

# newsletter

EUROPEAN SOCIETY OF BIOMECHANICS

## TABLE OF CONTENTS

Editorial.....	1
Executive notes .....	2
Forthcoming events.....	8
Advertisements.....	16
Survey form.....	17

## EDITORIAL

Our Society, while approaching the tenth Anniversary of its foundation, is exhibiting an ever increasing vitality which is accompanied by a greater interest in Biomechanics within the scientific and professional communities. You may have noticed that even mass media have started talking about Biomechanics as a well established discipline. Important results, both heuristic and practical, have been obtained in recent years. And in those areas where significant results are still to be achieved, Biomechanics has helped establishing a more appropriate and effective language and philosophical approach to the open problems. Professionals, such as medical doctors, have drawn a great deal of benefit from the continuous debate going on among biomechanicians concerning their practical problems.

The ESB Fifth General Meeting is being prepared in West Berlin. Everything is going well and points to a successful event.

We are also working on another important enterprise which is bound to draw multifaceted interests. Next year in September, immediately following the West Berlin meeting, western biomechanicians will have the opportunity to meet with their colleagues of the socialist countries. This will happen in Riga, Latvian SSR of USSR. The details about this event can be found further on in this Newsletter. The objective we pursue is to bring together two scientific communities which as yet have had only sporadic occasions to exchange information and to compare different research trends. This is being undertaken also in the hope that our Society can promote the scientific unification of Western and Eastern Europe the division of which is certainly beyond the will of the individuals involved. We do count on a

Council:	Secretariat:	Treasury:	Editor:
S.Perren, President	R.Huiskes	D.H.van Campen	A.Cappozzo
A.Cappozzo, Vice-President	Biomechanics Lab.	Jan sluytersweg	Laboratory of Biomechanics
R.Huiskes, Secretary General	Dept. of Orthopaedics	5645 JA Eindhoven	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 123959	"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			

massive and qualified presence in Riga of the ESB memberships. To facilitate this we have made a special effort to make both travel to and sojourn in Riga as inexpensive as possible.

In addition to the above activities, the ESB will promote, in the near future, a number of other scientific events, such as workshops and study institutes, which will focus on specific topics of or related to Biomechanics.

I take this opportunity to wish you all a Merry Christmas and a Happy New Year.

#### EXECUTIVE NOTES

##### From the Treasurer

The private address of the treasurer has been changed once again and is now expected to be the definite one. The new address, to which all correspondence regarding the treasurership should be sent, reads:

Jan Sluytersweg 1  
5645 JA Eindhoven  
The Netherlands  
Phone: (0) 40-123959

The financial report, dated August 25, 1985, is enclosed with this newsletter.

Following a decision of the ESB Council the present total fee is kept at UK £ 32,50, including UK £ 19.- for the J.Biomechanics.

The capital sum is now on interest account of 6%. 43 Members have been expelled because they did not pay their fees during the year of 1982, 1983, and 1984. The situation for 1984 is 152 paying members, 2 honorary members and 30 members who did not pay their fees.

The situation for 1985 is 107 members paid, 2 honorary members, 80 Members who did not yet pay, and 50 new members.

It is noted that sometimes members have skipped a year of payment. At the recent Council Meeting it has been decided that this will not be allowed, and the treasurer will eventually book each payment on a previous year for which the fee has not yet been paid.

ESB members who did not yet pay their fee for 1985 or for previous years are urgently requested to fulfil this duty as soon as possible. As has been announced before, starting from January 1, 1985, Pergamon Press will not provide ESB members any more with back issues of the Journal of Biomechanics. The ESB Council has decided nevertheless that members who did not yet pay their fee for previous years have to pay the complete fee.

It looks as if the supply of the J.Biomechanics from Pergamon Press runs without problems. Those paying members who still have supply problems are asked to contact the treasurer and Pergamon simultaneously.



## Financial Report Treasurer ESB - August 25 1985

1US\$ = Df 3.10

1UK&amp; = Df 4.35

	Df	UK&	US\$
<u>Cash balance March 1985</u>			
Total amount on deposits	22,683.31	5,214.55	7,371.20
Current account Df	182.66	41.99	58.92
&	0.00	0.00	0.00
Postal Giro Account	1,078.80	248.00	348.00
	98.16	22.57	31.66
	24,042.93	5,527.11	7,755.78
<u>Incomes:</u>			
Membership fees	4,325.21	994.30	1,395.23
Interest (&,\$ acc)	212.25	48.97	68.47
	4,537.46	1,043.09	1,463.70
<u>Expenses:</u>			
Administr.costs President	425.09	97.72	137.13
Porto reg.letters Treasurer	84.50	19.43	27.26
Council meeting Amsterdam	766.75	176.26	247.34
Invoice Pergamon J. of B.	247.95	57.00	79.98
	1,524.29	350.41	491.71
<u>Cash balance August 1985</u>			
Total amount on deposits	20,957.79	4,817.27	6,760.58
Current account Df	3,201.12	735.89	1,032.62
UK&	1,579.40	363.08	509.48
US\$	809.35	186.06	261.08
Postal Giro Account	508.44	116.88	164.01
	27,056.10	6,219.79	8,727.77

## From the Meeting Committee

The following Meetings have been held, in the recent past, under the patronage of the ESB:

- 1- Symposium on Mechanics of Posture and Movement

Enschede

The Netherlands

February 27, 1985

- 2- First ESB Workshop on Methodology and Problems in Biomechanics: strain gauge technique in biomechanics

M.E.Mueller Institute for Biomechanics  
Murtenstrasse 33  
Bern  
September 2-3, 1985

- 3- Symposium on Body Posture and Body Movement during Work  
Jaarbeursgebouw  
Utrecht  
The Netherlands  
November 5, 1985
- 4- Symposium "The artificial man"  
Jaarbeursgebouw  
Utrecht  
The Netherlands  
November 12, 1985

The following Meetings will take place under the patronage of ESB:

- 1- Workshop on Human Implant Biotelemetry  
Istituto Superiore di Sanità  
Roma  
Italy  
March 13-14, 1986
- 2- Study Institute and Conference on Biomechanics of Human Movement:  
Applications to Ergonomics, Sports, and Rehabilitation  
Scuola Nazionale di Atletica Leggera  
Formia  
Italy  
June 16-21, 1986

Other workshops on Methodology and Problems in Biomechanics are about to be organized by the ESB on the following topics:

- 1- Experimental stress analysis in Biomechanics (September 1986)
- 2- Knee legaments (spring 1987)
- 3- CAT scans in Biomechanics
- 4- External prostheses load analysis

People who are planning to organize symposia and workshops relevant to Biomechanics and willing to obtain the ESB patronage should send their application together with all possible details concerning the scientific event to the Meeting Committee Chairman:

Dr.L.Claes  
Labor. fur Exp.Exp.Traumatology  
der Abt. Chirurgie III  
Universitat Eselsberg

D-7900 Ulm

After the Meeting has been held, a report should be sent by the organizer to the Editor of this Newsletter for publication.

#### New Members E.S.B.

Ang Eng Joo	Kampner, S.L.
Ascherl, R.	Kaug, Z.H.
Barry, E.B.	Kiefer, H.
Baumann, W.	Krettek, Chr.
Baumgart, F.	Masanori Oka
Beaupré, G.S.	Merz, N.
Brinckmann, P.	Missirlis, Y.
Bunch, R.P.	Mutschler, W.
Burton, A.Kim	Oddou, C.
Carter, D.R.	Opila, K.A.
Cavallini, A.	Ovesen, J.
Clarys, J.P.	Pelisse, F.
de Groot, G.	Preuschtaft, H.
Duerselen, L.	Procter, P.
Dul, J.	Putz, R.
Dvorak, J.	Rodano, R.
Frick, D.C.	Rumelhart, C.
Gautier, E.	Seeman, P.-S.
Goodship, A.E.	Siebels, W.
Grieve, D.W.	Sutter, F.
Hagena, Fr.W.	Toshev, Y.
Hartman, W.	Van Gheluwe, B.
Hofmann, G.O.	Weizsacker, H.W.
Hoschek, J.	Whitecloud, Th.S.III
	Xinxiang Xu

#### A ESB Research Award has been established

##### 1. GENERAL

1.1 At every General Meeting of ESB an award will be given to a research paper based on the selection made by the Award Committee.

1.2 The award will consist of (a) a certificate, (b) \$400.00, and (c) waiver of conference registration fee for the first author.

##### 2. SELECTION

2.1 Selection will be made by the Award Committee from original manuscripts submitted by one or more authors, exclusively for this purpose.

2.2 Manuscripts will be solicited by advertising in the Journal of Biomechanics at least one year before the General Meeting.

2.3 The response time to solicitation will be three months: and the winner will be notified approximately 6 months before the General Meeting.

### 3. ELIGIBILITY

3.1 All original manuscripts (written in English) in the field of biomechanics, which have not been published before or submitted for publication elsewhere are eligible.

3.2 The competition is not restricted to ESB membership.

3.3 Council and Award Committee members are not eligible for the award.

### 4. AWARD COMMITTEE

4.1 The Award Committee is appointed by the Council and consists of the following members:

- Vice President (ex officio)
- Secretary General (ex officio)
- Two to four Council Members
- Up to four previous awardees
- Up to four other members

4.2 The Committee will have a minimum of seven and maximum of 14 members.

4.3 The manuscript will be selected by majority vote of the Award Committee based on individual assessment of Committee Members, and comments provided by peer review.

4.4 The secretary of the Award Committee is responsible for providing the peer-review comments by having each manuscript refereed by two authorities in its field.

### 5. PRESENTATION

5.1 The award will be presented at a time designated by the Program Committee of each General Meeting.

5.2 A technical presentation of the award receiving paper will also be scheduled;

5.3 The manuscript will be published as an award paper in the Journal of Biomechanics.



5.4 A press release of the award will be arranged by the Award Committee.

#### Organization of the Sixth Meeting of the European Society of Biomechanics

The Sixth Meeting of our Society is due in 1988. Members willing to organize this Meeting should send their proposal to the Meeting Committee Chairman no later than 24 June 1986, that is, three months prior to the Fifth Meeting which is to be held in West Berlin from 7 to 10 September 1986.

Proposal should be accompanied by a detailed description of the hosting Institution, other sponsorships, funding, conference and accomodation arrangements, and transport services. An estimate of subsistence expenses and Conference fees should also be included. Applicants may enclose suggestions concerning the scientific programme.

The proposals will be assessed by the Council and presented in a report to the ESB General Assembly at its meeting in West Berlin, where the final decision will be made.

#### Organization of the First World Congress on Biomechanics

Summer 1990

The U.S. National Committee on Biomechanics is promoting the organization of the First World Congress on Biomechanics to be held in 1990. To this purpose it is soliciting proposals from Scientific Societies and/or Institutions willing to host this Congress.

The purpose of the Congress would be to help establish a comprehensive, international community of biomechanics researchers and research societies. The hope is that most of the presently existing societies will participate at the Congress. If this First Congress is successful, the convening of subsequent Congresses, perhaps every four years, is foreseen.

#### SCIENTIFIC MEETING REPORTS

##### Symposium: "The human spine in research and practise"

This symposium was held in Utrecht, December 7 and 8, 1984, and organized by the Dutch workgroup "Prevention backaches". The presented 28 papers include the three topics: introduction to back problems and its social relevance, biomechanics of the spine and clinical aspects, can be obtained at a price of Dfl 25,- or US\$ 8.-.

Orders should be addressed to:

Peter Scholten  
Department of Anatomy and Biomechanics  
Vrije Universiteit, Amsterdam  
The Netherland

## Specialists Consensus Meeting "Monitoring of fracture healing"

Leuven, Belgium, 14-16 March 1985

A previous workshop sponsored by the European Commission had been convened by J.K.Rose and J.B.King (London, October 1981). During that workshop, several techniques for assessment of fracture healing had been compared. It was then decided that mechanical vibration analysis had to be developed further, and that the potentialities of the latter technique should be evaluated by comparison with static direct stiffness measurements.

Van der Perre's team (Katholieke Universiteit Leuven) developed an Impulse Frequency Response (IFR) technique, whereas Christensen's team (Hvidovre University Hospital, Copenhagen) developed a Bone Resonance Analysis Technique (BRA). Both teams have worked together very intensively on the interpretation of in vivo vibration results by modal analysis, the assessment of the influence of joints and soft tissues, the development of mathematical models and the optimization of measurement techniques. A number of clinical measurements have been made.

The results of this cooperative research were recently presented to an European forum of specialists during a "Specialists Consensus Meeting" (Leuven, 14-16 March 1985). Also the results obtained with vibrational techniques by three other teams were presented: Collier et al. (Canterbury), Mollan and Shaw (Belfast), Mintowt-Czyz and Nokes (Cardiff). Experiences with direct stiffness measurements were reported by the team Burny, Bourgois, Hinsenkamp (Brussels), by Harris (Oxford), Richards (Cardiff) and Jorgensen (Randers).

In the final session it was decided that the participants will further cooperate in a clinical evaluation program as well as in a scientific support program. A multi centre evaluation program was set up, involving patient measurements in eight European hospitals. The Proceedings of the Leuven meeting will be published in September 1985.

The project is sponsored by the Commission of European Communities, through the Medical Research Council, Concerted Action Committee for Biomedical Engineering (COMAC-BME). People interested are invited to contact Prof.G.Van der Perre, Kathol.Univ.Leuven, Celestijnenlaan 200 A, 3030 Heverlee, Belgium.

## FORTHCOMING EVENTS

## FIFTH MEETING OF THE EUROPEAN SOCIETY OF BIOMECHANICS

Berlin (West), Germany

Precourses: September 7, 1986

Conference: September 8-10, 1986



All of you have received the Final Announcement and Call for Papers.  
See you in Berlin then.

International Conference  
TRENDS IN HUMAN BIOMECHANICS RESEARCH AND APPLICATIONS IN MEDICINE AND SURGERY  
September 12-15, 1986  
Riga, Latvian SSR  
USSR

Organized by  
European Society of Biomechanics  
The Latvian Scientific Research Institute of Traumatology and Orthopaedics

in cooperation with  
Scientific Council of the USSR Academy of Sciences on the Problems of  
Biomechanics  
The USSR National Committee on Theoretical and Applied Mechanics  
The USSR Ministry of Health  
The Ministry of Health of the Latvian SSR  
The Academy of Sciences of the Latvian SSR  
Division of Biomechanics and Biomaterials of the Latvian Scientific Society of  
Traumatologists and Orthopaedics

sponsored by  
The USSR Ministry of Health  
and other Institutions to be named by the Soviet Organizers.

President

To be named by the Soviet organizers.

Scientific Committee

G.Bergmann (West Germany)  
A.Cappozzo (Italy)  
R.Huiskes (The Netherlands)  
H.Jansons (USSR)  
S.Perren (Switzerland)

and others to be indicated by the Soviet organizers.

Organizing Committee

H.Jansons (USSR)  
and others to be indicated by the Soviet organizers.

Scientific Program

The aim of the Meeting is to promote exchange of information and discussions concerning contemporary trends and perspectives of research in the field of human biomechanics and related applications in medicine and surgery. The European Society of Biomechanics and Soviet biomechanicians hope that the wide exchange of information and opinions during the Meeting will serve as a further stimulus for the development of science in biomechanics, will be conducive to joint studies, promote friendship among nations, and strengthen peace in the whole world.

The Meeting will be made of a total of 19 working hours and will be organized as follows.

Nine round tables on the following topics and with the indicated duration:

- history of biomechanics (1 hour)
- soft tissue biomechanics (1 hour)
- hard tissue biomechanics (1 hour)
- fluid biomechanics (1 hour)
- joint biomechanics (1 hour)
- spine biomechanics (1 hour)
- fraction fixation biomechanics (2 hours)
- artificial joint biomechanics (2 hours)
- cardiovascular biomechanics (2 hours)
- gait analysis (1 hour)

For each round table an ESB and a Soviet specialist will be invited to give a keynote lecture (20 to 40 minutes each).

The round table panel will be composed by the two keynote lecturers and two penelists for ESB and two for USSR.

Contributed papers will be presented in poster form. A total of three hours will be allotted for formal poster sessions. However, posters will remain exhibited for the entire duration of the Meeting. Meetings of small groups will be organized for discussing specific topics (3 hours).

Invited speakers will include: (to be named as soon as possible)

#### Tentative time-table

Friday 12 morning	:	registration
afternoon	:	opening ceremony and start of scientific sessions
Saturday 13 all day:	:	scientific sessions
Sunday 14 all day:	:	touristic excursion and scientific visits
Monday 15 all day:	:	scientific sessions.

#### Exhibitions

1. Commercial exhibition of firms.
2. Exhibition "Biomechanics in Latvia".

#### Scientific visits

- Visits to centres of biomechanics: the Latvian Scientific Research Institute of Traumatology and Orthopaedics, and Institute of Polymer Mechanics of the Academy of Sciences of the Latvian SSR, the Riga Medical Institute.
- Demonstration of operations for traumatologists and orthopaedists (participation of delegates in the operations is possible). A direct video transmission from the operating theatres to the conference hall of the Institute will be provided.

#### Official languages

The official languages of the Meeting will be Russian and English. Simultaneous translation will be available during the plenary sessions. Interpreters will be around during the poster sessions and to help personal contacts and working groups.

Venue

The International Meeting will be held in Riga, the capital of the Soviet Latvia.

Riga was founded in 1201, and at present is the largest scientific and industrial centre of the Baltic Republics with a population of 950 thousand inhabitants.

Old Riga is famous for its beautiful ancient buildings and churches. Seaside resort, towns and the most wonderful sandy beaches of the Riga Bay in the Baltic sea are situated 20 km from Riga.

Straight railroad communication from Berlin to Riga provides a convenient travel from the centre of Europe. Planes come to Riga through Moscow or Leningrad where the international airports of the USSR are situated. The flight from Sheremetjevo-1 (in Moscow) to Riga takes 1 hour and 10 minutes. Comfortable night trains, with sleeping cars, join Riga to Leningrad and Moscow.

Conference site

Conference facilities are in the centre of Riga at ten minutes walk from Latvia Hotel where delegates will be accommodated. They include:

- a conference theater seating 600 people with modern audiovisual facilities,
- a number of smaller rooms seating 60 people each,
- a large space for exhibiting posters,
- a large cafeteria for refreshment breaks.

Attendance

Participation is open to both ESB and non-ESB members. Delegates are given the opportunity to bring accompanying persons.

Travel arrangements

The Organizing Committee suggests three travel schemes, two of which start from and arrive to West Berlin where a number of ESB delegates will be attending the Fifth Meeting of the European Society of Biomechanics.

1. Travel from West Berlin to East Berlin railway station by motor coach and by train to Riga and return. A convenient number of sleeping cars will be reserved. A restaurant car will be available and meal servings organized for the delegates. During both the onward and backward journey, an excursion will be organized in Vilnius where the train stops for four hours (this will include a dinner in a typical restaurant).

Approximate train time-table:

departure from West Berlin:	10 September evening,
arrival in Riga:	12 September morning,
departure from Riga:	15 September evening,
arrival in West Berlin:	17 September morning.

This scheme will be handled by Intourist (the Soviet travel agency). The price will be around 70 US dollars each way inclusive of all services mentioned above. Intourist cancellation rules will be applied.

2. Return flight from either West or East Berlin to Moscow. Moscow-Riga and return by plane or night train. Negotiations are being made with airlines for best price on the above route.



3. Return flight from country of origin to Moscow. Moscow-Riga and return by plane or night train. This route has to be arranged individually with the local travel agent. An "inclusive tour" ticket may be issued in this case. Detailed information about the travel schemes 2) and 3) will be forwarded upon registration to the Conference.

For the scheme number 1) contact a travel agent which organizes tours in USSR. Intourist will send an information letter to all its correspondent agencies concerning the existence of this travel combination.

#### Entrance visa

Entrance visa in Soviet Union can be obtained through travel agency upon purchase of Intourist package and presentation of the Conference Announcement. Passport, three photographs and the filling of an application form are usually required.

#### Accommodation

ESB delegates will be accommodated in the Latvia Hotel situated in the centre of Riga. Prices will be approximately:

150 US dollars per person - single room accommodation with bathroom.

105 US dollars per person - double room accommodation with bathroom.

This will include:

- hotel room for four nights (from the 12th to the 15th of September),
- breakfast, lunch, and dinner for four days,
- excursion by motor coach with guide-interpreter,
- transfer upon arrival and departure by motor coach, and portage of two pieces of hand luggage.

Delegates arriving earlier than the 12th and/or departing after 12 o'clock of the 16th will pay an extra price accordingly.

To arrange for this accommodation scheme delegates should contact a travel agent in their country which organizes trips in USSR and obtain the relevant Intourist voucher. As for the above-mentioned travel scheme, Intourist will send an Information letter to all its correspondent agencies concerning the existence of this accommodation arrangement in Riga.

Intourist cancellation rules will be applied.

#### After Conference excursion

Intourist will organize the following after conference tour:

Riga-Leningrad-Moscow (5 days) with visit to the Hermitage palaces of the Russian Tzars in Leningrad, places of interest and museums in Moscow (Kremlin and Tretjakov Art Gallery).

The price of this tour will be of 250 US dollars and will include accommodation in double room, meals three times a day, two excursions every day, flights from Riga to Leningrad to Moscow. Single room accommodation may be provided by extra payment on the spot.

Delegates taking this excursion may find more convenient to travel to Soviet Union using schemes number 2) or 3). This to avoid to purchase a single way flight ticket from Moscow to West Europe which is notably expensive.

Registration fees

Early registration fee (dead line: June, 1986) for the participants will be 100 US dollars (80 dollars for ESB members). Late registrars will pay 20 US dollars more.

Registration will include the following items:

- 1) participation to the scientific sessions,
- 2) coffee breaks,
- 3) book of preprints and book of proceedings,
- 4) welcome reception,
- 5) a souvenir,
- 6) conference banquet.

The registration fee for accompanying persons will be 40 US dollars and will include items 4), 5), and 6).

Refund of 90% of registration fee is made upon cancellation.

Call for papers

Papers relating biomechanics in medicine and surgery are solicited for poster presentation. Consistently with the philosophy of the Meeting, these papers should report on the major research projects carried out and results obtained in specific laboratories in the last years, rather than on the latest research work. For each paper a short abstract (150 words) and a long abstract (max 4 pages - DIN A4 format - typed single space - figures and references included) should be submitted to the Conference Secretariat by

March 15, 1986

At the head of both abstracts type title, author/s name, complete mailing address and 1 or 2 subject areas under which the abstract may be indexed.

Preprints and Proceedings

Preprints will be produced containing the long abstracts in the original language and the short abstracts translated either into English or Russian. These will be distributed at the time of the Conference.

Proceedings will contain the above-mentioned short abstracts and the invited lecture full papers. This material will be both in English and in Russian and will be printed in USSR.

Conference Secretariat

Biomechanics International Conference  
Latvian Scientific Research Institute  
of Traumatology and Orthopaedics  
Duntes Street, 12/22  
Latvian SSR  
RIGA 226006  
USSR  
Telephone: 392348

Enquiries

- Dr. Haralds Jansons  
Conference Secretariat
  
- Dr. Aurelio Cappozzo  
Laboratory of Biomechanics  
Istituto di Fisiologia Umana  
Università degli Studi "La Sapienza"  
Roma - Italy  
Telephone: 06 490673  
Telex 620564 - UNISAP
  
- Dr. Rik Huiskes  
Laboratory of Biomechanics  
Department of Orthopaedics  
University of Nijmegen  
Nijmegen  
The Netherlands  
Telephone: 080 514476  
Telex 48232 - ACZHS NL

STUDY INSTITUTE AND CONFERENCE  
Biomechanics of Human Movement - Applications to Ergonomics, Sports and  
Rehabilitation  
Scuola Nazionale di Atletica Leggera  
Formia, Italy  
June 16-21, 1986

The Announcement and Call for Papers has been mailed to all of you.  
Those who are interested in this branch of Biomechanics should not miss  
this important event.

ELEVENTH INTERNATIONAL CONGRESS ON BIOMECHANICS  
Amsterdam  
June 29 - July 3, 1987

This is the biannual Meeting of the International Society of  
Biomechanics.

Announcements will come out shortly.

Workshop on  
HUMAN IMPLANT BIOTELEMETRY  
Istituto Superiore di Sanità  
Rome, Italy  
March 13-14, 1986



The workshop will promote an exchange of technical information on the wireless telemetry by means of implantable devices. Some typical problems common to most of the application fields, ranging from telemetry of biophysics data to monitoring of surgical implants, such as long-term stability, biocompatibility and miniaturization will be underlined.

The principal aim is to stimulate the clinical use of this technique. For this purpose, the workshop should explore the possibility of a standardization of the codification of information and of the techniques for data transmission and reception, possibly distinguishing among different classes of implantable devices, and consequently promoting the study of general purpose functional integrated moduli or of single VLSI programmable circuits which could be conveniently produced on an industrial basis.

In order to increase the number of users of a standardized industrial product, the potentiality of implant biotelemetry in other fields of biological monitoring, such as zootechnics with its optimization problems, should be also examined.

The workshop has been particularly solicited by the European Society of Biomechanics because of the increasing interest telemetry has in the in vivo monitoring of orthopaedic implants and in the measurement of the mechanical quantities along the skeleton structure.

Inquiries

Velio Macellari

Laboratorio di Ingegneria Biomedica

Istituto Superiore di Sanità

Viale Regina Elena, 299 - 00161 Roma, Italy

Telex 610071 ISTSAN I - Phone 6 - 4990 ext.864

## BA8500

### SIGNAL CONDITIONING AMPLIFIER

This is a newly developed modular multichannel signal conditioning amplifier for use with strain gauge transducers both in laboratory and field applications. It represents an exceptional association of high performance, reliability and low cost.

Designed for integration in a computerized environment, the amplifier guarantees a better accuracy than 1 bit over 12 (250 ppm) and allows for software control of output zero setting.

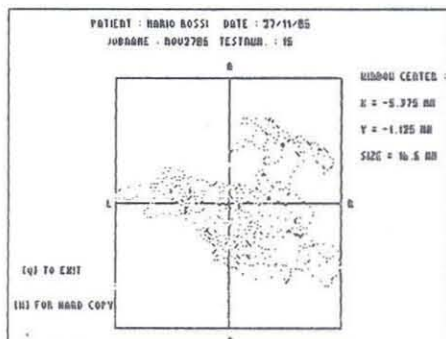
- 2.5  $\mu$  VRTI resolution (0.125  $\mu$   $\epsilon$  for a full bridge supplied at 10 V)
- +/-6000  $\mu$   $\epsilon$  input range
- 1  $\mu$  V/ $^{\circ}$ C RTI (typical) thermal drift
- Electronic zero setting
- Bridge balance trimmers with LED null indicators
- Selectable amplifier gain (125,250,500,1000,2000,4000)
- Switchable 4th order Butterworth filter
- Switchable bridge excitation voltage (2.50,5.00,10.0 Vdc)
- Accepts 350 & 120 Ohm full bridge inputs (1/2 & 1/4 bridge configurations by insertion of completion resistors in proper places on p.c. board)
- Amplifier and bridge supply outputs protected against short circuits.

## CPS

### COMPUTERIZED POSTUROGRAPHY SYSTEM

This is a system specifically developed for clinical routine use.

Design criteria were reliability, low cost and user friendly software and hardware. It consists of the following components:



- Three component strain gauge force plate (dim.500x500 mm) with builtin preamplification circuitry
- Three channel signal conditioning amplifier BA8503
- 12 bit, programmable gain ADC
- Application software Apple IIe compatible (IBM-PC compatible software under development).

For further information  
please contact us

 capodarco  
elettronica

Via Silicella, 57a - 00169 ROMA  
Italy tel. 06-2678086

=====

SURVEY

=====

Let's get to know better ourselves

This survey aims at collecting detailed information about the present scientific interests of our membership and how they distribute among the different research areas.

Relevant results will be published in this Newsletter. The filled survey forms will also be put in a file to which all ESB members may have access for their own use.

Please fill this form and send it to the Newsletter Editor at your earliest convenience.

Name.....Surname.....

Institution.....

Address.....

.....

Telephone.....Telex.....

Highest degree.....

Share of your working time (in percent) devoted to

research in general.....

research in biomechanics.....

Field of research (tick when appropriate).

- Biomechanics of hard tissues
- Biomechanics of soft tissues
- Muscle biomechanics
- Haemodynamics
- Dynamics of the musculo-skeletal system
- Joint kinematics
- Joint loading
- Spine biomechanics
- Experimental stress analysis
- Analytical stress analysis
- Methodology in biomechanical research
- Stereophotogrammetry
- EMG
- Dynamometry
- Intra-abdominal pressure
- Gait analysis
- Bone stimulation
- Rehabilitation biomechanics
- Dental biomechanics
- Sports biomechanics
- Orthopaedic biomechanics
- Cardiovascular biomechanics
- Mechanical properties of implantable materials
- Other topics (specify):

.....

.....

.....

.....



=====

SURVEY

=====

Archive journals in which you have published most:

.....  
.....  
.....  
.....

Date.....

Signature.....