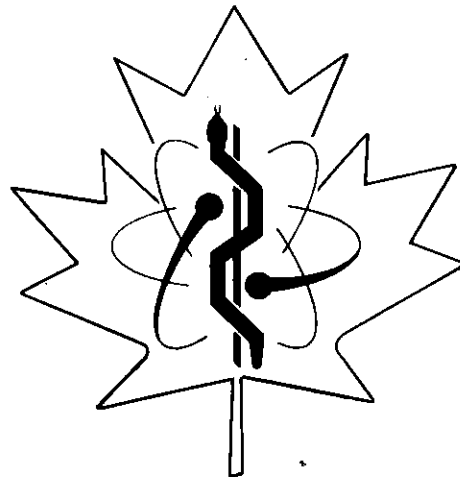


11th INTERNATIONAL CONFERENCE
ON MEDICAL AND BIOLOGICAL
ENGINEERING

11^e CONFERENCE INTERNATIONALE
DU GENIE MEDICAL
ET BIOLOGIQUE

WORKSHOPS

SEANCES D'ETUDE



combined with the

6TH CANADIAN
MEDICAL AND BIOLOGICAL
ENGINEERING CONFERENCE

combinée à la

6^e CONFERENCE CANADIENNE
DE GENIE MEDICAL
ET BIOLOGIQUE

OTTAWA CANADA

AUGUST 2-6 AOÛT, 1976

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WORKSHOP / SEANCE D'ETUDE 1

TECHNOLOGY FOR THE DISABLED
TECHNIQUES DESTINEES AUX INVALIDES

Chairman / Président H.W. Ladd
Department of Research, Rehabilitation Institute
of Montreal

Papers / Mémoires

- W1.1 Voluntarily controlled neuromuscular activity and
below-elbow prostheses
H.W. Ladd
Department of Research, Rehabilitation Institute
of Montreal
(Paper not received in time for printing)
- W1.2 A systems view of prosthetics research
Robert N. Scott
Bio-Engineering Institute, University of
New Brunswick
- W1.3 Clinical considerations on arm prostheses
Peter Herberts
Department of Orthopaedic Surgery 1, University
of Göteborg, Sweden
- W1.4 Thoughts on the future of prosthetic research
Robert I. Magnusson
Division of Applied Electronics, Chalmers University
of Technology, Göteborg, Sweden
- W1.5 Biomechanical devices in the prevention of deformity
Charles M. Godfrey
Division of Rehabilitation Medicine, Faculty of
Medicine, University of Toronto, Toronto

WORKSHOP / SEANCE D'ETUDE 2

LIFE SUPPORT ASSISTIVE DEVICES
APPAREIL D'ASSISTANCE POUR LE SOUTIEN DE LA VIE

Chairman / Président H.S. Wolff
Clinical Research Centre, Harrow, Middlesex, England.

Papers / Mémoires

- W2.1 The development of a spinal support device for wheelchair bound muscular dystrophy patients
A. Michael Albisser
Biomedical Research, The Hospital for Sick Children, Toronto
- W2.2 Evaluation of cardiac data from echorecordings by digitizer and computer
Winfried Krebs, Walter Bleifeld, and Peter Hanrath
Department of Internal Medicine I, RWTH Aachen, West Germany
- W2.3 Role and importance of transducers in life support assistive devices
M.A. LaBalme
Technical Director, Kulite International, France
(Paper not received in time for printing)

WORKSHOP / SEANCE D'ETUDE 3

BIOFEEDBACK AND ACUPUNCTURE
RETROACTION BIOLOGIQUE, ACUPUNCTURE

Chairman / Président David P. Nowlis
Psychiatric Institute, Jewish General Hospital,
Montreal, Quebec

Papers / Mémoires

- W3.1 Some questions involved in current research on
biofeedback and acupuncture
David P. Nowlis
Psychiatric Institute, Jewish General Hospital,
Montreal, Quebec
- W3.2 Biofeedback instrumentation
H. Myers
Division of Cardiology, Royal Victoria Hospital,
Montreal, Quebec
- W3.3 Acupuncture
Wen Ko
Engineering Design Centre, Case Western Reserve
University, Cleveland, Ohio

WORKSHOP / SEANCE D'ETUDE 4

MEDICAL INSTRUMENTATION
INSTRUMENTATION MEDICALE

Chairman / Président David J. Dewhurst
Electrical Engineering, University of Melbourne,
Melbourne, Australia

Papers / Mémoires

W4.1 Reliability and maintenance of biomedical equipment
David J. Dewhurst
Electrical Engineering, University of Melbourne,
Melbourne, Australia

W4.2 Medical instrumentation equipment evaluation and
specification
Herman R. Weed
Director, Biomedical Engineering, Ohio State University,
Columbus, Ohio

W4.3 Computers in medicine
W.J. Perkins
Head, Computer Science Laboratory, National
Institute for Medical Research, London, England

WORKSHOP / SEANCE D'ETUDE 5

BIOMATERIALS
BIOMATERIAUX

Co-Chairmen / Présidents adjoints

E. Flam
Health Care Division, Johnson and Johnson,
New Brunswick, N.J.

P.Y. Wang
Institute Biomedical Engineering, University
of Toronto, Toronto

Papers / Mémoires

- W5.1 Factors affecting the biological evaluation and testing of biomaterials for cardiovascular applications
Stephen D. Bruck
National Heart and Lung Institute, National Institutes of Health, Bethesda, Maryland, U.S.A.
- W5.2 On the mechanical testing of some implants and materials
Gregory Malcolm McNeice
Department of Civil Engineering, University of Waterloo, Waterloo, Ontario
- W5.3 Thermodynamic approach to cellular adhesion
A. Wilhelm Neumann
Department of Mechanical Engineering, University of Toronto, Toronto

WORKSHOP / SEANCE D'ETUDE 6

A SAFE OPERATING ROOM

UNE SALLE D'OPERATION SANS HAZARD ELECTRIQUE

Chairman / Président John A. Ulrich
Department of Microbiology, University of
New Mexico, Albuquerque, New Mexico

Papers / Mémoires

- W6.1 Recirculation of air in operating rooms
John A. Ulrich
Department of Microbiology, University of
New Mexico, Albuquerque, New Mexico
- W6.2 Electrical safety in the operating room
Michael Newbold Leeming
University of Vermont, Burlington
- W6.3 Burns from electrosurgical generator
M. Frize and P.K. Chiu
Hôpital Notre-dame, Montréal, Québec

WORKSHOP / SEANCE D'ETUDE 7

ELECTRIC CURRENT THERAPY
ELECTROTHERAPIE

Chairman / Président Charles D. Ray
Medtronic Incorporated, Minneapolis

Papers / Mémoires

- W7.1 Electric current therapy
Charles D. Ray
Medtronic Incorporated, Minneapolis
- W7.2 Bipolar electromagnetic field applicator for skin
wound repair
C. Romero-Sierra, M.W. Roomi, J. Bigu Del Blanco Jr.,
Department of Anatomy, Queen's University, Kingston
and J.A. Tanner
Division of Mechanical Engineering, National Research
Council of Canada, Canada
- W7.3 Augmentation of bone healing by supplemental dc
electricity
David Allan MacKenzie, Stephen Retfalvi, and
Carolyn Knowles
Montreal Children's Hospital, Montreal, Quebec

WORKSHOP / SEANCE D'ETUDE 8

SAFETY STANDARDS AND REGULATIONS FOR MEDICAL DEVICES
NORMES ET REGLEMENTS POUR LA SURETE D'APPAREILS MEDICAUX

Chairman / Président Erkki Koivisto
University of Oulu, Department of Radiology, Finland

Papers / Mémoires

- W8.1 Safety and standardization of electromedical equipment
Hermann Bertheau and Erkki Koivisto
International Electrotechnical Commission, Hamburg,
Germany
- W8.2 Safety of medical electrical equipment. The state of
affairs in IEC 62
A.M. Klomp
N.V. Philips Medical Systems Division, Best,
The Netherlands
- W8.3 The national part in international standardization
Hermann Bertheau
International Electrotechnical Commission, Hamburg,
Germany
- W8.4 Regulations in Canada for increased safety and efficacy
Ajit K. Das Gupta
Medical Devices, Bureau Environmental Health,
Directorate, Tunney Past, Ottawa, Canada