to Biomechanics and the Society membership.

Organizers who wish that their Meetings or Instructional Courses be sponsored by the ESB should apply to the ESB Council through the meeting committee chairman providing all necessary details. The Meeting Committee shall process the application, and the Council shall evaluate it and reach the final decision. Applicants should take notice that this procedure will take at least four months.

Members are solicited to organize workshops on specific topics under the sponsorship of the Society. Proposals should be submitted to this Committee.

The Meeting Committee Chairman is:
 Priv.Doiz.Dr.L.Claes
 Labor fur Exp. Traumatologie der
 Abt. Chirurgie III, Universitat Ulm
 Oberer Eselsberg, D-7900 Ulm
 Telefon (0731) 176-2634
 West Germany

MINUTES of the GENERAL ASSEMBLEE of the European Society of Biomechanics
 Davos, Switzerland, September 1984

Present: M.Janet, H.Woltring, J.Atha, T.Arts, J.Huyge, M.Portigiallis-Barbos, A.Ascenzi, R.H.Delcominette, P.Scholten, A.de Boer, F.Bosman, H.J.Grootenboer, R.Klumpert, W.Plitz, A.Huggler, J.Cordey, E.Munting, R.Bourgois, D.Crick, J.P.Paul, J.U.Baumann, A.R.Schaer, B.A.Kalm, B.Jonsson, T.Peters, U.Schleger, H.Lanshammar, C.W.Spoor, U.Soltesz, A.Rohlman, L.Claes, L.Blankevoort, I.Hvid, A.J.C.Lee,

E.Schneider, P.Comte, A.Cappozzo, B.Moyen, N.Berme, D.H.van Campen, R.Huiskes, F.Burny, S.Perren, C.Hernandez-Ros, R.Kolbel, G.Bergmann, L.Katz.

1. Opening by the Chairman (F.Burny)

- The chairman thanks the local Committee for the organization of the 4th General Meeting, which is excellent. He reminds of the increase in Membership and Papers in the course of the years.

2. Reports

- Membership Committee (N.Berme)

Now 143 members in good standing, plus 5 approved at the last Council Meeting. An additional 42 individuals have not paid their fees for three years. Their membership will be terminated. Assistance is asked from the Corresponding Members to locate members of which the addresses are unknown.

- Newsletter (A.Cappozzo)

The members are asked to submit material for the Newsletter

3. Financial Report

- The treasurer (D.van Campen) distributes the Financial Balance. There are no comments from the floor.

- There is no increase of the membership fee proposed for 1985/86.

- Pergamon Press has proposed an increase of the J.Biomechanics subscription fee from \$25.= to \$30.. After negotiations it was agreed that this fee will be paid in Pound Sterling, in order to reduce the net price somewhat, and decrease the effects of the variable dollar exchange rate.

- Pergamon Press will send no more back issues at a reduced price. So everyone is advised to pay her/his fee on time.

- H.Woltring proposes to put the Giral Account no. of the Bank on the invoice. The treasurer will investigate the possibilities.

4. Location of the 5th General Meeting in 1986

- A proposal has been received from R.J.Minns (Durham, U.K.). However, nobody of that group is present.

- G.Bergmann outlines the proposal for Berlin (8-10 September 1986). A national group for the organization of this meeting has been formed.

- A.Lee suggests that the BES (U.K.) could organize a Conference, but according to J.Paul they have no experience with such large meetings.

- The German proposal (Berlin) is unanimously accepted.

- A.Lee proposes that the 1986 Berlin Meeting and the 1986 Biomaterials Meeting in Bologna should either be close together or far apart. Since the Berlin Meeting is set now, the Biomaterials Society can chose its own dates accordingly.

- L.Katz suggests that close together will be better for the american attendants. H.Woltring suggests to have 2 days in-between.

5. Report from the Corresponding Members

No Reports.

6. Elections for Council Members

- The members F.Burny, J.Merckx and C.Hernandez-Ros retire. Seeking re-election for 4 more years are: N.Berme, R.Huiskes, S.Perren, and J.Wagner.

New proposals from the Council: L.Claes, R.Kolbel, and J.Paul.

- The proposals are put to a vote and approved by the membership. The new Council is installed.

- Perren takes the chair and thanks the leaving Council members for their efforts on behalf of the Society. He reminds in particular the founding of the Society by F.Burny, his work as Secretary and later as President.

7. Other Business

- The chairman stresses the importance of Newsletter material from the membership. He proposes the organisation of specialty workshops during the next two years. These can be organized by individuals or groups. Suggestions for topics are welcome.

- J. Cordey suggests the topics: Strain-Gauge Analysis, FE-Analysis, CT-Scanning, Telemetry. H. Woltring suggests a comparison of equipment.

- R. Kolbel proposes small workshops in relation with the General Meeting.

- Th. Arts suggests to organise mixed oral/poster presentations. J. Cordey inquires whether the posters could be published in the Abstract Book.

8. Closure

The chairman closes the General Assembly, thanking again the retired Council Members Burny, Hernandez-Ros, and Merckx.

Announcements on the Journal of Biomechanics

Pergamon Press has given a one page space to the ESB for Announcements.

These may concern:

- ESB Affairs.
- Scientific Meetings.
- Instructional Courses.
- Vacant positions in Biomechanics.
- Other important notice.

Members are required to submit the relevant material to the Newsletter Editor.

FORTHCOMING EVENTS

EINSEGNEMENT INTERUNIVERSITAIRE DE BIOMECHANIQUE DE L'APPAREIL LOCOMOTEUR
VIe SESSION

Organisé par l'Université Libre de Bruxelles, l'Université Catholique de Louvain,
l'Ecole Royale Militaire et l'Université de l'Etat à Liège
Bruxelles, Belgique, 9-16 Mars 1985

Lieu: Fondation Universitaire - rue d'Egmont, 11 - 1050 Bruxelles.

Droit d'inscription: 9.000.-F.B. à verser au compte bancaire "EIBAL - Secrétariat"
n°. 210-0660093-60 avant le 28 février 1985.

Avec la participation de:

P. BLAIMONT
S. BORENSTEIN
R. BOURGOIS
F. BURNY
P. COUTELIER
J. E. DESMEDT

M. HINSENKAMP
J. JEDWAB
R. LEMAIRE
L. LEWILLIE
P. MAQUET
G. MARECHAL

J.EBBENI
K.HAINAUT
P.HALLEUX

H.NOEL
A.VINCENT
J.WAGNER

Professeurs invités:

A.DHEM (Bruxelles)
P.CALDERALE (Turin)
P.CHRISTEL (Paris)

B.KUMMER (Cologne)
J.SCALES (Londres)
A.VILADOT (Barcelone)

Secrétariat général:

J.WAGNER
avenue Nestor Plissart, 82
B - 1150 Bruxelles (Belgique)

Cet enseignement est particulièrement adapté à la formation des chirurgiens orthopédistes, des rhumatologues et de tous ceux qui traitent l'appareil locomoteur.

1985 BIOMECHANICS SYMPOSIUM
Albuquerque, New Mexico, 24-26 June 1985

The 1985 Biomechanics Symposium is sponsored jointly by the Applied Mechanics, Bioengineering and Fluids Engineering Divisions of the American Society of Mechanical Engineers and by the Biomechanics Division of the American Society of Civil Engineers. This call is to request papers in all areas of mechanics which relate to biological phenomena and/or medical applications.

Keynote speaker for the Symposium will be Dr.Y.C.FUNG, Professor, University of California at San Diego. The Proceedings volume will be dedicated to Dr.Fung.

Featured at the conference will be a Forum on Unsteady Flows in Biological Systems, sponsored by the Fluid Mechanics Committee of the Bioengineering Division and the Fluid Transient Committee of the Fluids Engineering Division. The purpose of the Forum is to review recent developments in unsteady biological flows, and to address new developments in the traditional areas of fundamental fluid mechanics and methods that may be applicable to unsteady phenomena in biological systems. The Forum will include invited and contributed papers. While a broad spectrum of subject matter is expected, submission of experimental or analytical papers on the following topics is particularly encouraged.

Blood flow in vessels, prostheses and devices
Respiratory flows, including high-frequency ventilation phenomena
Experimental methods for unsteady flows
Applications of unsteady computational fluid mechanics

Papers will be selected on the basis of abstracts submitted on author-prepared mats and are limited to two pages of text plus no more than two pages of figures. Accepted papers will be published in a proceedings available volume at the meeting.

DEADLINES

Submission of Typed Masters
Notification of Authors

December 14, 1984
March 1, 1985

Blank mats and typing instructions may be obtained from the following:

Forum on Unsteady Flows in Biological Systems

Dr. Morton H. Friedman
Johns Hopkins University
Applied Physics Laboratory
Laurel, Maryland 20707
(301) 953-5259

Dr. David C. Wiggert
Department of Civil Engineering
Michigan State University
East Lansing, Michigan 48824
(517) 355-5155 or 355-5107

Biomechanics Symposium

Dr. David Butler
Dept. of Aero. Engr. & App. Mech.
University of Cincinnati
Cincinnati, Ohio 45221
(513) 475-3548

Dr. Robert E. Mates
Dept. of Mech. & Aero. Engr.
SUNY at Buffalo
Buffalo, New York 14260
(716) 636-2726

Dr. T. K. Hung
Dept. of Civil Engr.
University of Pittsburgh
Pittsburg, Pa. 15261
(412) 624-5369

ORTHOPAEDIC BIOMECHANICS. A CONTINUING EDUCATION COURSE

University of Nijmegen

Nijmegen, The Netherlands, 1-4 July 1985

Albert H. Burstein and Rik Huiskes, Course Directors

Co-Sponsored by the European Society of Biomechanics and the Netherlands Association of Orthopaedic Surgeons.

Each Faculty member is a recognized expert in the field and experienced in teaching Biomechanics to Orthopaedic surgeons.

The course has previously been held at several places in the U.S.A.

Faculty

Donald L. Bartel, Ph.D., Ithaca, New York
Albert H. Burstein, Ph.D., New York, New York
Edmund Y. C. Chao, Rochester, Minnesota
Wilson C. Hayes, Ph.D., Boston, Massachusetts
Rik Huiskes, Ph.D., Nijmegen, The Netherlands
Jack L. Lewis, Ph.D., Chicago, Illinois
Van C. Mow, Ph.D., Troy, New York
Theo J. G. van Rens, M.D., Nijmegen, The Netherlands
Tom J. J. H. Slooff, M.D., Nijmegen, The Netherlands
Savio Woo, Ph.D., La Jolla, California

Purpose

The purpose of the course is to develop and understanding of physical and engineering principles fundamental to orthopaedic diagnosis and surgery. In-depth knowledge of mathematics is not required.

Topics

Dynamic force and moment concepts; reaction of biological tissues to load; response of bone to loading; performance of implants, joint kinematics and kinetics fracture

fixation.

Target Group

Orthopaedic surgeons, residents, and other medical and paramedical professionals involved with the musculoskeletal system.

Engineers and Engineering students involved in biomechanics research and teaching.

Information

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5th MEETING OF THE EUROPEAN SOCIETY OF BIOMECHANICS

Berlin, West Germany, 8-10 September 1986

General Information

The purpose of the meeting is to bring together scientists of various disciplines, members as well as non-members, interested in all fields of biomechanics research or its application, to review the present state of knowledge, promote further research and enhance collaborative endeavours.

The official conference language is English.

The scientific program will cover all areas of research, such as

- Orthopaedic Biomechanics
- Dynamics of the Musculoskeletal System
- Biomechanics of Hard and Soft Tissues
- Bone Stimulation
- Rehabilitation Biomechanics
- Dental Biomechanics
- Sports Biomechanics
- Cardiovascular and Respiratory Biomechanics
- Methodology in Biomechanical Research
- Mechanical Properties of Biomaterials
- General Topics

The educational program will include the following precourses:

- *Stress Analysis in Bone
- *Biomechanics of the Upper Limb
- *Bone Remodeling
- *Endoprosthetic Design