

Abridged Resume

Maury L. Hull, PhD

Distinguished Professor Emeritus
Department of Biomedical Engineering
Department of Mechanical Engineering
Department of Orthopaedic Surgery

One Shields Avenue
University of California
Davis, CA 95616

Phone: 530-269-1497

FAX: 530-752-4158

E-mail: mlhull@ucdavis.edu

Education

1976 Postdoctoral Scholar in Mechanical Engineering, University of California, Berkeley

1975 PhD in Mechanical Engineering, University of California, Berkeley

1970 MS in Mechanical Engineering, University of California, Berkeley

1969 BS in Mechanical Engineering, Carnegie-Mellon University, Pittsburgh

Work Experience

2016-present Distinguished Professor Emeritus, Department of Orthopaedic Surgery, University of California, Davis Medical Center

2013-present Distinguished Professor Emeritus, Department of Biomedical Engineering, University of California, Davis

2013-present Distinguished Professor Emeritus, Department of Mechanical Engineering, University of California, Davis

2012 - 2013 Distinguished Professor, Biomedical Engineering, University of California, Davis

2012 - 2013 Distinguished Professor, Mechanical Engineering, University of California, Davis

2010 - 2012 Full Professor, Biomedical Engineering, University of California at Davis

1999 - present Staff Research Scientist, Shriners Hospital of Northern California, Sacramento, CA

1993-00 Chair, Biomedical Engineering Graduate Program, University of California, Davis

1990-94 Group Leader, Mechanical Systems Group, Mechanical Engineering, University of California, Davis

1988 - 2012 Full Professor, Mechanical Engineering, University of California at Davis

1981-88 Associate Professor, Mechanical Engineering, University of California at Davis

1976-81 Assistant Professor, Mechanical Engineering, University of California at Davis

Professional Activities

A. Societies:

Life Fellow American Society of Mechanical Engineers (ASME)

Fellow Biomedical Engineering Society (BMES)

Member Orthopedic Research Society (ORS)

Past Member International ACL Study Group

Past Member American Society of Biomechanics (ASB)

Past Member International Society of Biomechanics (ISB)

Past Member American Society for Testing and Materials (ASTM)

Past Member International Society for Skiing Safety (ISSS)

B. Editorial Appointments:

Member Editorial Board, Journal of Biomechanics, 2009-present

Assoc. Editor Journal of Biomechanical Engineering, 1998-2004

Member Editorial Consultants Board, Journal of Biomechanics, 1993-1999

Member Editorial Board, Cycling Science, 1989 - 1997

Member Editorial Board, International Journal of Sport Biomechanics, 1989-1992

C. Committees in Societies

Chair Committee on Design and Rehabilitation, Bioengineering Division of ASME, 1991-94
Representative Program Committee, Bioengineering Division of ASME, 1995
Secretary Program Committee, Bioengineering Division of ASME, 1996
Chair Program Committee, Bioengineering Division of ASME, 1997
Member Honors Committee, Bioengineering Division of ASME, 1995-2002
Member Executive Committee, Bioengineering Division of ASME, 1998-2005
Secretary Executive Committee, Bioengineering Division of ASME, 2002-2003
Chair Executive Committee, Bioengineering Division of ASME, 2003-2004
Member Honors Committee, American Society of Biomechanics, 1998
Chair YC Fung Young Investigator Award Committee, Bioengineering Division of ASME, 2000-2003
Member H. R. Lissner Award Committee, Bioengineering Division of ASME, 2000-2003
Chair Nominating Committee, Bioengineering Division of ASME, 2004-2005
Chair New Directions Committee, Bioengineering Division of ASME, 2005-2008

D. Primary Reviews:

Reviewer Journal of Biomechanics
Reviewer Journal of Orthopedic Research
Reviewer Journal of Biomechanical Engineering
Reviewer American Journal of Sports Medicine
Reviewer Journal of Bone and Joint Surgery
Reviewer Clinical Orthopedics and Related Research
Reviewer Bone and Joint Journal

Honors

2021 Robert M. Nerem Education and Mentorship Medal from the Bioengineering Division of the American Society of Mechanical Engineers
2020 Honorary Member of the Personalized Arthroplasty Society
2019 Coauthor on paper which received the Paolo Aglietti Award recognizing outstanding research contributing to the understanding of knee arthroplasty
2012 Distinguished Professor, Department of Mechanical Engineering, Department of Biomedical Engineering, University of California Davis.
2012 Creation of the Maury L. Hull Endowed Graduate Student Fellowship in the UC Davis College of Engineering with donation from Scott Maxwell
2010 Elected as Fellow in the Biomedical Engineering Society
2008 Bicycling Magazine Special Award for Excellence in Applied Science Research
2007 H. R. Lissner Medal from the Bioengineering Division of the American Society of Mechanical Engineers (highest honor of the Division for career-level achievement)
2005 Major Professor to Corey Neu, recipient of the Zuhair Munir Award for the best PhD dissertation in the College of Engineering at UC Davis
2003 Elected as Chair of the Bioengineering Division of the American Society of Mechanical Engineers
2003 Recipient of the UC Davis Engineering Alumni Distinguished Teaching Award
2002 Major Professor to Tammy L. Haut Donahue, recipient of the Allen G. Marr Prize for the best PhD dissertation in the physical sciences at UC Davis
1999 Recipient of the Best Research Paper Award from the Clinical Investigation Facility, David Grant Medical Center
1998 Recipient of the Best Research Paper Award from the Clinical Investigation Facility, David Grant Medical Center

- 1998 Recipient of the West Peak Award from the off-road bicycle industry for innovations to bicycle technology
- 1997 Elected to the Executive Committee of the Bioengineering Division of ASME
- 1993 Elected as Fellow in the American Society of Mechanical Engineers
- 1989 Recipient of the Giovanni Borelli Award from the American Society of Biomechanics (highest honor of the Society)
- 1980-81 Gear of the Year Award, ASME Student Chapter
- Summer 1980 Regents Junior Faculty Fellowship Recipient
- Summer 1979 Regents Junior Faculty Fellowship Recipient
- 1968 Pi Tau Sigma
- Also: Listed in various Who's Who publications
- Invited speaker and keynote speaker at a number of conferences

Courses Taught

Undergraduate	Graduate
1. Introduction to Mechanical Vibrations	1. Muscle Mechanics
2. Mechanical Design I: Static and Fatigue Failure	2. Musculoskeletal System Biomechanics
3. Mechanical Design II: Components	3. Digital Data Acquisition
4. Introduction to Manufacturing Engineering	4. Signal Processing: Fourier Analysis
5. Statistical Methods in Design and Manufacturing	
6. Dynamics	
7. Dynamics Laboratory	
8. Measurement Systems Engineering	
9. Introduction to Biomedical Engineering	

Research Activities

Directed several ongoing research programs as follows:

1. Biomechanics of the human knee joint with emphasis on developing improved procedures for treatment and surgical repair of soft tissue injuries and diseases including ACL reconstruction, meniscal transplantation, and total knee replacement.
2. Movement biomechanics including muscle mechanics, coordination and neuromuscular control, modeling and simulation of movement particularly repetitive tasks such as pedaling, optimization of performance, and the mechanics and prevention of overuse musculoskeletal injuries particularly those to the knee.
3. Methodologies for design analysis and optimization of off-road bicycle frames and components including suspensions.
4. Prevention of injuries in Alpine skiing accidents including design of novel releasable bindings and biomechanics of knee ligamentous injuries.

Publications

Author or co-author of more than 300 full-length technical publications. Of these, more than 275 are published in peer-reviewed scientific journals. A complete listing is attached.

Graduate Student Research Supervision

Major research professor for 90 graduate advisees who completed theses during academic career.

Grants and Contracts

Recipient of more than 50 grants, contracts, and gifts awarded since promotion to Full Professor in 1988. Sources include federal such as the National Science Foundation, the National Institute for Disability Related Research, the US Air Force, and the US Department of Education; private foundations such as the Engineering Foundation, the Whitaker Foundation, the Orthopaedic Research and Education Foundation, and the Aircast Foundation; and various industry sponsors particularly Alpine skiing and cycling equipment manufacturers and orthopaedic implant manufacturers. From these sources, average extramural funding of approximately \$250,000/year sustained over the past 35 years.

A1. ARTICLES PUBLISHED AND ACCEPTED FOR PUBLICATION IN FULLY REFEREED JOURNALS

1. PULSE CODE MODULATION TELEMETRY IN SKI INJURY RESEARCH PART I: INSTRUMENTATION,
M. L. Hull and C. D. Mote, Jr., *Journal of Biotelemetry* 1(4):182-191, 1974.
2. PULSE CODE MODULATION TELEMETRY IN SKI INJURY RESEARCH; PART II: PRELIMINARY RESULTS,
M. L. Hull and C. D. Mote, Jr., *Journal of Biotelemetry* 2(5):276-296, 1975.
3. A PRELIMINARY ANALYSIS OF SKI RELEASE BINDING DYNAMIC PROPERTIES,
C. D. Mote, Jr., and M. L. Hull, *ASME Journal of Dynamic Systems, Measurement, and Control* 98(3):301-308, 1976.
4. ANALYSIS OF LEG LOADING IN SNOW SKIING,
M. L. Hull and C. D. Mote, Jr., *ASME Journal of Dynamic Systems, Measurements and Control* 100(3):177-186, 1978.
- 5a. PRINCIPLES OF DIGITAL DATA ACQUISITION,
M. L. Hull, *ISA Transactions* 19(3):25-36, 1980.
- 5b. Also appeared in: Advances in Instrumentation, Instrument Society of America, Pittsburgh, Vol. 34, Part 1, pp. 449-466, 1979.
- 6a. LEG LOADING IN SNOW SKIING: COMPUTER ANALYSES,
M. L. Hull and C. D. Mote, Jr., *Journal of Biomechanics* 13(6):481-49, 1980.
- 6b. Also appeared in: Ski Trauma and Skiing Safety III, TUV, Munich, pp. 58-64, 1982.
- 7a. A BIOMECHANICAL MODEL FOR ACTIVELY CONTROLLED SNOW SKI BINDINGS,
M. L. Hull and J. E. Ramming, *ASME Journal of Biomechanical Engineering* 102(4):326-331, 1980.
- 7b. Also appeared in: *Proceedings of the International Conference on Medical Devices and Sports Equipment*, American Society of Mechanical Engineers, New York, pp. 23-30, 1980.
- 8a. MEASUREMENT OF PEDAL LOADING IN BICYCLING: I. INSTRUMENTATION,
M. L. Hull and R. R. Davis, *Journal of Biomechanics* 14(12):843-856, 1981.
- 8b. Also appeared as: A SIX-AXIS BICYCLE PEDAL LOAD MEASUREMENT SYSTEM,
Advances in Instrumentation, Instrument Society of America, Pittsburgh, Vol. 35, Part 2, pp. 677-689, 1981.
- 9a. DESIGN OF AN ACTIVELY CONTROLLED SNOW SKI RELEASE BINDING,
M. L. Hull and K. W. Allen, *ASME Journal of Biomechanical Engineering*, 103(3):138-145, 1981.
- 9b. Also published as: AN ELECTRONIC SNOW SKI BINDING WITH MULTIPLE RELEASE MODES,
M. L. Hull and K. W. Allen, Ski Trauma and Skiing Safety III, TUV, Munich, pp. 12-17, 1982
10. DESIGN OF ALUMINUM BICYCLE FRAMES,
R. R. Davis and M. L. Hull, *ASME Journal of Mechanical Design*, 103(4):901-907, 1981.
- 11a. MEASUREMENT OF FOOT PEDAL LOADS IN BICYCLING: II. ANALYSIS AND RESULTS,

- R. R. Davis and M. L. Hull, *Journal of Biomechanics* 14(12):857-872, 1981.
- 11b. Also appeared in: Biomechanics in Sports, Academic Publishers, Del Mar, CA, pp. 113-133, 1982.
12. MEASUREMENT OF ANGULAR ACCELERATION DURING BICYCLING,
M. L. Hull, *International Journal of Mechanical Engineering Education* 10(1):39-52, 1982.
- 13a. ANALYSIS OF ROAD INDUCED LOADS IN BICYCLE FRAMES,
M. G. Wong and M. L. Hull, *ASME Journal of Mechanisms, Transmissions, and Automation in Design*, 105(1):138-145, 1983.
- 13b. Also appeared in: *Paper No. 82-DET-52*, American Society of Mechanical Engineers, New York, 1
14. DYNAMIC SIMULATION OF THE LEG IN TORSION,
L. K. Dorius and M. L. Hull, *Journal of Biomechanics* 17(1):1-9, 1984.
15. A MINIATURE MICROCOMPUTER-BASED SKI BINDING CONTROLLER,
L. Halsted and M. L. Hull, *Journal of Microcomputer Applications* 3(3):66-68, 1984.
- 16a. A METHOD FOR BIOMECHANICAL ANALYSIS OF BICYCLE PEDALLING,
M. L. Hull and M. Jorge, *Journal of Biomechanics*, 18(9):631-644, 1985.
- 16b. Also appeared as: BIOMECHANICS OF BICYCLE PEDALLING,
Sports Biomechanics, Academic Publishers, Del Mar, CA, pp. 233-246, 1984.
17. A MICROCOMPUTER CONTROLLED SNOW SKI BINDING SYSTEM: I. INSTRUMENTATION AND FIELD EVALUATION,
D. MacGregor, M. L. Hull, and L. K. Dorius, *Journal of Biomechanics* 18(4):255-265, 1985.
- 18a. A MICROCOMPUTER CONTROLLED SNOW SKI BINDING SYSTEM: II. RELEASE DECISION THEORIES,
D. MacGregor and M. L. Hull, *Journal of Biomechanics* 18(4):267-275, 1985.
- 18b. Also appeared in: Ski Trauma and Skiing Safety: STP 860, American Society for Testing and Materials, Philadelphia, pp. 258-281, 1985.
- 19a. MEASUREMENT OF RIDER INDUCED LOADS DURING SIMULATED BICYCLING,
F. Bolourchi and M. L. Hull, *International Journal of Sports Biomechanics* 1(4):308-329, 1985.
- 19b. Also appeared in: Biomechanics in Sports II, Academic Publishers, Del Mar, CA, pp. 178-198, 1985.
- 20a. ANALYSIS OF EMG MEASUREMENTS DURING BICYCLE PEDALLING,
M. L. Hull and M. Jorge, *Journal of Biomechanics* 19(9):683-694, 1986.
- 20b. Also appeared in: Sports Biomechanics II, Academic Publishers, Del Mar, CA, , pp. 160-177, 1985.
- 21a. JOINT MOMENTS AND PEDALLING RATES IN BICYCLING,
R. Redfield and M. L. Hull, *Journal of Biomechanics* 19(4):317-329, 1986.
- 21b. Also appeared in: Sports Biomechanics, Academic Publishers, Del Mar, CA, pp. 247-258, 1984.
- 21c. Also appeared as: ON THE RELATION BETWEEN JOINT MOMENTS AND PEDALLING RATES AT CONSTANT POWER IN BICYCLING, *Proceedings of the 2nd International Human Powered*

Vehicle Scientific Symposium, International Human Powered Vehicle Association, Indianapolis, IN, pp. 187-203, 1984.

22. PREDICTION OF PEDAL FORCES IN BICYCLING USING OPTIMIZATION METHODS,
R. Redfield and M. L. Hull, *Journal of Biomechanics*, 19(7):523-540, 1986.
23. AN INSTRUMENTED BRACE FOR STUDY OF LEGG-CALVE-PERTHES DISEASE,
H. Abou Ghaida, M. L. Hull, and G. T. Rab, *Journal of Biomaterials, Artificial Cells, and Artificial Organs* 15(4):719-735, 1987.
- 24a. A COMPACT, BATTERY POWERED DATA ACQUISITION SYSTEM WITH HIGH THROUGHPUT,
S. Maxwell and M. L. Hull, *International Journal of Microcomputer Applications* 7(2):28-32, 1988.
- 24b. Also appeared in: Computers in Engineering 1986, American Society of Mechanical Engineers, New York, Vol. 2, pp. 1-6, 1986.
- 24c. Also appeared in: Software and Hardware Applications of Microcomputers, ACTA Press, Anaheim, pp. 221-225, 1986.
25. A MECHANICALLY DECOUPLED TWO FORCE COMPONENT BICYCLE PEDAL DYNAMOMETER,
J. Newmiller, M. L. Hull, and F. E. Zajac, *Journal of Biomechanics* 21(5):375-386, 1988.
26. PARAMETER IDENTIFICATION OF THE HUMAN LOWER LIMB UNDER DYNAMIC, TRANSIENT TORSIONAL LOADING,
C. Johnson and M. L. Hull, *Journal of Biomechanics* 21(5):401-415, 1988.
27. A SECOND GENERATION MICROCOMPUTER CONTROLLED BINDING SYSTEM FOR ALPINE SKIING RESEARCH,
G. Wunderly, M. L. Hull, and S. Maxwell, *Journal of Biomechanics*, 21(4):299-318, 1988.
28. BIVARIATE OPTIMIZATION OF PEDALLING RATE AND CRANK ARM LENGTH IN CYCLING,
M. L. Hull and H. Gonzalez, *Journal of Biomechanics* 21(10): 839-849, 1988.
29. CARRIER DETECTION OF DUCHENE DYSTROPHY BY FREQUENCY ANALYSIS OF THE ELECTROMYOGRAMS,
B. M. Preising, M. L. Hull, R. G. Taylor, and R. H. Shumway, *Journal of Biomedical Engineering* 10(5):417-425, 1988.
- 30a. OPTIMIZATION OF PEDALING RATE IN CYCLING USING A MUSCLE STRESS-BASED OBJECTIVE FUNCTION,
M. L. Hull and H. Gonzalez, *International Journal of Sport Biomechanics*, 4(1):1-20, 1988.
- 30b. Also appeared in: Biomechanics in Sports-A 1987 Update, American Society of Mechanical Engineers, New York, DE-Vol. 13, pp. 93-100, 1987.
- 31a. CONTRIBUTIONS OF RIDER INDUCED LOADS TO BICYCLE FRAME STRESSES,
M. L. Hull and F. Bolourchi, *Journal of Strain Analysis* 23(3):105-114, 1988.
- 31b. Also appeared in: Trends in Vehicle Design Research - 1987, American Society of Mechanical Engineers, New York, DE-Vol. 11, pp. 61-72, 1987.

- 32a. A METHOD FOR DESIGNING MULTILOAD COMPONENT DYNAMOMETERS INCORPORATING OCTAGONAL STRAIN RINGS,
M. Kroencke and M. L. Hull, *Experimental Mechanics* 29(2):195-204, 1989.
- 32b. Also published as: COMPUTER AIDED DESIGN OF MULTI LOAD COMPONENT DYNAMOMETERS INCORPORATING OCTAGONAL STRAIN RINGS,
M. Kroencke and M. L. Hull, Computers in Engineering - 1988, American Society of Mechanical Engineers, New York, Vol. 3, pp. 185-195, 1988.
33. A BIOMECHANICAL APPROACH TO ALPINE SKI BINDING DESIGN,
G. Wunderly and M. L. Hull, *International Journal of Sport Biomechanics* 5(3):308-323, 1989.
- 34a. MEASUREMENT OF STRENGTH AND LOADING VARIABLES OF THE KNEE DURING ALPINE SKIING,
S. Maxwell and M. L. Hull, *Journal of Biomechanics* 22(6/7):609-624, 1989.
- 34b. Also appeared in: Skiing Trauma and Safety: STP 1022, American Society for Testing and Materials, Philadelphia, pp. 231-251, 1989.
35. MULTIVARIABLE OPTIMIZATION OF CYCLING BIOMECHANICS,
H. Gonzalez and M. L. Hull, *Journal of Biomechanics* 22(11/12):1151-1161, 1989.
- 36a. A COMPACT PORTABLE DATA ACQUISITION SYSTEM FOR SPORTS BIOMECHANICS RESEARCH,
J. Newmiller and M. L. Hull, *International Journal of Sport Biomechanics* 6(4):404-414, 1990.
- 36b. Also appeared as: 68000 BASED PORTABLE DATA ACQUISITION MODULE WITH ADVANCED PERFORMANCE CAPABILITIES,
Computers in Engineering 1989, American Society of Mechanical Engineers, New York, Vol. 1, pp. 577-584, 1989.
37. THE EFFECT OF PEDAL PLATFORM HEIGHT ON CYCLING BIOMECHANICS,
M. L. Hull and H. Gonzalez, *International Journal of Sport Biomechanics* 6(1):1-17, 1990.
38. A METHOD FOR DETERMINING LOWER EXTREMITY MUSCLE-TENDON LENGTHS DURING FLEXION/EXTENSION MOVEMENTS,
D. Hawkins and M. L. Hull, *Journal of Biomechanics* 23(5):487-494, 1990.
39. GONIOMETRIC MEASUREMENT OF HIP MOTION IN CYCLING WHILE STANDING,
M. L. Hull, A. Beard, and H. Varma, *Journal of Biomechanics* 23(7):687-703, 1990.
40. IMPLEMENTATION OF A FIVE DEGREE OF FREEDOM AUTOMATED SYSTEM TO DETERMINE KNEE FLEXIBILITY IN VITRO,
G. S. Berns, M. L. Hull, and H. Patterson, *ASME Journal of Biomechanical Engineering* 112(4):392-400, 1990.
- 41a. AN ALPINE SKI BINDING WITH ELECTRICALLY MODULATED TWIST RELEASE,
K. Eseltine and M. L. Hull, *International Journal of Sport Biomechanics* 7(2):183-200, 1991.
- 41b. Also appeared in: *Paper No. 90-WA/DE-1*, American Society of Mechanical Engineers, New York, 1990.
- 42a. APPARATUS TO OBTAIN ROTATIONAL FLEXIBILITY OF THE HUMAN KNEE UNDER MOMENT LOADS IN VIVO,

- O. S. Mills and M. L. Hull, *Journal of Biomechanics*, 24(6):351-369, 1991.
- 42b. Also appeared in: Skiing Trauma and Safety: STP 1104, American Society for Testing and Materials, Philadelphia, pp. 1-34, 1991.
- 43a. FLEXIBILITY OF THE HUMAN KNEE AS A RESULT OF VARUS/VALGUS AND AXIAL MOMENTS IN VIVO: EXPERIMENTS AND RESULTS,
O. S. Mills and M. L. Hull, *Journal of Biomechanics* 1987, 24(8):673-690, 1991.
- 43b. Also appeared in: Skiing Trauma and Safety: STP 1104, American Society for Testing and Materials, Philadelphia, pp. 35-56, 1991.
44. AN ANGULAR VELOCITY PROFILE IN CYCLING DERIVED FROM MECHANICAL ENERGY ANALYSIS,
M. L. Hull, S. Kautz, and A. Beard, *Journal of Biomechanics*, 24(7):577-586, 1991.
45. A COMPUTER SIMULATION OF MUSCLE-TENDON MECHANICS,
D. Hawkins and M. L. Hull, *Computers in Medicine and Biology*, 21(6):369-382, 1991.
46. THREE-DIMENSIONAL KNEE JOINT LOADING DURING SEATED CYCLING,
T. Ruby, M. L. Hull, and D. Hawkins, *Journal of Biomechanics* 25(1):41-53, 1992.
47. STRAIN IN THE ANTEROMEDIAL BUNDLE OF THE ANTERIOR CRUCIATE LIGAMENT UNDER COMBINATION LOADING,
G. S. Berns, M. L. Hull, and H. A. Patterson, *Journal of Orthopedic Research* 10(2):167-176 1992.
48. DESIGN AND EVALUATION OF A MULTI-DEGREE-OF-FREEDOM FOOT PEDAL INTERFACE FOR CYCLING,
D. Wootten and M. L. Hull, *International Journal of Sport Biomechanics*, 8(2):152-164, 1992.
49. THE EFFECT OF LOWER-LIMB ANATOMY ON KNEE LOADS DURING SEATED CYCLING,
T. Ruby, M. L. Hull, D. Jenkins, and K. Kirby, *Journal of Biomechanics*, 25(10):1195-1207, 1992.
- 50a. PHYSIOLOGICAL RESPONSE TO CYCLING WITH BOTH CIRCULAR AND NON-CIRCULAR CHAINRINGS,
M. L. Hull, M. Williams, K. Williams, and S. Kautz, *Journal of Medicine and Science in Sports and Exercise*, 24(10):1114-1122, 1992.
- 50b. Also appeared in: *Proceedings of International Congress on Cycling Biomechanics: Tour '92*, Centro de Estudio de Investigaciones Tecnicas de Gipuzkoa, San Sebastian, Spain, Documento No. 2, 1992.
- 51a. A NEW MECHANICAL SKI BINDING WITH RELEASE SENSITIVITY TO TORSION AND BENDING MOMENTS TRANSMITTED BY THE LEG,
R. Neptune and M. L. Hull, *International Journal of Sport Biomechanics*, 18(4):331-349, 1992.
- 51b. Also appeared in: Skiing Trauma and Safety: STP 1266, American Society for Testing and Materials, Philadelphia, PA, pp. 339-353, 1996.
52. AN ACTIVATION-RECRUITMENT SCHEME FOR USE IN MUSCLE MODELLING,
D. Hawkins and M. L. Hull, *Journal of Biomechanics*, 25(12):1467-1476, 1992.
- 53a. RESPONSE OF INTERSEGMENTAL KNEE LOADS TO FOOT/PEDAL PLATFORM DEGREES OF FREEDOM IN CYCLING,

- T. Ruby and M. L. Hull, *Journal of Biomechanics*, 26(11):1327-1340, 1993.
- 53b. Also appeared in: *Proceedings of International Congress on Cycling Biomechanics: Tour '92*, Centro de Estudio de Investigaciones Tecnicas de Gipuzkoa, San Sebastian, Spain, Documento No. 1, 1992.
54. A THEORETICAL BASIS FOR INTERPRETING THE FORCE APPLIED TO THE PEDAL IN CYCLING,
S. A. Kautz and M. L. Hull, *Journal of Biomechanics*, 26(2):155-165, 1993.
55. MUSCLE FORCE AS AFFECTED BY FATIGUE: MATHEMATICAL MODEL AND EXPERIMENTAL VERIFICATION,
David Hawkins and M. L. Hull, *Journal of Biomechanics*, 26(9):1117-1128 1993.
- 56a. RIDER/BICYCLE INTERACTION LOADS DURING STANDING TREADMILL CYCLING,
C. Stone and M. L. Hull, *Journal of Applied Biomechanics*, 9(3):208-218, 1993.
- 56b. Also appeared in: *Proceedings of the 4th International Human Powered Vehicle Scientific Symposium*, Cycling Research Association, Weed, CA. pp. 67-76, 1994.
- 57a. A DYNAMIC SYSTEM MODEL FOR ESTIMATING SURFACE-INDUCED FRAME LOADS DURING OFF-ROAD CYCLING,
H. Wilczynski and M.L. Hull, *ASME Journal of Mechanical Design*, 116(3):816-822, 1994.
- 57b. Also appeared in: Vibration, Shock, Damage, and Identification of Mechanical Systems, American Society of Mechanical Engineers, New York, DE-vol. 64, pp. 87-106, 1994.
- 58a. QUANTIFYING OFF-ROAD SUSPENSION HUB STIFFNESS,
Mike DeLorenzo, Eric L. Wang, and M. L. Hull, *Cycling Science*, 6(1):12-15, 26, 1994.
- 58b. Also appeared in: *International Journal of Vehicle Design*, 25(3) Special Issue: 249-259, 2001.
59. COMPARISON OF MUSCULAR MECHANICAL ENERGY EXPENDITURE AND INTERNAL WORK IN CYCLING,
S. Kautz, M. L. Hull, and R. Neptune, *Journal of Biomechanics*, 27(12):1459-1467, 1994.
60. THE EFFECT OF RIDER WEIGHT ON RIDER-INDUCED LOADS DURING COMMON CYCLING SITUATIONS,
C. Stone and M. L. Hull, *Journal of Biomechanics*, 28(4):365-375, 1995.
61. ACCURACY ASSESSMENT OF METHODS FOR DETERMINING HIP MOVEMENT IN SEATED CYCLING,
R. Neptune and M. L. Hull, *Journal of Biomechanics*, 28(4):423-437, 1995.
- 62a. A NEW LOAD APPLICATION SYSTEM FOR IN VITRO STUDY OF LIGAMENTOUS INJURIES TO THE HUMAN KNEE,
J. Bach and M. L. Hull, *ASME Journal of Biomechanical Engineering*, 117(4):373-382, 1995.
- 62b. Also appeared in: Skiing Trauma and Safety: STP 1266, American Society for Testing and Materials, Philadelphia, PA, 1196, pp. 232-254, 1995.
63. A NEW FORCE PLATE DESIGN INCORPORATING OCTAGONAL STRAIN RINGS,
M. L. Hull, R. Brewer, and D. Hawkins, *Journal of Applied Biomechanics*, 11(3):311-321, 1995.

64. A DYNAMIC OPTIMIZATION FRAMEWORK FOR ANALYSIS OF EQUIPMENT SET UP PROBLEMS IN ENDURANCE CYCLING,
S. A. Kautz and M. L. Hull, *Journal of Biomechanics*, 28(11):1391-1401, 1995.
- 65a. THE EFFECT OF INTERFACE PLATE COMPLIANCE ON DYNAMOMETERS INCORPORATING OCTAGONAL STRAIN RINGS,
R. Brewer and M. L. Hull, *Experimental Mechanics*, 35(4):337-344, 1995.
- 65b. Also appeared in: Dynamic Systems and Control 1994, American Society of Mechanical Engineers, DSC-Vol 55-2, pp. 1093-1101, 1994.
- 66a. A MODEL FOR DETERMINING RIDER INDUCED ENERGY LOSSES IN BICYCLE SUSPENSION SYSTEMS,
E. Wang and M. L. Hull, *Vehicle System Dynamics*, 25(3):223-236, 1996.
- 66b. Also appeared in: Transportation Systems-1994, American Society of Mechanical Engineers, New York, DC-Vol 54/DE-Vol 76, pp. 301-318, 1994.
- 67a. AN EMPIRICAL MODEL OF DETERMINING RADIAL FORCE-DEFLECTION BEHAVIOR OF OFF-ROAD BICYCLE TIRES,
David Moore, Eric Wang, and M. L. Hull, *International Journal of Vehicle Design*, 17(4):471-482, 1996.
- 67b. Also appeared in: *Cycling Science*, 7(3):13-17, 27, 1996.
68. STRAIN IN THE MEDIAL COLLATERAL LIGAMENT OF THE HUMAN KNEE UNDER COMBINATION LOADING,
M. L. Hull, G. S. Berns, H. Patterson, and H. Varma, *Journal of Biomechanics*, 29(2): 199-206, 1996.
69. AN IMPROVED ACCURACY SIX LOAD COMPONENT PEDAL DYNAMOMETER FOR CYCLING,
T. Boyd, M. L. Hull, and D. Wooten, *Journal of Biomechanics*, 29(8): 1105-1110, 1996.
70. QUANTIFICATION OF HIP MOTION IN SEATED CYCLING WITH COMPETITIVE CYCLISTS
R.R. Neptune and M. L. Hull, *Journal of Applied Biomechanics*, 12(4): 493-507, 1996.
71. DIRECT MEASUREMENT OF STRAIN IN THE POSTEROLATERAL BUNDLE OF THE ANTERIOR CRUCIATE LIGAMENT,
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