

INTERNATIONAL WORKSHOP ON HUMAN  
SUBJECTS FOR BIOMECHANICAL RESEARCH

FIFTEENTH ANNUAL MEETING  
NEW ORLEANS, LOUISIANA  
OCTOBER 8, 1987 .

THE ENVIRONMENTAL WORKSHOP ON HUMAN  
SUBJECTS FOR BIOMECHANICAL RESEARCH

PHYSICAL AND MEDICAL  
NEW YORK, N.Y. 10017  
OCTOBER 8, 1977

## TABLE OF CONTENTS

	PAGE
<u>INTRODUCTION</u> .....	1
<u>REPORTS</u>	
Current National and International Activity in Biodynamics Standards Development. J. Guignard.....	3
Control of AIDS in Cadaveric Testing: Preliminary Guidelines J. Cavanaugh.....	13
Nonlinear, Two Dimensional Finite Difference Model of the Head G. Nusholtz (Discussion paper not received).....	41
Injury Mechanism of Axial Load to Leg. D.P. Roberts.....	45
Automated System for the Detection of Erroneous Data N. Khaewpong and J. Marcus.....	63
Computation of the 3D Rigid Body Motion Using Cinematographic Data F. Bendjellal, et.al.....	83
Investigation of the Least Squares Approach to the Calculation of Angular Acceleration from Linear Accelerometry. J. Hardy, et.al.....	93
Child Abdominal Penetration Measurement Device. R. Stalnaker and E. Hiltner (Discussion paper not received).....	123
Determination of Head Dynamics in Crash Tests, Using a Specified Hybrid III Instrumentation. F. Chamouard.....	133
Uniaxial Neutral Density Cranial Accelerometer Design. W. Hardy.....	143
Front End Design for Mitigation of Pedestrian Head Injury: Hood-Fender Region. J. Kessler.....	169



## INTRODUCTION

The Fifteenth Annual International Workshop on Human Subjects for Biomechanical Research was held on November 8, 1987, in New Orleans, Louisiana. Richard Morgan was Chairman for the two sessions. Attendance was about 65 for the eleven oral presentations and discussions.

The following proceedings contain the text of nine of the presentations. Drs. Nusholtz and Stalnaker were unable to provide copies of their presentations in time for this printing. They may be made available for the proceedings of the next workshop.

Papers appearing in these proceedings are not to be considered as formal publications. Although references to the presentations have appeared occasionally in the open literature, this recommendation has generally been observed by the research community.

Ms. Shirley Lawson has volunteered to take Dave Foust's chore as Workshop secretary. The continued excellent coverage of this years discussions is due largely to her dedicated efforts.

The Workshop Committee on behalf of the participants and attendees extends its thanks and appreciation to the Stapp Conference Advisory Committee for its support of this activity, and to the SAE meetings staff who arranged for administrative services, refreshments, audio visual support, and meeting rooms.

The Workshop Committee

Richard Morgan  
Albert King  
John Melvin

