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VAN C. MOW

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PROFESSIONAL EXPERIENCE

- 2003- : Director, Liu Ping Laboratory for Functional Tissue Engineering, Engineering School, Columbia University
- 2000- : Chairman, Department of Biomedical Engineering, Engineering School, Columbia University
- 1998- : Stanley Dicker Professor of Biomedical Engineering, Columbia University
- 1995-2000: Director, Center for Biomedical Engineering, School of Engineering, Columbia University
- 1986-2002: Director, New York Orthopaedic Hospital Research Laboratory, Columbia-Presbyterian Medical Center
- 1986-98: Professor of Mechanical Engineering and Orthopaedic Bioengineering, Columbia University
- 1982-86: John A. Clark and Edward T. Crossan Professor of Engineering, Rensselaer Polytechnic Institute
- 1976-77: Visiting Professor, Harvard Medical School
- 1976-82: Professor of Mechanics and Biomedical Engineering, Rensselaer Polytechnic Institute
- 1969-76: Associate Professor of Mechanics, Rensselaer Polytechnic Institute
- 1968-69: Member of Technical Staff, Division of Engineering Mechanics, Bell Telephone Laboratories, Incorporated

ACADEMIES

- Academy of Sciences for the Developing World (TWAS), 2008
- Academia Sinica, Taiwan, 2004
- U.S. Institute of Medicine of the National Academy of Sciences, 1998
- U.S. National Academy of Engineering, 1991

HONORS AND AWARDS

- OARSI 2008 Outstanding Basic Science Award, OARSI World Congress, Rome, Italy, September 18, 2008
- Biot Heritage Lecture, Columbia University, New York, November 16, 2006
- Davies Medal for Outstanding Alumni Achievements, Rensselaer Polytechnic Institute, April 6, 2006
- Named Lecture Series: The Annual Van C. Mow Lecture Series in Applied Mechanics, Rensselaer Polytechnic Institute, 2006-
- Honorary Member, International Chinese Hard Tissue Society, 2005
- Fellow, Biomedical Engineering Society, 2005
- Namesake for ASME Medal: The Van C. Mow Medal for Excellence in Bioengineering, 2005-
- Honorary Professor, Beijing University of Aeronautics and Astronautics, 2004
- Honorary Professor, Zhejiang University, Hongzhou, China, 2004
- Academic Advisor to Crown Princess Maha Chakri Sirindhorn for the Development of Biomedical Engineering in Thailand, 2003-07
- Honorary Professor, Hong Kong Polytechnic University, 2003
- Founder and Inaugural Chair, Department of Biomedical Engineering, Columbia University, 2000
- Robert H. Thurston Lecture, ASME, November 18, 1998
- Stichting World Biomechanics Foundation "Low-Lands" Biomechanica Award, the Netherlands, 1996
- HE Cabaud Award, American Orthopaedic Society for Sports Medicine, 1996
- CS Neer Award for shoulder research, American Shoulder and Elbow Surgeons, 1996
- College of Fellows, American Institute of Medical and Biological Engineering, Founding Member, Elected 1992
- Giovani Borelli Award, American Society of Biomechanics, 1991
- Best Journal Paper Award, Bioengineering Division, ASME, 1991
- Fogarty Senior International Fellowship, 1987
- HR Lissner Award for Contributions to Bioengineering, ASME, 1987
- Honorary Professor, Shanghai Jiao Tong University, 1987
- Japanese Society for the Promotion of Science Fellowship, 1986
- Honorary Professor, Shanghai University, 1983
- John A. Clark and Edward T. Crossan Professor of Engineering, 1982-1986
- Melville Medal, Highest ASME honor for original paper, 1982
- President, Orthopaedic Research Society, 1982-1983
- William H. Wiley, Distinguished Faculty Award, RPI, 1981
- Honorary Professor, Sichuan University, 1981
- Kappa Delta Award, Best Research in Orthopaedics, AAOS, 1980
- Fellow, American Society of Mechanical Engineers, 1979
- NATO Senior Postdoctoral Fellow, 1978
- Sigma Xi
- Who's Who in America
- Who's Who in Science and Engineering
- American Men and Women in Science
- Who's Who in Engineering

- Who's Who in Technology Today
- Who's Who in the World
- Who's Who in Medicine

PROFESSIONAL COMMITTEES AND ACTIVITIES

- 2008-10 Member, Med-X International Scientific Advisory Committee, Shanghai Jiao Tung University
- 2007 Reviewer, Australian Academy of Sciences
- 2007 FDA Continuing Education Lecture for Cartilage and Osteoarthritis
- 2007-11 Advisory Board, World Association of Chinese Biomedical Engineers
- 2007-10 Member, External Advisory Committee, Department of Biomedical Engineering, Hong Kong University
- 2007 Member, Round Table Discussion on Future Direction of NIAMS
- 2006-07 Member, IOM Committee on NASA's Space Flight Health Standards
- 2006-07 Member, NRC Panel on Benchmarking the Research Competitiveness of the United States in Mechanical Engineering
- 2006- Co-Chairman, Global Development Team, Fu Foundation School of Engineering and Applied Science, Columbia University
- 2006- Chair, Advisory Committee for Biomedical Engineering, Tsinghua University, China
- 2006 Nominator for Medicine and Mathematics, The Shaw Foundation, Hong Kong
- 2006- Member, ASME Robert H. Thurston Lecture Award Committee
- 2006-07 Reviewer, National Screening Committee of the Institute of International Education, International Fulbright Science and Technology Award, United States Department of State
- 2005-06 Benchmarking for Mechanical Engineering, National Research Council
- 2005- Chairman, Advisory Committee, Research Centre for Musculoskeletal Bioengineering, Hong Kong Polytechnic University
- 2004 Nominator, The Heinz Prize, Heinz Family Foundation
- 2004-06 Departmental Academic Advisor, Jocky Club Rehabilitation Engineering Centre, Hong Kong Polytechnic University
- 2003- Steering Committee of the World Association for Chinese Biomedical Engineers
- 2002-06 Treasurer, World Committee on Biomechanics
- 2003- Advisor to HRH Princess Sirindhorn for Biomedical Engineering in Thailand
- 2002 President's Advisory Committee for Biomedical Engineering, Carnegie Mellon University
- 2002-05 Member, Committee on Longitudinal Study of Astronaut Health, NASA
- 2002-03 Member, Nominations Committee, National Academy of Engineering
- 2002 Member, President's Advisory Committee on Biomedical Engineering, Carnegie Mellon University
- 2002-05 Member, Biomedical Engineering Committee, Academy of Radiology Research
- 2001-08 Member, Standing Committee on Aerospace Medicine and Medicine of Extreme Environments (CAMMEE), IOM Advisory Committee for NASA
- 2001-04 Member, Committee on Membership, National Academy of Engineering

- 2000-03 Member, Russ Prize Committee, National Academy of Engineering
- 2000-01 Chairman, National Academy of Engineering Mid Atlantic Regional Meeting, June, 2001
- 2000-02 Member, International Steering Committee, 4th World Congress of Biomechanics
- 1999-05 Chairman, Advisory Committee, Division of Medical Engineering Research, National Health Research Institute, Taiwan
- 1999 Member, Long-Range Planning Committee, NIAMS, July 1999
- 1999 Moderator, Osteoarthritis Workshop, NIAMS, July 1999
- 1999-01 Chair, Bioengineering Section, National Academy of Engineering
- 1998-99 Member, Committee on Space Biology and Medicine, Space Studies Board of NASA, National Research Council
- 1998 Co-Chair, Mathematical Modeling Panel, NIH98 Bioengineering Symposium
- 1997-00 Chair, Research Committee, American Shoulder and Elbow Surgeons
- 1997-99 Vice-Chair, Bioengineering Section, National Academy of Engineering
- 1997-99 NRC Liaison Officer for Bioengineering, National Academy of Engineering
- 1996-99 Peer Committee, Bioengineering Section, National Academy of Engineering
- 1995 Chair, Site Visiting Committee, Musculoskeletal Research Center, University of Pittsburgh, November, 1995
- 1995 Member, NIH Study Section for Osteoarthritis Research
- 1995 Guest Reviewer, Whitaker Biomedical Engineering Research Award
- 1994 Member, Biomedical Engineering Review Panel, National Science Foundation
- 1994-06 Member, World Council for Biomechanics
- 1993-96 Board of Directors, Biomedical Engineering Society
- 1993-96 Hoar Research Fellowship Committee, New York Academy of Medicine
- 1993-95 Member, Research Committee, American Shoulder and Elbow Surgeons
- 1992-96 Co-Chairman, Grants Review Committee, Orthopaedic Research and Education Foundation
- 1992-96 Member, Grants Board, Orthopaedic Research and Education Foundation
- 1991-94 Chairman, U.S. National Committee on Biomechanics
- 1991 Member, NIA Special Study Section
- 1991 Member, NIAMDS Special Study Section
- 1990-94 Member, Program Committee, Second World Congress on Biomechanics, Amsterdam, The Netherlands
- 1990-94 Member, International Steering Committee, Second World Congress on Biomechanics, Amsterdam, The Netherlands
- 1990-91 Member, National Research Council Committee on Materials: Synthetic Hierarthical Structures
- 1990 Chairman, NIH GMA-1 AHR-MA Special Study Section
- 1989-90 Chairman, Symposium on Biomechanics of Diarthrodial Joints, First World Congress on Biomechanics
- 1988-94 Member, Basic Science Committee, AAOS
- 1988-91 Chair, Subcommittee for Government Relations, USNCB on

Biomechanics

- 1988-91 Vice Chair, U.S. National Committee on BIomechanics
- 1988-90 Member, Program Committee, First World Congress on Biomechanics
- 1988 Chair, Panel Review Committee, BRAD Program, NSF
- 1986-90 Member, International Steering Committee, First World Congress on Biomechanics
- 1985-88 Secretary-Treasurer, U.S. National Committee on Biomechanics
- 1985-92 Member, Research Grant Review Committee, OREF
- 1984-85 Chair, Bioengineering Division, American Society of Mechanical Engineers
- 1984 Chair, NIH Special Study Section on Orthopaedics and Musculoskeletal Systems
- 1984-85 Member, NIH Workshop Committee on Osteoarthritis
- 1983 Member, Constitution Committee Orthopaedic Research and Education Foundation
- 1982-84 Member, Executive Committee, Bioengineering Division, American Society of Mechanical Engineers
- 1982-85 Member, Faculty Committee on Promotion and Tenure, RPI
- 1982 Co-Chairman, Task Force on Documentation for the New NIH Institute on Arthritis, Musculoskeletal, and Skin Diseases, American Academy of Orthopaedic Surgeons
- 1982-84 Member, Board of Directors, Orthopaedic Research Society
- 1982 Chairman, By-laws Committee United States National Committee on Biomechanics
- 1982-83 President, Orthopaedic Research Society
- 1982-83 Secretary-Treasurer, Bioengineering Division, American Society of Mechanical Engineers
- 1982-84 Chairman, Orthopaedics and Musculoskeletal Diseases Study Section, National Institutes of Health
- 1981 Member, Steering Committee on Sport Injuries to Knee, National Institutes of Health
- 1980-82 Member, Applied Physiology and Orthopaedic Study Section, National Institutes of Health
- 1979 Group Leader, Orthopaedic Science and Bioengineering Group, Visit to The People's Republic of China, August 17-31, 1979
- 1979-80 Chairman, Program Committee, Bioengineering Division, American Society of Mechanical Engineers
- 1979-80 Chairman and Founder, First Gordon Research Conference on Bioengineering and Orthopaedic Science
- 1978-79 President, American Association of University Professors, RPI Chapter
- 1978 Member, Executive Committee Orthopaedic Research Society
- 1978 Chairman, Program Committee, Orthopaedic Research Society
- 1978 Member, Scientific Program Committee American Academy of Orthopaedic Surgeons
- 1977-83 Member, Joint Bioengineering and Applied Mechanics Committee on Biomechanics, American Society of Mechanical Engineers
- 1977 Member, Nominating Committee, American Society of Biomechanics
- 1976-78 Member, Program Committee, Orthopaedic Research Society
- 1974-80 Member, Research Council on Lubrication, American Society of Mechanical Engineers Lubrication of Biological Joints

PROFESSIONAL SOCIETIES

- American Academy of Mechanics
- American Academy of Orthopaedic Surgeons (Associate Member)
- American Association for the Advancement of Science
- American Association of University Professors (President, RPI Chapter)
- American Physical Society: Fluid Dynamics Division; Biophysics Division
- American Shoulder and Elbow Surgeons (Affiliate Member)
- American Society of Biomechanics (Founding Member)
- American Society of Engineering Educations
- American Society of Mechanical Engineers (Fellow)
- Biomedical Engineering Society (Board of Director, 1993-1997)
- Chinese Speaking Orthopaedic Society
- International Society of Biorheology
- International Cartilage Repair Society
- New York Academy of Medicine (Fellow)
- Orthopaedic Research Society (President, 1982)
- Osteoarthritis Research Society International

CONSULTATIONS

- 2003 University of Virgina, Orthopaedic Surgery
- 2002 Carniegie Mellon University
- 1998 Johnson & Johnson PI
- 1996-99 Shriner's Hospital Medical Center, Springfield, MA
- 1996 Department of Orthopaedic Surgery, University of Pittsburgh
- 1995-97 Alza Corporation, Palo Alto, California
- 1994-99 International Board of References, Interdisciplinary Centre for Musculoskeletal Bioengineering and Rehabilitation, Hong Kong Polytechnic University
- 1978-82 Biomechanics Unit, Helen Hayes Hospital, Haverstraw, New York
- 1978-83 Biomedical Sciences Group, General Motors Research Laboratory, Warren, Michigan
- 1974-81 Harvard Medical School, Skeletal Research Laboratory, Children's Hospital Medical Center, Boston
- 1973-76 Touro Research Institute, New Orleans
- 1966-67 Mechanical Technology Incorporated, Latham, NY

MAJOR AND HONORARY INVITED LECTURES

- Opening Ceremony Lecture, OARSI Congress, Rome, Italy, September 18, 2008
- Honorary Lecture, Functional Tissue Engineering, Shanghai Jiao Tung University, October 23, 2007
- Colloquium Lecture, On the State of the Department of Biomedical Engineering at Columbia University, October 10, 2007
- Honorary Lecture, Workshop on Tissue Biomecanics, Tsinghua University, October 9, 2007
- Colloquium Lecture, On the Establishment of a Biomedical Engineering Department, Hong Kong University, October 5, 2007
- Plenary Keynote Lecturer: Cartilage and Osteoarthritis: Biomechanics and Ultrasound, IEEE Ultrasonics Symposium, New York, October 29, 2007
- Faculty of Engineering Distinguished Lectuer, Hong Kong University,

October 5, 2007

- Distinguished Lecturer in Biomechanical Engineering, Molecular and Cellular Biomechanics of Articular Cartilage, Stanford University, June 4-5, 2007
- Hunter Distinguished Scientist Lecture, Molecular and Cellular Basis for Cartilage Functional Tissue Engineering—Role of Biomechanics, Biomedical Engineering Department, Clemson University, April 5, 2007
- Distinguished Lecturer, Biomedical Engineering Department, University of Virginia, November 3, 2006
- Keynote Lecturer: Functional Tissue Engineering – The Articular Cartilage Paradigm, Annual IEEE EMB Conference, New York, NY, August 31, 2006
- Keynote Lecturer: Structure and Function of Normal and OA Articular Cartilage, 53rd Annual Meeting of American College of Sports Medicine, Denver, CO, June 2, 2006
- Clarence Davies Medal Lecture, From Immigrant to Bioengineer: Tales from Two Cultures—China to United States and Aeronautical Engineering to Biomedical Engineering, Rensselaer Polytechnic Institute, April 7, 2006
- Gurley Lecture in Mechanics: Constitutive Modeling of Biological Tissues as a Soft, Charged, Hydrated, Fiber-Reimforced Material -- Implications for Tissue Engineering, Rensselaer Polytechnic Institute, April 7, 2006
- Plenary Honorary Lecturer: Biomedical Engineering for the Year 2020: What Do We See? A New Discipline for the Twenty First Century, National Science and Technology Development Agency, Symposium on Technology Transfer, Bangkok, Thailand, December 16, 2005
- Keynote Lecturer: The Origin of Residual Stress and Curling Behavior of Biological Tissues: Physiological and Medical Implicatons. First U.S. - Thailand Biomedical Engineering Symposium, Bangkok, Thailand, December 14, 2005
- Honorary Lecturer: Biomedical Engineering for the Year 2020: What Do We See? A New Discipline for the Twenty First Century, First U.S. - Thailand Biomedical Engineering Symposium, Bangkok, Thailand, December 12, 2005
- Plenary Lecturer: The Origin of Residual Stress and Curling Behavior of Biological Tissues: Physiological and Medical Implicatons. 30th International Conference on Computatial and Experimental Engineering and Sciences, IIT Chennai, India, December 1, 2005
- Keynote Lecturer: Animal Joint Lubrication: Nature's "Fail-Safe" Mechanisms and What Happens when it Fails, 3rd World Congress on Tribology, Washington DC, September 14 & 15, 2005
- Plenary Honorary Lecture, How to Succeed in America as a Chinese Researcher, ICHTS, February 20, 2005, Washington DC
- Keynote Lecturer, U.S. National Science Foundation Sino-American Multi-Sited Biomedical Engineering Symposium, “Influence of Tension-Compression Nonlinearity on the Mechano-Electrochemical Environment of Chondrocytes in Cartilage Explants under Unconfined Compression”, Chinese Academy of Sciences, Beijing, China, July 15, 2004
- Keynote Lecturer, U.S. National Science Foundation Sino-American Multi-Sited Biomedical Engineering Symposium, “Indentation Determined Mechano-electrochemical properties and fixed charge density of articular cartilage”, Shanghai Jiao Tung University, July 7, 2004
- Zhu Kezhen Memorial Lecture, “Rigorous Engineering Analysis of Human Joint Function and Etiology of Osteoarthritis”, Zhejiang University, China, July 5, 2004
- Invited Lecture, National Academy of Engineering, National Meeting, Irvine, California, February 12, 2004
- Army Research Office Conference on Mechanics and Chemistry of Biosystems, Irvine California, February 10, 2004
- Plenary Lecture, Biomechanics and Disease Mechanism, World Congress on OsteoArthritis, Berlin, Germany, October 12, 2003

- Keynote Lecture, 2nd National Science Education Seminar, for the Commemoration of Her Royal Highness, Crowned Princess Sirindhorn 48th Birthday and the 60th Anniversary of Kasetsart University, September 5, 2003, Thailand
- Keynote Lecturer, Life Sciences Consortium's Colloquium Series, Functional Tissuee Engineering, Pennsylvania State University, March 4, 2003
- Keynote Lecturer: Role of Biomechanics on Functional Tissue Engineering, First Congress of Chinese Biomechanics, Taipei, December 11, 2002
- Kroc Foundation Distinguished Lecturer on Osteoarthritis and Tissue Engineering, University of Miami, November 7&8, 2002
- Visiting Professorship, Univesity of Pittsburgh, June 3, 2002
- Keynote Lecture, Croucher Advanced Studies Institute, Hong Kong, April 13, 2000
- Southwest Mechanics Lecture Series, March 26-31, 2000
- AC Suhren Jr. Lecture, Tulane University, March 30, 2000
- Sprint Distinguished Lecturer, Steadman-Hawkins Sports Medicine Foundation,Vail, Colorado, March 2 & 6, 2000
- Keynote Lecture, YC Fung 80th Birthday Symposium, ASME Bioengineering Conference, June 16, 1999
- Plenary Lecture, International Society of Magnetic Resonance in Medicine, Philadelphia, PA, June 19, 1998.
- Lord Kelvin Lecture, University of Texas, Austin, April 9, 1998
- Keynote Lecture, JSME Centennial Grand Congress, Tokyo, Japan, July 20, 1997
- Caterpillar Distinguished Lecturer, University of Iowa, May 7, 1997
- Stichting World Biomechanics Award Lecture, Amsterdam, The Netherlands, November 11, 1996
- Paul M. Chung Distinguished Lecture Series, University of Illinois, Chicago, October 16, 1996
- Plenary Lecture, Mechanics & Materials Summer Conference, ASME, June 18, 1996
- Ray and Robert Kroc Foundation Lectureship on Arthritis, University of Miami, April 24, 1996
- Plenary Lecture, First Asian Shoulder Society Meeting, Taipei, April 25, 1994
- Keynote Lecture, 20th Symposium of European Society for Osteoarthrology, Bari, Italy, October 20, 1994
- Keynote Lecture, 2nd World Congress on Biomechanics, Amsterdam, The Netherlands, July 12, 1994
- Presidential Guest Lecture, 8th Japanese Orthopaedic Research Society Meeting, Matsumoto, Japan, October 24, 1993
- Keynote Lecture, The Whitaker Foundation, Salt Lake City, July 25, 1993
- Keynote Lecture, 7th International Conference on Biomedical Engineering, Singapore, December, 1992
- Presidential Guest Lecture, Arthroscopy Association of Republic of China, Taiwan, April 17, 1992
- Presidential Guest Lecture, European Society of Biomechanics, Rome, June 12, 1992
- Keynote Lecture, Third USA-China-Japan Conference on Biomechanics, Georgia Institute of Technology, August 21, 1991
- Borelli Lecture, American Society of Biomechanics, October 14, 1991
- Keynote Lecture, Swiss Connective Tissue Research Society, Basal, Switzerland, September 16, 1990
- Kroc Foundation Lectureship on Arthritis, University of Miami, April 21,

1990

- Alza Distinguish Lectureship, Biomedical Engineering Society, October 18, 1987
- Keynote Lecture, XVth Symposium of European Society of Osteoarthrology, Finland, June 20, 1986
- Keynote Lecture, European Society of Biomechanics, Nijmegan, January 22, 1982
- Keynote Lecture, American Society of Biomechanics, Seattle, October 14, 1982
- Keynote Lecture, British Connective Tissue Society, Southampton, England, September 27, 1982
- Keynote Lecture, First National Meeting on Biomechanics, Shanghai, People's Republic of China, August 12, 1981
- Keynote Lecture, 1979 Biomechanics Symposium, ASME, June 21, 1979

EDUCATION

- 1962: B.A.E., Aeronautical Engineering, Rensselaer Polytechnic Institute
- 1966: Ph.D., Applied Mechanics, Rensselaer Polytechnic Institute
- 1967-68: Postdoctoral, Applied Mathematics, Courant Institute of Mathematical Sciences, New York University

GRANTS

- 2002-06 Principal Investigator, Whitaker Foundation Biomedical Engineering Special Award: Leadership in Biomedical Engineering Through Cellular and Tissue Engineering, Biomedical Imaging and Biomchanics
- 2003-05 Principal Investigator, National Science Foundation, U.S. - China Multi-Institutional Symposium on Biomedical Engineering
- 1999-03 Principal Investigator, Whitaker Foundation Biomedical Engineering Development Award: Bridging Engineering, Medicine and Biology with an Emphasis on Biomedical Imaging
- 1996-99 Principal Investigator, National Institutes of Health, Biomechanical Factors in OA of the Glenohumeral Joint.
- 1996-98 Principal Investigator, Whitaker Special Opportunity Award, Tissue Biomechanics and Biochemistry: A Theme for the Development of a Biomedical Engineering Department at Columbia University
- 1994-02 Principal Investigator, National Institutes of Health, Etiology of Osteoarthritis of the Carpometacarpal Joint
- 1993-97 Co-Principal Investigator, National Science Foundation, Understanding Human Joint Mechanics through Advanced Computational Models, Columbia University/RPI Collaborative Project
- 1993-00 Principal Investigator, National Institutes of Health, Mechano-Electrochemical Properties of Cartilage
- 1990-94 Principal Investigator, Bristol-Myers/Zimmer Grant for Excellence in Orthopaedic Research: Fundamental and Clinical Interdisciplinary Research on Diarthrodial Joints -- Hand, Knee and Shoulder
- 1989-92 Co-Principal Investigator, St. Giles Foundation, The Growth Plate in Pediatric Orthopaedics: A Biomechanical and Biochemical In Vitro Study
- 1989-91 Senior Investigator, Orthopaedic Research and Education Foundation, Biomechanics of the Shoulder, EL Flatow, PI
- 1988-92 Co-Principal Investigator, Syntex Laboratories, Inc., Studies on the Effects of Naproxen on Normal and Pond-Nuki OA Articular Cartilage Metabolism, Biochemistry and Biomechanics
- 1988-91 Principal Investigator, National Institutes of Health, Biomechanics of Normal Bovine and Human Meniscus, Columbia University/RPI Collaborative Project

- 1987-89 Senior Investigator, Orthopaedic Research and Education Foundation Grant, Correlates of Healing Cartilage Mechanical Properties, Biochemical Composition, MP Rosenwasser, PI
- 1987-91 Principal Investigator, National Institutes of Health Grant, Mechanics and Chemistry of Cartilage from Animal Models of OA and Joint Disuse, Columbia University/University of Miami Collaborative Project
- 1986-89 Principal Investigator, National Science Foundation Grant, Fundamental and Applied Research on Biomechanics of Diarthrodial Joints, Columbia University/RPI Collaborative Project
- 1985-90 Principal Investigator, National Institutes of Health Grant, Structure and Biorheology of Cartilage Proteoglycans, RPI/Montefiore Hospital Medical Center/Kennedy Institute of Rheumatology (London) Collaborative Project
- 1984-87 Principal Investigator, National Institutes of Health Grant, Biomechanics of Normal and Osteoarthritic Human Cartilage, RPI/University of Miami Medical School Collaborative Project
- 1983-86 Principal Investigator, National Institutes of Health Grant, Mechanics and Chemistry of Cartilage, RPI/Harvard Medical School Collaborative Project
- 1983-86 Principal Investigator, National Science Foundation Grant, Biomechanics of Diarthrodial Joints
- 1982-86 Principal Investigator, Surdna Foundation Endowment Fund on the Development of Biomechanics Research at RPI
- 1982 Principal Investigator, Biomedical Research Support Grant, The Acquisition of a Sensitive, Stable, Servo-Controlled Mechanical Testing Device for Tissue Properties
- 1981-84 Principal Investigator, The Kroc Foundation, Structure and Function of Proteoglycans in Normal and Osteoarthritic Cartilage
- 1981-84 Principal Investigator, National Institutes of Health Grant, Biomechanics of Normal and Osteoarthritic Human Cartilage, RPI/Harvard Medical School Collaborative Project
- 1980 Principal Investigator, Biomedical Research Support Grant, The Acquisition of MINC 11/03 Laboratory Instrument Control, Data Acquisition and Data Analysis System
- 1980-83 Co-principal Investigator, National Science Foundation Grant, Biomechanics of Diarthrodial Joints
- 1980-82 Principal Investigator, National Institutes of Health Grant, Mechanics, Electromechanics and Chemistry of Cartilage, Tri-Institutional Grant: RPI/Harvard Medical School/MIT
- 1978-80 Principal Investigator, General Motors Grant, Characterization of Impact Induced Microtrauma on Articular Cartilage
- 1977 Principal Investigator, Biomedical Research Support Grant, The Video Dimensional Analyzer for Tissue Mechanics Studies
- 1977-80 Co-principal Investigator, National Science Foundation Grant, Biorheological Characterization of Articular Cartilage and Synovial Fluid
- 1976-81 Principal Investigator, National Institutes of Health Grant, Biomechanics of Aging and Osteoarthritic Cartilage
- 1975-78 Co-principal Investigator, National Science Foundation Grant, Biomechanics of Normal and Pathological Synovial Joints
- 1974-76 Principal Investigator, National Science Foundation Grant, Biomechanics of Normal and Pathological Cartilage
- 1971-74 Principal Investigator, National Science Foundation Grant, Biomechanics of Synovial Joints

EDITORSHIPS

- 2008-13 Member, Editorial Board, Annual Review of Biomedical Engineering
- 2007- Chair, Editorial Advisory Board, Cellular and Molecular

Bioengineering, Springer Publishers

- 2005- Editorial Advisory Board, J Biomechanics
- 2004-06 Editorial Board, Mechanics and Chemistry of Biosystems
- 2001-07 Co-Editor/Associate Editor, Osteoarthritis and Cartilage, W.B. Saunders
- 1999 Special Volume of Osteoarthritis and Cartilage, edited by VC Mow and SLY Woo
- 1996- Editorial Board, Journal of Musculoskeletal and Orthopaedic Research
- 1996-00 Editorial Board, Osteoarthritis and Cartilage, W.B. Saunders
- 1994-00 Advisory Editorial Board, Spine
- 1993-04 Board of Advisory Editors, Clinical Orthopaedics and Related Research
- 1993 Special Volume of Journal of Biomechanical Engineering for the 20th Anniversary ASME Biomechanics Symposium, edited by VC Mow, SLY Woo and RM Nerem
- 1986- Consulting Editor, Springer-Verlag Series in Mechanical Engineering
- 1985-92 Honorary Editor, Chinese Journal of Biomechanics, Shanghai
- 1984-88 Chairman, Editorial Advisory Board, Journal of Orthopaedic Research
- 1982 Co-Founder, Journal of Orthopaedic Research
- 1981-05 Member, Editorial Advisory Board, Journal of Biomechanics
- 1981- Member, Board of Associate Editors, Journal of Orthopaedic Research
- 1980 Editor, 1980 Advances in Bioengineering, ASME
- 1979-86 Associate Editor, Journal of Biomechanical Engineering, Trans ASME
- 1977-81 Member, Board of Consulting Editors, Journal of Bone and Joint Surgery

BOOKS

- *Biomechanics of Diarthrodial Joints*, I. eds VC Mow, A Ratcliffe, SLY Woo, Springer-Verlag, New York, pp 451, 1990.
- *Biomechanics of Diarthrodial Joints*, II. eds VC Mow, A Ratcliffe, SLY Woo, Springer-Verlag, New York, pp 464, 1990.
- *Basic Orthopaedic Biomechanics*. eds VC Mow, WC Hayes, Raven Press, New York, pp 453, 1991.
- *Knee Meniscus: Basic and Clinical Foundations*. eds VC Mow, SP Arnoczky and DW Jackson, Raven Press, New York, pp 190, 1992.
- *Cell Mechanics and Cellular Engineering*, eds VC Mow, F Guilak, R Tran-Son-Tay, RM Hochmuth, Springer-Verlag, New York, pp 564, 1994.
- *Basic Orthopaedic Biomechanics*, 2nd Edition, eds VC Mow, WC Hayes, Lippincott-Raven Press, Philadelphia, pp 514, 1997.
- *Basic Orthopaedic Biomechanisc and Mechanobiology*, 3rd Edition, eds VC Mow, HWJ Huiskes, Lippincott-Williams and Wilkins, Philadelphia, 2004

PEER REVIEWED PUBLICATIONS

1. Wan LQ, Jiang J, Arnold DE, Guo XE, Mow VC, Lu HH: Viscoelastic shear properties of chondrocyte-hydrogel constructs, Tissue Eng, In Review, 2008
2. Lu XL, Mow VC, Guo XE: Determination of biomechanical properties and proteoglycan content of TMJ condylar cartilage by micro-indentation, J Dental Res, In Review, 2008
3. Wan LQ, Mow VC: Cellular and Molecular Biomechanics: Articular Cartilage Paradigm—A Review, J Med Biomechanics, 21:1; 2/2008

4. Wan LQ, Jiang J, Arnold DE, Guo XE, Lu HH, Mow VC: Calcium concentration effects on the mechanical and biochemical properties of chondrocyte-alginate constructs, Cellular and Molecular Bioengineering, 1:93-102, 2008
5. Chien S, Yoganathan A, Mow VC: Cellular and Molecular Bioengineering: Celebration of the inauguration of a new international Journal of the Biomedical Engineering Society, Cellular and Molecular Bioengineering, 1:4-9, 2008
6. Winer WO,...Mow VC,...: Benchmarking the Research Competitiveness of the United States in Mechanical Engineering, National Research Council Report, pp 1-106, 2007
7. Brinker MR, O'Connor DP, Almekinders LC, Best TM, Buckwalter JA, Garrett, WE Jr, Kirkendall DT, Mow VC, Woo SLY; In Orthopaedic sports medicine: Principles and practice: Physiology of Injury to Musculoskeletal Structures, ed by D Drez Jr, JC DeLee, Miller, WB Saunders Company, Philadelphia, 2007, In Press
8. Lu XL, Miller M, Chen FH, Guo XE, Mow VC: The generalized triphasic correspondence principle for simultaneous determination of the mechanical properties and proteoglycan content of articular cartilage by indentation. J Biomechanics, 40:2434–2441, 2007
9. Ingber DE, Mow VC, Butler DL, Niklason L, Huard J, Mao JJ, Yanna I, Kaplan D, Vunjak-Novakovic G: Tissue engineering and developmental biology: Going biomimetic, Tissue Engineering, 12(12):3265-3283, 2006
10. Troken AJ, Wan LQ, Marion NW, Mow VC, Mao JJ: Properties of Cartilage and Meniscus, In: JG Webster, The Wiley Encyclopedia of Medical Devises and Instrumentation, 3rd Edition, 55:63-80, 2006
11. Wang VM, Sugalski MT, Levine WN, Pawluk RJ, Mow VC, Bigliani LU: J Bone Jt Surg, 87A:1312-1322, 2005
12. Huang CY, Stankiewicz A, Ateshian GA, Mow VC: Anisotropy, inhomogeniety, and tension-compression nonlinearity of human glenohumeral cartilage in finite deformation. J Biomechanics, 38:799-809, 2005
13. Koff MF, Shrivastava N, Gardner TR, Rosenwasser MP, Mow VC, Strauch RJ: An in vitro ligament reconstruction or extension osteotomy on trapeziometacarpal joint stability and contact area, J. Hand Surg, 31A: 429-439, 2005
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ABSTRACTS

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Soft tissue biomechanics (including articular cartilage, meniscus and intervertebral disc), biomechanics of osteoarthritis, cell-matrix interactions, mechano-signal transduction, and functional tissue engineering.