# International Society of Biomechanics Newsletter

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INSTRUCTIONS TO AUTHORS

In order to facilitate the editing of the ISB Newsletter, we would appreciate receiving any material according to the following criteria :

1° All material should be typewritten single spaced.

2° Typewrite within a frame of 10 cm width.

3° The title should be written in CAPITAL LETTERS.

4° Subtitles should be written *in italics* and/or underlined.

5° Different paragraphs should be separated by double spacing.

6° Try to use the whole text-face. There should not be any margines inside the frame.

Tank you in advance for your cooperation.

Jan P. CLARYS

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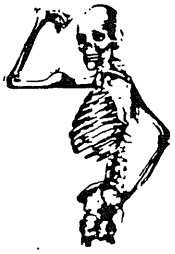
P.S. The ISB Newsletter is published quarterly. Material and articles should reach us prior to February 10 for the Spring issue, May 10 for the Summer issue, August 10 for the Autumn issue and November 10 for the Winter issue.



When individual members have a change in a mailing address, it is important to send the new address to the Treasurer so that you are certain to receive copies of the Newsletter and dues notices.

ISB Treasurer :
C.A. Morehouse
109 Sports Research Bldg.
Penn State University
University Park, PA 16802
U.S.A.

CALL FOR PAPERS

We would appreciate if I.S.B. members could participate more active in this Newsletter. Please send us material : short papers, letters to the editor, laboratory features,... etc.

SCIENTIFIC ADVERTISEMENTS

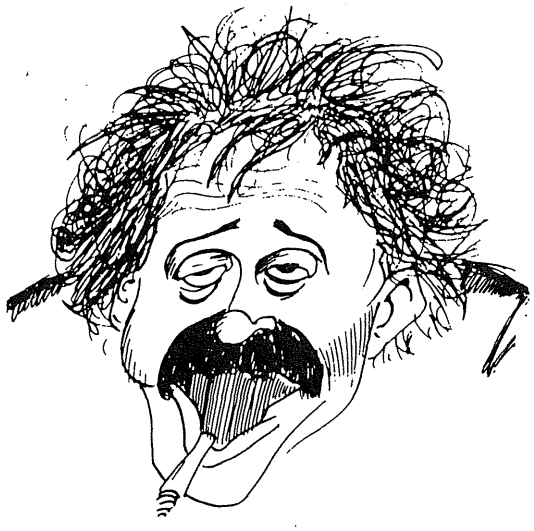
On request of ISB members and on condition that there is no relation with a commercial circuit, all scientific advertisements will be published free of charge.

COMMERCIAL ADVERTISEMENTS

The Newsletter is open for commercial publicity at

100 US dollar per full page
50 US dollar per half page
25 US dollar per quarter page

All publicity will be advertised in the 4 issues.



Seminar
"BIOMECHANICS AND TEACHING MOTOR SKILLS"

The IVth School on Biomechanics and Teaching Motor Skills took place in Karpacz, Poland on May 6-10, 1984. The organizers was Academy of Physical Education in Wrocław and personally Prof. Dr. Tadeusz Bober, Doc. Dr. Bogdan Czabański /cochairmen/ and Dr. Stefan Kornecki /secretary scientific/. The idea of briniging together scientists and practitioners from biomechanics and theory of learning and teaching was presented in ISB Newsletter No 6, Feb.1982

There were 65 participants including 5 quests from abroad.

At this School the invited lectures were presented by:

1. M.Kulczycki /Wrocław/, Human activity - subjective and objective aspects
2. T.Bober /Wrocław/, Biomechanical investigations in walking and running
3. R.Pöhlmann /Jena/, Spiral of motor learning
4. P.Weinberg /Hamburg/, Learning in sports. A conception based on the theory of learning of P.J.Galperin
5. H.G.John /Akwizgran/, Some didactic aspects of teaching sports
6. A.Hotz /Bern/, Optimization of learning sport skills
7. A.Morecki /Warszawa/, Contemporary biomechanics and robotics

There were also number of papers presented:
In biomechanics

1. E.Ostrowska /Warszawa/, Energy changes of body parts in running
2. J.Zawadzki and S.Kornecki /Wrocław/, Mechanical work in human locomotion
3. A.Lisiecki and W.Mikołajczyk /Poznań/ Calculation method of optimal load parameters pushing weight bench exercise
4. T.M.Czyżkowski and J.Pietrucha /Warszawa/, Mathematical modeling ski jump as a means for optimization of movement's technique
5. T.M.Czyżkowski and K.Kędzior /Warszawa/, Modeling the slide of luge and bobsley
6. K.Fidelus, J.Eliasz and M.Kruszewski /Warszawa/, Search for relationship between practice loads and strength in weightlifters in different training periods
7. M.Fiłon /Wrocław/, Perfecting the back stroke by a system stabilizing kinematic parameters of swimming technique
8. M.Golema and G.Jaśkiewicz /Wrocław/, Objectivization of the motoric features of man utilized in the process of keeping balance
9. L.B.Dworak and W.Haremza /Poznań/, Influence of regulated static load on strength parameters of muscles performing graps and palmar flexion
10. R.Serafin and S.Kornecki /Wrocław/, Kinematic and dynamic attributes of swinging wind-up movements in gimnastics
11. A.Dąbrowska and W.Sikorski /Warszawa/ Maksimum voluntary contraction of judo athletes
12. P.Lewandowicz and I.Lenart /Poznań/, Analysis of dynamic equilibrium of the system motorcycle - rider in sagital plane during speedway start
13. T.Rynkiewicz /Poznań/, Identification of propulsion force as a base for assessment of selected elements of paddling technique and selecting squad in kajaking
14. S.M.Alhashimi /Poznań/, The relationship between run up velocity and the take - off impuls in a high jump /Flop technique/
15. T.Ruchlewicz /Kraków/, Searching for sprint start pattern
16. Cz.Urbanik /Warszawa/, Speed - force effect of training with mixed muscle work
17. Heidrum Schewe/, The kinesiology helps perfecting methods of teaching basketball in beginners

In teaching and learning

a. T.Raczkowska-Bekiesińska /Warszawa/, Teaching of sports technique and temperament of the learner

b. W.Wiesner /Wrocław/, Didactical film applied to the teaching - learning process of sports technique

c. K.Boiczev /Sofia/ and B.Czabański /Wrocław/, Application of objective feadback information to learning the vertical jump with defined force

The fifth School in planned on April, 1985. The address of organizers is as follows:

Akademia Wychowania Fizycznego
Katedra Biomechaniki
Al. Olimpijska 35
51-612 Wrocław, Poland

X Congress of the
International Society
of Biomechanics

ISB Congress 1985 Umeå

ISB



# Laboratory Feature

Department of Human Movement and Recreation Studies
The University of Western Australia
Nedlands, Western Australia 6009
AUSTRALIA
Ph. 61-09-380-3838

The University of Western Australia is situated on the banks of the Swan river just 4 kilometers from downtown Perth. More than 10,000 students are engaged in courses offered by ten faculties, including Education, Medicine, Science and Engineering. There are over 1500 academic staff and postgraduate students, supported by nearly 1200 librarians, technicians and other service personnel. Each year the university attracts more than $10 million from Government, private and University sources, and it hosts many research programmes with international reputations.

The biomechanics laboratory is the centre-piece of a new multi-disciplinary Human Movement and Recreation Studies complex, and provides 400 sq. meters of indoor laboratory space which houses a Kistler force platform, run-through synthetic surfaced track, and overhead filming gantry. Adjacent to this is a grassed oval and 25 meter swimming pool, the latter with underwater filming bays. Additional research laboratories provide facilities for neuro-muscular research, film analysis and computing.

Biomechanics Personnel:

Brian A. Blanksby, PhD (joint appointment with Anatomy and special interest in acquatics);

Bruce C. Elliott, PhD (special interest in sports biomechanics particularly racket sports);

Graeme A. Wood, PhD (special interest in neuromuscular performance and co-ordinator of post-graduate studies);

assisted by seven current PhD and Masters research students, and supported by seven electronic, photographic and mechanical workshop staff.

Currently Funded Research:

Neuromuscular mechanisms and muscular strength development;

Biomechanical determinants of pathological gait patterns;

Biomechanical factors underlying hamstring muscle strain;

Biomechanical factors underlying back strain in cricket fast bowlers;

Biomechanical comparisons of tennis serving techniques;

Biomechanical appraisal of children's movement patterns including those with minimal brain dysfunction;

Anatomical characteristics and swimming performance in elite junior swimmer's growth;

Onset of menarche and its relationship with swimming performance;

A study of physical and psycho-social changes in swimmers over the age of 50.

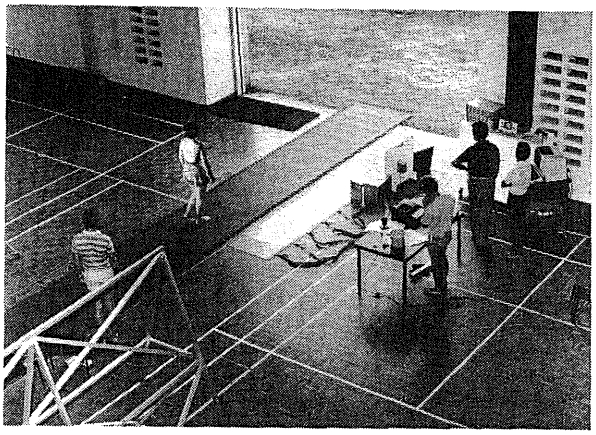
Equipment:

Data acquisition systems include high speed 16mm phase-locking cameras (Photosonics), force platform (Kistler), video strobe (Sony), 16-channel biological instrumentation racks (Grass and Devices - the former incorporating a Tekronix 5223 digitizing oscilloscope), FM tape recorder (Schlumberger), together with several EMG, force, angle and acceleration transducers.

All analogue instrumentation is on-line to a PDP-11/23 computer equipped with 10 megabytes of hard disk (RL02) backed up by magtape (Cipher) and floppy disk (RX02). Other peripherals include high speed printer (LA100), colour graphics terminal (Tektronix 4105) and digital plotter (Tektronix 4663). A mobile PDP-11/03 system is available for fieldwork, and all laboratories have communications with a network of large main-frame computers (principally DEC-10, Cyber and Prime - the latter being available for specialised graphics work).

The film analysis laboratory houses two digitizing systems, one comprising a Numonics digitizer with Lafayette projector, the other a Calcomp digitizer with an NAC projection unit. Each is micro-processor controlled and communicates with the DEC-10 computer system.

Customized software for film motion analysis (FMAP) and real-time data acquisition and analysis (DAOS) is available, as too is a wide range of scientific applications packages.



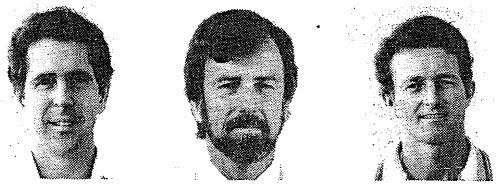
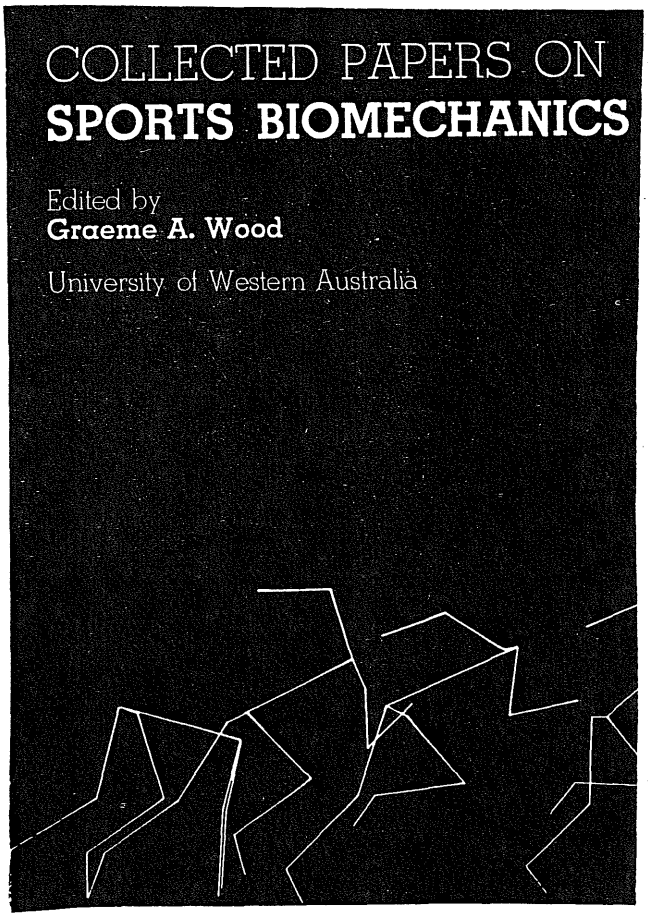


Figure: (above) View of main Biomechanics laboratory from over-head gantry;
(below) Academic staff - Graeme Wood, Brian Blanksby and Bruce Elliott (L to R).




The University of Western Australia

DEPARTMENT OF HUMAN MOVEMENT AND RECREATION STUDIES
UNIVERSITY OF WESTERN AUSTRALIA
NEDLANDS W.A. 6009

# Congress Announcement

JB/RC - July 1984

CALENDER OF WORLDWIDE SCIENTIFIC EVENTS FROM 1984 UNTIL 1987

1984

Sep. 24-26, 1984 Davos, Switzerland, 4th Meeting of the European Society of Biomechanics.

Sep. 30-Oct. 6, 1984 Aruba, Netherland Antilles, Central American and Carribean Conference on Physical Education, Sports and Recreation for the Handicapped (Mr. L.F. van Putten, AV, 3 E No. 62-55, Apostado de Correos 10099, Maracaibo 4002, Venezuela).

Oct. 08-12, 1984 Urbino, Italy, International Congress on "Child and Sport" (c/o Prof. Venerando, Direttore dell'Instituto de Medicina dello Sport, Via dei Campi Sportivi 46, Roma, Italy).

Oct. 22-26, 1984 Oslo, Norway, "ICOSH Seminar 1984, Sport and Politics 1918-1940" (c/o Prof. Dr. M. Olsen Norwegian College of Physical Education and Sport, Post Box 40, Kringsja, Oslo 8, Norway).

1985

Jan. 03-07, 1985 Cairo, Egypt, Int. Congress on "Sports for All in the developing countries" (c/o Prof. Allawy, Heluan Univ., Fac. of P.E. for Men, Abbasia Str. 62, Cairo, Egypt).

Mar. 25-28, 1985 Prague, CSSR, IVth European Congress of Sports Medicine (c/o Czechoslovak Medical Society J.E. Purkyne, Vitezneho unora 31, 120 26 Praha 2).

Apr. 1985 Vth International School on Biomechanics and Teaching Motor Skills (c/o Prof. T. Bober, Acad. of P.E., Biomech. Laboratory, Al. Olimpyska 35, 51 612 Wroclaw, Poland).

Jun. 12-15, 1985 Copenhagen, Denmark, Biochemistry of Exercise (c/o

Jun. 15-20, 1985 Umea, Sweden, "Xth Intern. Congress on Biomechanics" (c/o Congress Secretariat, X International Congress of Biomechanics, Work Physiology Division, National Board of Occupational Safety and Health, Box 6104, S-900 06 Umea, Sweden, Phone : (46-90) 165060).

Jun. 24-27, 1985 Kopenhagen, Denmark, "VIth World Congress of Sports Psychology" (c/o DIS CONGRESS SERVICE Linde Allé 48, 2720 Vanløse Kopenhagen, Denmark).

Jun. 25-29, 1985 Montreal, Canada, "IVth International Congress of Auxology" (c/o General Secretary Ms. M. Brault Dubuc, Int. Congress of Auxology, Univ. de Montreal, C.P. 6128, Juccursale A., Montreal, Quebec, Canada H3C 3J7).

Jul. 01-05, 1985 Glasgow, Scotland, "XIth HISPA International Congress" Themes
"Sport and the History of Ideas"
"Sport and Social Class"
" Sport and the Middle Ages"
"Sport and the Industrial Revolution"
"Sport and Local History"
"Sport ; Open Section"
(c/o Dr. J.A. Mangan, Academic Organiser, HISPA XI International Congress, Jordanhill Colege of Education, Southbrae Drive, Glasgow G13 1PP, Scotland).

Jul. 08-12, 1985 New York, USA, "Physical Activity, Aging and Sports" (c/o Sara Harris, Executive Director, The Center for the Study of Aging, 706 Madison Avenue Albany NY 12208).

Jul. 09-11, 1985 Budapest, Hungary, "Intern. Sym. of the European Union for School and University Health and Medicine (c/o Congress Bureau MOTESZ, P.O. Box 32, H-1361, Budapest, Hungary).

Jul. 14-20, 1985 Brussels, Belgium, "XIth Intern. Conference of the IAPESGW" (c/o Prof. Clairette Brack, Vrije Universiteit Brussel, HILOK, Pleinlaan 2, 1050 Brussel, Belgium).

Jul. 20-27, 1985 Warwick, England, "Xth Intern. Conference of the I.A.P.E.S.G.W. (c/o Pat Bowen-West, Bedord College, 37 Lansdowne Road, Bedford MK40 2BZ).

Aug. 19-23, 1985 Long Island, New York, USA, International AIESEP 1985 Conference on "Research on Teacher preparation and the teaching of physical education and sport" (c/o Mr. G. Barrette, P.E. Dept. Adilphi University, Long Island, 11530 Garden City, NY, USA).

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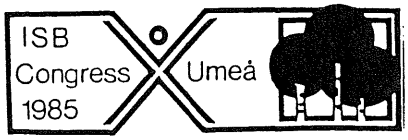


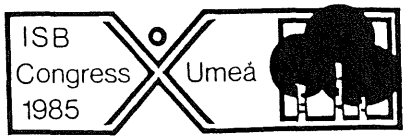

Aug. 22-26, 1985 Heidelberg, FRG, Intern. AIESEP Congress on "The Sport Teacher Today" (c/o Prof. H. Rieder, Inst. f. Sportwissenschaft, Im Neuenheimer Feld 710, 6900 Heidelberg, FRG).

Aug. 26-28, 1985 Kobe, Japan, "FISU/CESU Intern. Conference" in conjunction with the Universiade 1985 Kobe; Conference Theme : University Sport in a Changing Society (c/o Organizing Committee for CESU Conference Kobe, 1985 International Friendship Building 6-9-1 Minatojimanakamachi Chuo Ku, Kobe City, (code 650) Japan phone : 078-302-8560).

Sep. 19-23, 1985 Vienna, Austria, Intern. Seminar on "Sport and Aging" (c/o Dir. F. Nowak, Bundesanstalt f. Leibeserziehungen, Possingerstrasse 2, 1150 Wien, Austria).

Oct. 14-19, 1985 Dresden, GDR, 8th Intern. Congress on Sportsinformation IASI (c/o Dr. H. Bachmann, Zentrum f. Wissenschaft information Körperkultur u. Sport, Friedrich-Ludwig-Jahn-Allee 59, 7010 Leipzig, GDR).

Nov. 09-12, 1985 Cologne, FRG, 9th Internat. IAKS-Congress (c/o IAKS, Neusserstrasse 26, 5000 Köln 1,FRG)

1986

Jul. 18-23, 1986 Glasgow, Scotland, "1986 Commonwealth Games Conference on Sport" (c/o Mr. B. Wright, Director, Jordanhill College of Education, Southbrae Drive, Glasgow, Scotland).

(Date to be fixed) Rome, "Vth Intern. Symposium of Biomechanics of Swimming".

(Date to be fixed) Seoul, Korea, "International Sportscience Conference" at the occasion of the Asian Games.

LETTER TO THE EDITOR

June 14, 1984

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195

DEPARTMENT OF KINESIOLOGY

Dr. Jan Pietor Clarys
Editor, International Society of
Biomechanics Newsletter
Experimental Anatomy
Vrije Universiteit Brussel
Laarbeeklaan 103
B-1090 Brussels
BELGIUM

Dear Jan:

The department of Kinesiology and all its programs of study have been eliminated from the University of Washington. No formal cours work will be available after Summer Session 1984.

Many colleagues across the country have written and spoken in our defense. It is impossible to send separate updates to all these individuals. Consequently, we are sending the enclosed report to selected professional organizations wherein a newsletter is published. We ask that you include the report in an upcoming edition of ISB Newsletter. The report is a statement of fact and is intended to provide a description of the events that occurred. It is our hope that colleagues learn from the facts of our case. We also sincerely hope that none of you ever face the situation present here at Washington.

Please do not hesitate to write or call if you need additional information.

Sincerely,

Beth Kerr
Associate Professor/Chair
for the faculty

BK:clc

enc.

The Department of Kinesiology at the University of Washington in Seattle is being eliminated as an academic discipline of study at the University effective June 84. Many colleagues have asked "why?" and "what happened?" This statement of fact, prepared by members of the Department, describes the Department when it was proposed for termination Fall 82 and briefly outlines the events that preceeded and followed the Central Administration decision to target the Department for elimination. This statement is a report for the many colleagues who wrote and spoke in our behalf.

The Department of Kinesiology is housed in the College of Arts and Sciences. In Fall 82, there were nine tenured faculty, six non-tenured faculty and one research professor. Three faculty formed a separate health education division with undergraduate and master-level degrees. The reamaining faculty were associated with undergraduate (approximately 200 students) and master-level (approximately 50 students) degrees in Kinesiology. At the undergraduate level, all students completed core course work and then selected liberal arts, human movement studies, or a physical education professional option. Students who selected this third option could elect to apply to the teacher certification program in the college of Education. Options at the graduate level included (a) M.S. thesis/research programs in human performance and motor control and in sport studies, (b) a MSPE program in exercise science, and (c) a MSPE program in sport administration.

In both 1980-81 and 1981-82, the Dean of the College of Arts and Sciences appointed intra-University faculty committees to review the Department. Reviews from these committees were positive. At one point the undergraduate physical education was proposed for elimination but this recommendation was later rescinded by the Dean. The addition of a Ph.D. program was recommended and in Summer 82 a committee to review the formal Ph.D. proposal was appointed. A site visit was scheduled for mid-fall 82.

Suddenly in October 82, the Dean, in response to a mandated budget reduction of 5.8% ( 4,280,000) to Arts and Sciences, proposed vertical rather than horizontal cuts. The entire department of Kinesiology, the entire Department of Nutritional Sciences and Textiles, and several other small programs/departments were proposed for elimination (the majority of these small units were later retained, e.g., dance). The stated basis for recommending the elimination of Kinesiology was "the lack of centrality to the mission of the college; the lack of a Ph.d. program and a lack of resources to develop it; the partial duplication with other programs in the State; and the lack of research orientation in some programs, particularly Health and Physical Education".

As required by the Faculty Handbook, a committee of faculty was appointed to review the Department and evaluate the impact of the proposed elimniation. Following a long series of procedures, including an open public hearing,

and with the input from tours of facilities, interviews with faculty and students, a survey, and letters, the committee report filed January 31, 1983, concluded that : "the Kinesiology core program is a legitimate academic thrust of the College of Arts and Sciences, is of high quality, satisfies the College Council's criteria for centrality, and should be retained". Duplication with other state universities was found to apply only to undergraduate teacher training in Physical Education. A poll conducted by the Committee of ten major North American universities external to the Northwest Region ranked the Department in the top ten, and in some cases, the top five academic programs in the country. Yet in March 83, the Dean's final recommendation to the President of the University of Washington was to terminate the entire Department of Kinesiology. The Department appealed to the Faculty Senate. A three-member faculty Appeal Committee, which did not hold hearings or solicit outside information, concluded that the Dean had followed the procedures specified in the Faculty Handbook. Late in May 83, the President of the University "upheld" the Dean's decision to eliminate the Department from the College of Arts and Sciences. About this time the State Legislature returned $ 8.5 million to the University budget but the Central Administration refused to use this money to restore programs still slated for elimination. In August 83, the University of Washington Board of Regents approved the termination, disregarding a pending grievance and a request by the Department to postpone this decision.

In Fall 83n the Kinesiology faculty took part in a formal hearing before the Grievance Committee of the Faculty Senate. The hearing was a follow up to a written grievance filed in April 83 and an informal review which led to the decision to move to formal procedures. The 42-page report filed by this Committee in February 84 covered affirmative action problems, probable flaws in the formal steps taken to reach the termination decision and appeal committee procedures, failure to provide an adjudicative hearing prior to the termination decision (as required by the AAUP) and specific individual grievances of members of the Department. The committee noted that "the only completely just solution to the situation confronting the grievants is a recision of the Board of Regent's decision and a reopening of the appeals procedure". The President of the University however, responded that the Grievance Committee had no jurisdiction in reviewing the adequacy of program elimination procedures and dismissed grievances that related to these issues.

Several members on the Grievance Committee have since resigned. The Department also tried to arrange a compromise solution which would have retained a Kinesiology Unit in some fashion on Campus. Neither the President nor the Board of Regents was willing to negotiate a compromise to total elimination. All formal avenues provided by our Faculty Handbook are now exhausted. The AAUP national and local chpaters are looking into the violations that have occurred. However, no change in termination status is expected.

Department efforts included interviews with review committees, preparation of material for committees, meetings with legislative committees and representatives, a letter campaign to the legislature, the coordination of the efforts of professional groups, and publicity (e.g., T.V., newspapers).

Over 500 personal letters from all over the world have been received in defense of the Department since Fall 82, We deeply appreciate these efforts on our behalf and thank all concerned for your expressions of concern and support. We also appreciate the support of the professional organizations (AAHPERD, WAHPERD, ACSM, NASPSPA, AAFDBI an others) who sent representatives to campus and the group letters we received from other colleges and universities. We urge our colleagues to maintain their commitment to discipline-based kinesiology and physical education programs.

The details provided here only outline the four year process. For more detail you may wish to consult "Proposed Termination of Kinesiology Department, University of Washington: A Precis and Implications for the State, "Washington JOHPERD, 40:3-4, 1983; "Physical Education in Higher Education," Invited Keynote Address, Western College Men's Physical Education Society, Reno, Nevada, October 1983; and "Oral Statement to the Faculty Senate Grievance Committee December 1983"; and all by R.S. Hutton. Our elimination appears to be the result of resource reallocation within the University based on decisions reached by the Central Administration and the Board of Deans. Budget was used as the catalyst to justify the means in accomplishing the terminations.

Several faculty members are retiring, some plan to move next fall to other departments on campus, and some have accepted appointments at other universities. Our intent is to see our students through to completion of their degrees and to maintain contacts with te professional organizations that have provided resources for us in the past and ties with colleagues and friends.

June 1984


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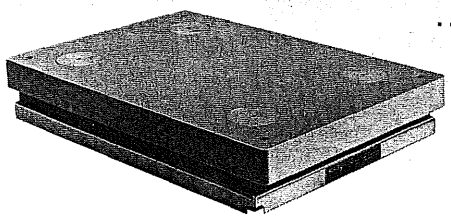
# Introducing: the KISTLER desktop biomechanics computer system

... new compact price



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# Membership of ISB

New Member List for ISB:

FORSBERG, ARTHUR #831
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