CURRICULUM VITAE

JOHN MICHAEL JURIST, Ph.D.

February 16, 2014

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Narrative Summary:

John M. Jurist is a semi-retired biophysicist. His major interests include medical applications of computer technology, medical instrumentation, biomechanics, skeletal physiology and aging, and aerospace medicine.

At the University of California at Los Angeles, he earned a bachelor's degree in physics in the College of Letters and Science with concentration in atomic and nuclear physics. Then, in that institution's School of Medicine, he earned master's degrees in biophysics and nuclear medicine, and a doctorate in biophysics. His postdoctoral training in medical physics was obtained in the Department of Radiology at the University of Wisconsin Medical School.

Dr. Jurist held a full time faculty appointment in the Division of Orthopedic Surgery at the University of Wisconsin School of Medicine and was Associate Director of the Biomedical Engineering Center at that same institution. He has held the positions of Adjunct Professor of Medical Science and Adjunct Professor of Electrical Engineering at Montana State University-Bozeman, Adjunct Professor of Physics at Eastern Montana College (now Montana State University-Billings), and Visiting Professor of Physics at Rocky Mountain College. Dr. Jurist is currently Adjunct Professor of Space Studies in the Odegard School of Aerospace Sciences at the University of North Dakota and Adjunct Professor of Biophysics and Aviation at Rocky Mountain College.

Among other professional associations, Dr. Jurist is a Life Member of the Space Medicine Branch of the Aerospace Medical Association (and also an Associate Fellow of the latter), a Life Member of the International Association of Military Flight Surgeon Pilots, an Emeritus Member of the Orthopaedic Research Society, and a Life Member of the New York Academy of Sciences. He has been a member of the Section on Clinical Medicine (now the Health Sciences Section) of the Gerontological Society since 1966 and was elected a Fellow of that society in 1977 in recognition of his contributions to understanding skeletal aging.

He has been a coinvestigator on grants funded by the National Aeronautics and Space Administration, the old Atomic Energy Commission (now the Nuclear Regulatory Commission), and has been principal investigator on grants funded by the National Institutes of Health and on privately funded grants. He has served as a reviewer for the Veteran's Administration, the National Science Foundation, the National Aeronautics and Space Administration, and such journals as the *Journal of Bone and Joint Surgery, Clinical Orthopaedics and Related Research, Physics in Medicine and Biology*, the *Journal of Biomechanics, Medical Physics*, and for Prentice-Hall, Inc.

Dr. Jurist earned a patent for a device to noninvasively measure bone density, is the author of a chapter in the textbook *Orthopaedic Mechanics*: *Procedures and Devices*, the author of three sections in the textbook *Space Mission Engineering: The New SMAD*, and is an author of more than 80 articles and abstracts published in such journals as the *Journal of Bone and Joint Surgery, Clinical Orthopaedics and Related Research, Physics in Medicine and Biology,* the *Journal of Biomechanics,* the *Journal of Neurosurgery, Aerospace Medicine*, etc. He has presented more than 200 papers and invited seminars.

He served as mayoral appointee to the Yellowstone County Air Pollution Control Board for six years (including three years as chairman). He has also served on the Biotechnology Subcommittee of the Advisory Council on Science and Technology for the State of Montana and was a gubernatorial appointee to the State Board of Health and Environmental Sciences. Dr. Jurist was the founding Scientific Director of the Deaconess Research Institute in Billings (now the Billings Clinic Research Division) and served more than a decade as Vice-Chairman and scientific representative on the Inter-institutional Review Board for the local medical community. He served a term as Co-Chairman and was a long-term member of the National Advisory Council to Rocky Mountain College.

He has testified as an expert witness in various civil and criminal trials and has consulted for the United States Veteran's Administration, the United States Air Force, the United States Marine Corps, the United States Department of Justice, the National Aeronautics and Space Administration, the Montana Attorney General, and the Yellowstone County Attorney on various scientific and medical matters.

In 2009 Dr. Jurist was the team leader on a project briefed to representatives from the Office of the Commandant, USMC; the USAF Security Forces Center Headquarters; the Pentagon Security Space Office; the US Special Operations Command; and the Air Force Research Laboratory. One of his recent graduate students, an active duty

USAF Captain, finished her master's degree project on the dynamics of high speed and high altitude bailout. This collaborative research topic is currently being extended. Another graduate student finished her master's degree project on the effects of hypoxia on acceleration tolerance. Two undergraduate students studied impact tolerance and the dynamics of high speed and high altitude atmospheric entry and one student extended this work into the low speed impact regime while supported by NASA grants. That research is also being extended.

Personal Data:

Born October 13, 1943 in Williamsport, Pennsylvania; widowed with two adult children

Business Address:

CRM, Inc.
Post Office Box 51179
Billings, Montana 59105
jmjurist@gmail.com

Scientific Interests:

Biomedical instrumentation, medical applications of computer technology, bone physiology and pathology, biomechanics, aerospace medicine, and skeletal aging

Education:

California (All at the University of California, Los Angeles, A.B. in College of Letters and Science, M.S. and Ph.D. in School of Medicine)

Dates	Degree	Awarded	Major Area of Concentration
9/60 - 6/64	A.B.	8/64	Physics
9/64 - 6/66	M.S.	6/66	Biophysics and Nuclear Medicine
7/66 - 9/68	Ph.D.	12/68	Biophysics

Dissertation:

A Quantitative Study of Bone Induction in the Rabbit, University of California, Los Angeles, 1968

Invention:

Vibratory Bone Density Determination Method and Apparatus, U. S. Patent No. 3,477,422, Nov. 11, 1969, Assigned to the Wisconsin Alumni Research Foundation

Honors and Awards:

1. Election to Sigma Pi Sigma (National Physics Honor Society)

2. First place award, Engineering Exposition, University of Wisconsin, 1969, for exhibit: C. R. Wilson, J. M. Jurist: Measurement of Bone Quality, Madison, Wisconsin

3. Elected Fellow, 1977, Gerontological Society, Section on Clinical Medicine

4. Elected Associate Fellow, 2010, Aerospace Medical Association

Professional Society Memberships:

1. Gerontological Society (Section on Clinical Medicine - Fellowship status awarded 11/77, emeritus status conferred 4/10)

2. Aerospace Medical Association (Space Medicine Branch - Life Membership conferred 8/91, Associate Fellowship status awarded 11/2010)

3. International Association of Military Flight Surgeon Pilots (Life Membership conferred 6/08)

4. American Association for the Advancement of Science (Medical Science Section – resigned 03/12)

5. Wisconsin Orthopaedic Society (Honorary Member, resigned 8/76)

6. Orthopaedic Research Society (Emeritus status conferred 8/08)

7. New York Academy of Sciences (Mathematics, Biophysics, and Biomedical Sciences Sections - Life Membership conferred 12/86)

8. Engineering in Medicine and Biology Society (resigned 12/05)

9. Institute of Electrical and Electronics Engineers (resigned 12/05)

10. International Society of Biomechanics (resigned 12/04)

11. American Institute of Aeronautics and Astronautics (Senior Member)

Principal Investigatorships:

1.	NIH NLM-71-4717 Phase II	6/21/71 - 3/19/73	X-Ray Transmission via Narrowband Circuit (became project Co-principal Investigator 9/22/72 and Principal Investigator 12/1/72)
2.	NIH AM-16514	1/1/73 - 8/1/76	Longitudinal Study of Skeletal Status in Women
3.	NIH AM-17804	9/1/74 - 8/31/76	Nondestructive Evaluation of Fracture Union
4.	NIH AM-20130	8/1/76 - 12/31/77	Longitudinal Study of Skeletal Status in Women
5.	GST Laboratories, Inc. #7137	5/18/81 - 5/17/82	Stress Telethermometry in Women
6.	Pacific Biomedical Corporation	2/6/89 - 2/5/90	Vibratory Bone Analysis
7.	Deaconess Development Foundation	9/1/88 - 6/30/92	Osteoporosis

Employment:

Dates	Institution or Organization	Title
2/63 - 6/64	Physics Dept., Univ. of Calif., Los Angeles, CA (UCLA)	Reader (part time)
3/64 - 6/64	Physics Dept., UCLA	Laboratory Assistant (part time)
8/64 - 9/65	IBM Systems Research & Development Center, Los Angeles, CA	Programmer (part time)
11/65 - 12/65	Dept. of Biophysics & Nuclear Medicine, UCLA	Research Assistant (part time)
1/66 - 6/67	Dept. of Biophysics & Nuclear Medicine, UCLA	Predoctoral Trainee
7/67 - 9/68	Dept. of Surgery/Orthopedics, UCLA	Technician (part time)
9/68 - 10/69	Dept. of Radiology/Medical Physics, Univ. of Wisconsin, Madison, WI (UW)	Project Associate
11/69 - 6/71	Dept. of Surgery/Orthopedics and Space Science & Engineering Ctr., UW	Assistant Professor of Surgery & Space Science
7/71 - 9/76	Dept. of Surgery/Orthopedics, UW	Assistant Professor of Surgery
8/76 - 8/77	Mechanical Engineering Dept., Montana State University, Bozeman, MT (MSU)	Research Associate
9/77 - 6/78	Mechanical Engineering Dept., MSU	Senior Research Engineer
8/76 - 7/78	Saint Vincent Hospital, Billings, MT	Biophysicist
7/78 - 12/79	Institute of Applied Research, MSU	Associate Research Biophysicist
8/79 - 6/80	Electrocardiographic Computer, Midland Empire Cardiology Assoc., Billings, MT	Technical Director (part time)
3/79 - 1/81	Peripheral Vascular Disease Lab., Saint Vincent Hospital, Billings, MT	Technical Director (part time)
9/80 - 8/81	Physical Science Dept., Eastern Montana College, Billings, MT (EMC)	Instructor (part time)
1/80 - 6/82	WAMI Medical Education Program, MSU	Adjunct Professor of Medical Science
8/81 - 7/82	GST Laboratories, Inc., San Diego, CA	Consultant, Biomedical Research & Development
4/81 - 10/82	Northern Rockies Surgicenter, Inc., Billings, MT	Treasurer (part time)
9/81 - 7/83	Physical Science Dept., EMC	Adjunct Professor of Physics

6/84 - 9/85	Billings Deaconess Hospital, Billings, MT	Consultant
7/89 - 6/91	Northern Rockies Surgicenter, Inc. Billings, MT	Vice President (part time)
6/88 - 8/91	Deaconess Research Institute, Inc. Billings, MT	Chief Operating Officer (part time)
6/88 - 6/92	Deaconess Research Institute, Inc. Billings, MT	Scientific Director (part time)
1/91 - 6/92	Rocky Mountain College, Billings, MT	Visiting Professor of Physics (part time)
6/92 - 6/93	College of Engineering, MSU	Adjunct Professor of Electrical Engineering
11/84 - 7/95	Center for Biomedical Study, Inc., Billings, MT	Secretary-Treasurer (part time)
7/91 - 7/95	Northern Rockies Surgicenter, Inc. Billings, MT	President (part time)
1/10 - 8/11	Rocky Mountain College, Billings, MT	Adjunct Professor of Biophysics
2/79 - Now	CRM, Inc., Billings, MT	President (part time -- full time 1/96-7/99)
6/08 - Now	Odegard School of Aerospace Sciences University of North Dakota, Grand Forks, ND	Adjunct Professor of Space Studies
8/11 - Now	Rocky Mountain College, Billings, MT	Adjunct Professor of Biophysics and Aviation

Notes: Adjunct professorships are part time appointments.
Consulting positions or assignments of less than 10 months duration are not listed.

Scientific, Technical, and Research Experience:

1. Scientific reviewer for the National Science Foundation, Veteran's Administration, The National Aeronautics and Space Administration, the Gerontological Society, The American Institute of Aeronautics and Astronautics *Journal of Bone and Joint Surgery, Clinical Orthopaedics and Related Research, Journal of the American Academy of Orthopaedic Surgeons, Physics in Medicine and Biology, Journal of Biomechanics, Medical Physics*, *Astropolitics*, and Prentice-Hall, Inc.

2. Reduction of scattering data in cyclotron experiments

3. Study of electrode impedance effects on unipolar electrocardiograms

4. Analog simulation of biological systems

5. Digital computer programming for statistical and business applications

6. Calibration of medical ultrasound equipment (medicolegal)

7. Development of apparatus for measurement of bone resonant frequency

8. Measurement of cell volume distributions and bone formation rates in a bone induction system

9. Development of method for rapid implantation of brain electrodes

10. Study of brain tissue reaction to chronically implanted metal electrodes

11. Clinical studies of skeletal status (effects of sodium fluoride, corticosteroids, estrogens, androgens, rheumatoid arthritis, immobilization, etc.)

12. Study of skeletal status in normative populations

13. Study of vibratory method of evaluating fracture union

14. Study of noninvasive method of monitoring intracranial pressure

15. Study of fracture biomechanics

16. Development of computer-based clinical data recording and retrieval schemes for various musculoskeletal studies

17. Feasibility study of computer-based enhancement of roentgenograms

18. Feasibility study of satellite transmission links for distribution of biomedical data

19. Study of effects of low level DC currents in treatment of fracture nonunion

20. Study of role of articular cartilage in preventing spread of infection following amputation

21. Study of dynamic characteristics of the spine in kyphoscoliosis

22. Biomechanical study of patellar subluxation

23. Evaluation of thermography for detection of breast disease

24. Normalization of Frank vectorcardiograms for patient stature

25. Noise characteristics of silver-silver chloride electrodes during chronic electrocardiographic monitoring

26. Evaluation of thermography for documentation of soft tissue and spinal injury

27. Accident analysis and reconstruction (legal)

28. Study of mechanical factors in personal injury

29. Application of artificial intelligence techniques to pattern recognition

30. Electrical impedance tomography

31. Electrical characteristics of normal and malignant breast tissue

32. Factors associated with graft incorporation in back surgery

33. Radiation exposure in manned space flight

34. Biodynamics of aircraft/spacecraft escape and impact tolerance

Administrative Experience:

1. University Bioengineering Coordinating Committee, University of Wisconsin, Madison, Wisconsin (UW) (11/69 - 8/76)

2. Space Science and Engineering Center Computer Facility Board of Directors (UW) (10/70 - 12/72)

3. Medical School Ad Hoc Clinical Bone Measurement Laboratory Committee (UW) (11/70 - 8/76)

4. Medical School Electronics Advisory Committee (UW) (9/71 - 8/76)

5. Center for Health Sciences Committee on Electrical Safety (UW) (12/71 - 8/76)

6. University Biomedical Engineering Center Board of Directors (UW) (5/74 - 8/76)

7. University Biomedical Engineering Center Associate Director (UW) (5/75 - 5/76)

8. Chairman of Biomedical Engineering Graduate Program Committee (UW) (5/75 - 5/76)

9. Center for the Health Sciences Computing Committee (UW) (11/75 - 8/76)

10. Hospital Intensive Care Committee, Saint Vincent Hospital, Billings, Montana (StV) (1/77 - 12/78)

11. Hospital Safety Committee (StV) (9/77 - 12/78)

12. Board of Directors, CRM, Inc., Billings, Montana (2/79 - now)

13. Mayoral Appointee, City-County Air Pollution Control Board, Billings, Montana (7/79 - 6/85)

14. Elected Secretary, City-County Air Pollution Control Board (7/79 - 6/80)

15. Elected Chairman, City-County Air Pollution Control Board (7/80 - 6/83)

16. Faculty Search Committee, Department of Physical Sciences, Eastern Montana College, Billings, Montana (EMC) (1/81 - 6/81)

17. Distinguished Professorship Committee (EMC) (3/81 - 6/81)

18. Board of Directors, Northern Rockies Surgicenter, Inc., Billings, Montana (4/81 - 8/82, 2/88 - 1/97)

19. Mayoral Appointee, Medical Area Task Force, Billings, Montana (9/81)

20. Legislative Appointee, Subcommittee on Biotechnology, Advisory Council on Science and Technology, State of Montana (10/83 - 11/84)

21. Board of Directors, Center for Biomedical Study, Inc., Billings, Montana (11/84 - 7/95)

22. Gubernatorial Appointee, Montana State Board of Health and Environmental Sciences (7/87 - 1/89)

23. Board of Directors, Deaconess Research Institute, Inc., Billings, Montana (9/88 - 4/92)

24. Member, Billings Interinstitutional Review Board (1/89 – 8/00)

25. Elected Vice-Chairman, Billings Interinstitutional Review Board (6/90 – 8/00)

26. Member, Deaconess Medical Center Interdisciplinary Cancer Committee, Billings, Montana (2/91 - 6/92)

27. Member, National Advisory Council, Rocky Mountain College, Billings, Montana (11/97 – 12/11)

28. Co-Chairman, National Advisory Council, Rocky Mountain College, (1/99 – 9/00)

29. Member, Advisory Board, The Colony Fund, L.L.C. (4/05 – 12/11)

30. Member, Advisory Board, The One Giant Leap Foundation (1/07 – 6/08)

31. Board of Directors, The One Giant Leap Foundation (7/08 – now)

32. Invited participant, National Space Strategy Project (collaboration between the National Space Studies Center of the Air University (USAF) and the Space Policy Institute at George Washington University (11/09 – 7/10).

Articles Published:

1. W. A. Selle, J. M. Jurist: Acoustical detection of senile osteoporosis, *Proceedings of the Society for Experimental Biology and Medicine*, 121:150 (Jan. 66)

2. W. A. Selle, J. M. Jurist: The onset of postmenopausal osteoporosis as studied by a new technique, *Journal of the American Geriatrics Society*, 14:930 (Sept. 66)

3. W. A. Selle, J. M. Jurist: Osteoporosis and the menopause, *OB/GYN Digest*, 9:33 (Apr. 67)

4. J. R. Cameron, J. M. Jurist, J. A. Sorenson, R. B. Mazess: Evaluation of skeletal status in humans, *Preprints of the 1969 Annual Scientific Meeting of the Aerospace Medical Association, Aerospace Medical Association*, Washington, D. C., pp. 130-131, 1969

5. J. R. Cameron, J. M. Jurist, J. A. Sorenson, R. B. Mazess: New methods of skeletal status evaluation in space flight, *Aerospace Medicine*, 40:1119 (Oct. 69)

6. M. R. Urist, J. M. Jurist, F. L. DuBuc, B. S. Strates: Quantitation of new bone formation in intramuscular implants of bone matrix in rabbits, *Clinical Orthopaedics and Related Research*, 68:279 (Jan. 70)

7. J. M. Jurist: *In vivo* determination of the elastic response of bone: I. Method of ulnar resonant frequency determination, *Physics in Medicine and Biology*, 15:417 (July 70)

8. J. M. Jurist: *In vivo* determination of the elastic response of bone: II. Ulnar resonant frequency in osteoporotic, diabetic, and normal subjects, *Physics in Medicine and Biology*, 15:427 (July 70)

9. J. M. Jurist, A. M. Dymond: Reproducibility of ulnar resonant frequency measurement, *Aerospace Medicine*, 41:875 (Aug. 70)

10. J. M. Jurist, A. M. Dymond: Factors affecting reproducibility of ulnar resonant frequency measurement, *Proceedings of Bone Measurement Conference*, Atomic Energy Commission Conf-700515, Oak Ridge, Tennessee, pp. 58-67, 1970

11. J. M. Jurist: Relationship of ulnar resonant frequency, bone mineral content, and various measures of body development in normal children, *Proceedings of Bone Measurement Conference*, Atomic Energy Commission Conf-700715, Oak Ridge, Tennessee, pp. 68-78, 1970

12. J. M. Jurist: Summary of the data reduction and exchange workshop, *Proceedings of Bone Measurement Conference*, Atomic Energy Commission Conf-700715, Oak Ridge, Tennessee, pp. 332-333, 1970

13. M. Mueller, J. R. Cameron, J. M. Jurist: The effect of rheumatoid arthritis and corticosteroid therapy on bone, *Proceedings of Bone Measurement Conference*, Atomic Energy Commission Conf-700715, Oak Ridge, Tennessee, pp. 405-407, 1970

14. J. M. Jurist: Ulnar vibratory properties, *Progress in Methods of Bone Mineral Measurement,* National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland, pp. 483-496, 1970

15. A. M. Dymond, L. E. Kaechele, J. M. Jurist, P. H. Crandall: Brain tissue reaction to some chronically implanted metals, *Journal of Neurosurgery*, 33:574 (Nov. 70)

16. A. M. Dymond, J. M. Jurist: Rapid method for implantation of brain electrodes, *Aerospace Medicine*, 41:1421 (Dec. 70)

17. J. R. Cameron, J. M. Jurist, R. B. Mazess: Some physical methods of skeletal evaluation, *Hypogravic and Hypodynamic Environments*, National Aeronautics and Space Administration AP269, Springfield,

Virginia, pp. 99-109, 1971, also published in *Advances in Medical Physics*, The Second International Conference on Medical Physics, Inc., Boston, Massachusetts, pp. 79-89, 1971

18. J. M. Jurist: Effect of corticosteroids on ulnar resonant frequency, *Surgical Forum*, 22:440 (Oct. 71)

19. J. N. Campbell, J. M. Jurist: Mechanical impedance of the femur: A preliminary report, *Journal of Biomechanics*, 4:319 (Oct. 71)

20. D. H. Kranendonk, J. M. Jurist, H. G. Lee: Femoral trabecular patterns and bone mineral content, *Journal of Bone and Joint Surgery*, 54A:1472 (Oct. 72)

21. M. N. Mueller, J. M. Jurist: Skeletal status in rheumatoid arthritis: A preliminary report, *Arthritis and Rheumatism*, 16:66 (Jan.-Feb. 73)

22. K. F. Konkel, J. M. Jurist: Tibial resonant frequency in Paget's disease, *Wisconsin Medical Journal*, 72:123 (May 73)

23. J. M. Jurist, K. Kianian: Three models of the vibrating ulna, *Journal of Biomechanics*, 6:331 (July 73)

24. E. L. Markey, J. M. Jurist: Tibial resonant frequency measurements as an index of the strength of fracture union, *Wisconsin Medical Journal*, 73:62 (May 74)

25. P. B. Spiegl, J. M. Jurist: Prediction of ulnar resonant frequency, *Journal of Biomechanics*, 8:213 (July 75)

26. R. H. Gelberman, P. B. Salamon, J. M. Jurist, J. L. Posch: Ulnar variance in Kienbock's disease, *Journal of Bone and Joint Surgery*, 57A:674 (July 75)

27. R. H. Gelberman, J. L. Posch, J. M. Jurist: High pressure injection injuries of the hand, *Journal of Bone and Joint Surgery*, 57A:935 (Oct. 75)

28. A. S. Foltz, D. J. Rolnick, J. M. Jurist: The relationships between bending stiffness, mineral content, geometry, and strength of the human ulna, *American Journal of Roentgenology*, 126:1270 (June 76)

29. J. M. Jurist, H. D. Hoeksema: Resonant frequencies of healing long bones, *Digest of the 11th International Conference on Medical and Biological Engineering*, Medical Research Section, National Research Council, Ottawa, Canada, pp. 256-257, 1976

30. J. M. Jurist, A. S. Foltz: Human ulnar bending stiffness, mineral content, geometry, and strength, *Journal of Biomechanics*, 10:455 (Aug. 77)

31. S. Radons, D. O. Blackketter, J. M. Jurist, R. K. Snider: Frequency response analysis of the *in vivo* human spine, *1979 Advances in Bioengineering*, M. K. Wells, ed., New York, New York, The American Society of Mechanical Engineers, pp. 57-60, 1979

32. J. Hagelin, D. O. Blackketter, J. M. Jurist, R. K. Snider: An analytical model of the patello-femoral joint, *1979 Advances in Bioengineering*, M. K. Wells, ed., New York, New York, The American Society of Mechanical Engineers, pp. 79-81, 1979

33. J. M. Jurist, D. B. Myers: Stress thermography of the breast, *Proceedings of the Eighth Annual N*ortheast *Bioengineering Conference*, I. Paul, ed., Cambridge, Massachusetts Institute of Technology, pp. 222-226, 1980

34. J. M. Jurist, D. B. Myers: Stress thermography in breast cancer, *Biomedical Sciences Instrumentation*, 17:7 (Apr. 81)

35. J. M. Jurist, R. K. Snider: Noninvasive measurement of bone strength, *Bioengineering Seminars*, Berkeley, California, University of California Press, pp. 1-4, 1981

36. J. M. Jurist, H. D. Hoeksema, D. O. Blackketter, R. K. Snider, E. R. Garner: *In vivo* measurement of the dynamic response of bone: Theory, methods, and applications, Chapter 1 in Volume III of *Orthopaedic Mechanics: Procedures and Devices*, D. Ghista, R. Roaf, eds., New York, New York, Academic Press, pp. 1-64, 1981

37. J. M. Jurist, D. B. Myers: Stress thermometry and breast disease, *Journal of Reproductive Medicine*, 27:690 (Nov. 82)

38. J. M. Jurist, R. K. Snider, H. D. Hoeksema: Resonant frequency and strength of rabbit humeri, *Images of the Twenty-First Century: Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Y. Kim, F. A. Spelman, eds., New York, New York, IEEE, 11:841-842 (Nov. 89)

39. J. M. Jurist, J. L. Reiser, R. K. Snider: Dog femoral strength in 3 point bending, *New Frontiers of Biomedical Engineering – Innovations from Nuclear to Space Technology: Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, J. H. Nagel, W. M. Smith, eds., New York, New York, IEEE, 13:1982-1983 (Nov. 91)

40. M. L. Kejariwal, K. Kaster, J. M. Jurist, J. Pakanati: Breast cancer detection using electrical impedance tomography: SPICE simulation, *Engineering Solutions to Current Health Care Problems: Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, A. Y. J. Szeto, R. M. Rangayyan, eds., New York, New York, IEEE, 15:64-65 (Oct. 93)

41. M. L. Kejariwal, J. M. Jurist: Breast cancer screening using electrical impedance tomography: a review, *Proceedings of the 1996 Canadian Conference on Electrical and Computer Engineering*, New York, New York, IEEE (May 96)

42. R. K. Snider, N. K. Krumwiede, L. J. Snider, J. M. Jurist, R. A. Lew, J. N. Katz: Factors affecting lumbar spinal fusion, *Journal of Spinal Disorders*, 12(#2):107 (99)

43. J. M. Jurist, S. Dinkin, D. Livingston: When physics, economics, and reality collide: The challenge of cheap orbital access, American Institute of Aeronautics and Astronautics, AIAA-2005-6620 (Sept. 05)

44. J. M. Jurist, S. Dinkin, D. Livingston: Low cost Earth orbit access: A look at physics, economics, and reality, *Astropolitics*, 4(#3):295-331 (Winter 06)

45. J. M. Jurist: Commercial suborbital sounding rocket market: A role for reusable launch vehicles? *Astropolitics,* 7(#1):32-49 (Jan.-Apr. 09)

46. J. M. Jurist, D. C. Hook, D. Livingston: Small Unit Space Transport and Insertion (SUSTAIN): How to Do It and Use It as a Driver for Low-Cost Responsive Orbital Launch, Proceedings of the 7th Responsive Space Conference, AIAA-RS7-2009-1002 (Apr. 09)

47. V. Y. Rygalov, J. M. Jurist, S. Ford: High altitude free fall: Theoretical analysis of g-forces impacting human subjects, Proceedings of the 41st International Conference on Environmental Systems, ICES-507 (July 2011)

48. J. M. Jurist, D. M. Livingston: Spaceflight economics, Chapter 1.4 in Edition 4 of *Space Mission Engineering: The New SMAD*, J. R. Wertz, D. F. Everett, J. J. Puschell, eds., Microcosm Press and Springer, The Space Technology Library, ISBN# 978-1881883159, pp. 16-23, 2011

49. J. M. Jurist, D. M. Livingston: Sources of space financing, Chapter 12.1 in Edition 4 of *Space Mission Engineering: The New SMAD*, J. R. Wertz, D. F. Everett, J. J. Puschell, eds., Hawthorne, California,

Microcosm Press and Springer, The Space Technology Library, ISBN# 978-1881883159, pp. 325-328, 2011

50. J. M. Jurist, D. M. Livingston: GAAP, amortization, and return on investment (ROI), Chapter 12.2 in Edition 4 of *Space Mission Engineering: The New SMAD*, J. R. Wertz, D. F. Everett, J. J. Puschell, eds., Microcosm Press and Springer, The Space Technology Library, ISBN# 978-1881883159, pp. 328-337, 2011

Articles in Preparation or Submitted for Publication:

1. R. K. Snider, N. K. Krumwiede, L. J. Snider, J. M. Jurist, R. A. Lew, J. N. Katz: Factors affecting patient satisfaction in lumbar spinal fusion

2. J. M. Jurist, R. K. Snider: Biomechanics and case evaluation

3. J. M. Jurist: Human factors in suborbital space flight

4. J. M. Jurist, J. S. Logan: *Aerospace Medicine and Human Factors for Engineers,* textbook.

5. J. M. Jurist, V. Y. Rygalov, S. Ford: High altitude free fall: Implications for emergency escape in space operations

6. B. T. Zotovich, J. M. Jurist: The Brinkley dynamic response index applied to motor vehicle accidents

Abstracts and Letters Published:

1. J. M. Jurist, W. A. Selle: Acoustical detection of osteoporosis, *The Physiologist*, 8:203 (Aug. 65)

2. W. A. Selle, J. M. Jurist: Acoustical measurement of bone density, *Federation Proceedings*, 25:577 (Mar. - Apr. 66, Part I)

3. W. A. Selle, J. M. Jurist: Detection of osteoporosis by a new technique, *Archives of Physical Medicine and Rehabilitation*, 47:568 (Aug. 66)

4. J. M. Jurist, J. R. Cameron: Measurement of bone resonant frequency *in vivo*, *Second International*, *Conference on Medical Physics, abstracts of Papers*, The Second International Conference on Medical Physics, Inc., Boston, Massachusetts, p. 3, 1969

5. E. L. Smith, J. M. Jurist, S. W. Babcock, J. R. Cameron: Detection of osteoporosis by measurement of monoenergetic photon absorption, *Eighth International Congress of Gerontology, Proceedings-Abstract Volume II*, International Association of Gerontology, Washington, D.C., p. 53, 1969

6. J. M. Jurist, E. L. Smith, S. W. Babcock, J. R. Cameron: *In vivo* estimation of bone elasticity by measurement of ulnar resonant frequency, *Eighth International Congress of Gerontology, Proceedings-Abstract Volume II*, International Association of Gerontology, Washington, D.C., p. 41, 1969

7. M. N. Mueller, J. M. Jurist, J. R. Cameron: Skeletal status in rheumatoid arthritis, *Arthritis and Rheumatism*, 13:340 (May - June 70)

8. J. M. Jurist: Ulnar resonant frequency determination and its relevance to the assessment of osteoporosis, *Physics in Medicine and Biology*, 16:149 (Jan. 71), letter to the editor

9. J. M. Jurist: Difficulties with measurement of ulnar resonant frequency, *Physics in Medicine and Biology*, 18:289 (Mar. 73), letter to the editor

10. J. M. Jurist, D. H. Kranendonk: Letter to the editor concerning "Femoral trabecular patterns and bone mineral content," *Journal of Bone and Joint Surgery*, 55A:890 (June 73)

11. J. M. Jurist, T. J. Gasser: Bone loss in women, *The Gerontologist*, 14:46 (Oct. 74, Part II)

12. P. B. Salamon, R. H. Gelberman, J. M. Jurist, J. L. Posch: Ulnar variance in Kienbock's disease, *Journal of Bone and Joint Surgery*, 57A:724 (July 75)

13. H. D. Hoeksema, J. M. Jurist: Resonant frequency and strength of healing dog femora, *Transactions of the 23rd Annual Meeting of the Orthopaedic Research Society*, The Orthopaedic Research Society, Las Vegas, Nevada, p. 113, 1977

14. J. W. Joosse, H. D. Hoeksema, J. M. Jurist: Disuse osteoporosis in rabbit humeri, *Transactions of the 23rd Annual Meeting of the Orthopaedic Research Society*, The Orthopaedic Research Society, Las Vegas, Nevada, p. 226, 1977

15. J. W. Joosse, H. D. Hoeksema, J. M. Jurist: Resonant frequency of defective bones, *Transactions of the 23rd Annual Meeting of the Orthopaedic Research Society*, Las Vegas, Nevada, p. 227, 1977

16. J. M. Jurist, R. K. Snider: Associations between bone strength and noninvasive measures of skeletal status, *Transactions of the 24th Annual Meeting of the Orthopaedic Research Society*, The Orthopaedic Research Society, Dallas, Texas, p. 263, 1978

17. J. M. Jurist, R. K. Snider: Bone strength, mineral content, and resonant frequency, *Journal of Biomechanics*, 12:631 (Aug. 79)
18. R. K. Snider, J. M. Jurist: Progression in female idiopathic scoliosis during adolescence, *Orthopaedic Transactions*, 4:96 (Spring 80)

19. D. B. Myers, J. M. Jurist: Thermography following cutaneous vasoconstriction in breast cancer, *Proceedings of the American Society of Clinical Oncology*, 3:12 (Mar. 84)

20. J. M. Jurist, D. R. Khoe, R. T. Ruble, M. L. Warren: Role of portable microcomputers in community hospital-based anesthesiology, *Computers in Anesthesia* 7:11, (Oct. 86)

21. J. Coyle-Dennis, J. M. Jurist, R. K. Snider: Bone loss in women: A 15-year longitudinal study, *The Gerontologist*, 30:184A (Oct. 1990)

22. R. K. Snider, J. M. Jurist: Progression in female idiopathic scoliosis: Validation of a model, *Orthopaedic Transactions*, 16:69 (Spring 92)

23. J. M. Jurist, R. K. Snider, J. Coyle-Dennis: Appendicular bone loss is not inevitable in aging women, *Orthopaedic Transactions*, 18(#1):66 (Spring 94)

24. R. K. Snider, J. M. Jurist, L. Snider: Anemia and lumbar fusion, *Proceedings of the International Society for the Study of the Lumbar Spine*, Abstract #89, 1994

25. R. K. Snider, J. M. Jurist, L. Snider: Anemia and lumbar fusion, *Orthopaedic Transactions*, 18(#3):885 (Winter 94) also published in *Orthopaedic Transactions*, 19(#1):88 (Spring 95)

26. R. K. Snider, L. J. Snider, J. M. Jurist: Decision analysis in one level lumbar fusion, *Orthopaedic Transactions*, 20(#4):903 (96-97)

27. D. M. Livingston, J. M. Jurist, S. Dinkin: The challenge of affordable orbital space access: A look at physics, economics and reality, *Proceedings of the 8th International Mars Society Convention*, Abstract Volume, 8:37 (Aug. 05)

28. J. M. Jurist: Commercial suborbital sounding rocket market: A role for RLVs? Published in The Space Review, edited by J. Foust (www.thespacereview.com) Oct. 13, 2008

29. J. M. Jurist: Taming the fire: The Ares I First Stage Development Test. Published in The Space Review, edited by J. Foust (www.thespacereview.com) Sept. 14, 2009

30. J. M. Jurist: Some thoughts on Ares I, the space advocacy community, and media reporting. Published in The Space Review, edited by J. Foust (www.thespacereview.com) Dec. 7, 2009

Series of columns on aerospace medicine published in The Space Review, edited by J. Foust (www.thespacereview.com):

1. Feb. 14, 2005: Laying the Foundation and Risk Assumption
2. Mar. 7, 2005: What Do I Breathe, and Why? A Small Dose of Pulmonary Physiology
3. Mar. 21, 2005: What Do I Breathe, and Why? Getting Adequate Oxygen
4. April 25, 2005: The Limits of Supplemental Oxygen
5. July 5, 2005: What Does Acceleration do to the Human Body?
6. July 18, 2005: Impact Acceleration: An Extreme Skydiving Experience
7. August 15, 2005: Failure Modes and Survival Strategies
8. October 3, 2005: Radiation Exposure and Weightlessness

Presentations at State, Regional, National, and International Meetings:

1. J. M. Jurist, W. A. Selle: Acoustical detection of osteoporosis, American Physiological Society, Aug. 26, 1965, Los Angeles, California

2. W. A. Selle, J. M. Jurist: Acoustical measurement of bone density, Federation of American Societies for Experimental Biology, Apr. 15, 1966, Atlantic City, New Jersey

3. W. A. Selle, J. M. Jurist: Detection of osteoporosis by a new technique, American Congress of Physical Medicine and Rehabilitation, Sept. 1, 1966, San Francisco, California

4. J. M. Jurist: Ulnar vibratory properties, Conference on Progress in Methods of Bone Mineral Measurement, Feb. 17, 1968, Bethesda, Maryland

5. J. M. Jurist (Discussant): Round table discussion of relative merits and advantages of various techniques, Conference on Progress in Methods of Bone Mineral Measurement, Feb. 17, 1968, Bethesda, Maryland

6. J. M. Jurist, J. R. Cameron: *In vivo* measurement of bone quality, Bio-Engineering at Wisconsin, Mar. 6, 1969, Madison, Wisconsin

7. J. M. Jurist (Demonstration): Bone elasticity measurement, Bio-Engineering at Wisconsin, Mar. 8, 1969, Madison, Wisconsin

8. J. R. Cameron, J. M. Jurist, J. A. Sorenson, R. B. Mazess: Evaluation of skeletal status in humans, Aerospace Medical Association, May 7, 1969, San Francisco, California

9. J. R. Cameron, J. M. Jurist, R. B. Mazess: Some physical methods of skeletal evaluation, Symposium on Hypogravic and Hypodynamic Environments, June 16, 1969, French Lick, Indiana

10. J. M. Jurist, J. R. Cameron: Measurement of bone resonant frequency *in vivo*, International Conference on Medical Physics, Aug. 11, 1969, Boston, Massachusetts

11. E. L. Smith, J. M. Jurist, S. W. Babcock, J. R. Cameron: Detection of osteoporosis by measurement of monoenergetic photon absorption, International Congress of Gerontology, Aug. 26, 1969, Washington, D.C.

12. J. M. Jurist, E. L. Smith, S. W. Babcock, J. R. Cameron: *In vivo* estimation of bone elasticity by measurement of ulnar resonant frequency, International Congress of Gerontology, Aug. 26, 1969, Washington, D.C.

13. J. M. Jurist: Resonant frequency of bone as a measure of the quality of the organic component of bone, State Medical Society of Wisconsin, Feb. 19, 1969, Madison, Wisconsin

14. J. M. Jurist, M. N. Mueller: Osteoporosis in rheumatoid arthritis -- relationship to duration and severity of disease and therapy of arthritis, State Medical Society of Wisconsin, Feb. 19, 1969, Madison, Wisconsin

15. J. M. Jurist, A. M. Dymond: Factors affecting reproducibility of ulnar resonant frequency measurement, Bone Measurement Conference, May 22, 1970, Chicago, Illinois

16. J. M. Jurist: Relationship of ulnar resonant frequency, bone mineral content, and various measures of body development in normal children, Bone Measurement Conference, May 22, 1970, Chicago, Illinois

17. J. M. Jurist (Session Chairman): Data reduction and exchange workshop, Bone Measurement Conference, May 22, 1970, Chicago, Illinois

18. M. N. Mueller, J. R. Cameron, J. M. Jurist: The effect of rheumatoid arthritis and corticosteroid therapy on bone, Bone Measurement Conference, May 23, 1970, Chicago, Illinois

19. M. N. Mueller, J. M. Jurist, J. R. Cameron: Skeletal status in rheumatoid arthritis, American Rheumatism Association, June 20, 1970, Detroit, Michigan

20. J. M. Jurist, C. H. Hickey: Effects of sodium fluoride on skeletal status in elderly women, State Medical Society of Wisconsin, May 12, 1971, Milwaukee, Wisconsin

21. J. M. Jurist: Effect of corticosteroids on ulnar resonant frequency, American College of Surgeons, Oct. 18, 1971, Atlantic City, New Jersey

22. J. M. Jurist: Skeletal effects of rheumatoid arthritis, State Medical Society of Wisconsin, May 11, 1972, Milwaukee, Wisconsin

23. M. N. Mueller, J. M. Jurist: Osteoporosis in rheumatoid arthritis: Influence of disease duration, severity, and steroid therapy, American Rheumatism Association, June 8, 1972, Dallas, Texas

24. J. M. Jurist: Measuring the union of ski fractures without x-rays, State Medical Society of Wisconsin, Apr. 5, 1973, Madison, Wisconsin

25. J. M. Jurist: Biomechanics, Wisconsin State Podiatry Society, Sept. 21, 1973, Madison, Wisconsin

26. J. M. Jurist, T. J. Gasser: Bone loss in women, Gerontological Society, Oct. 29, 1974, Portland, Oregon

27. R. H. Gelberman, P. B. Salamon, J. M. Jurist, J. L. Posch: Ulnar variance in Kienbock's disease, American Society for Surgery of the Hand, Feb. 27, 1975, San Francisco, California

28. A. S. Foltz, J. M. Jurist: The relationships between bending stiffness, geometry, and strength of the human ulna, Conference on Nondestructive Testing of Bone, Feb. 28, 1975, San Francisco, California

29. H. D. Hoeksema, J. M. Jurist: Resonant frequency of healing tibial fractures, Conference on Nondestructive Testing on Bone, Feb. 28, 1975, San Francisco, California

30. C. D. Maguire, J. M. Jurist: Satellite transmission studies of x-rays, Wisconsin Orthopedic Society, Oct. 17, 1975, Oshkosh, Wisconsin

31. D. J. Rolnick, J. M. Jurist: The relationships between bending stiffness, mineral content, geometry, and strength of the human ulna, Wisconsin Orthopedic Society, Oct. 17, 1975, Oshkosh, Wisconsin

32. J. W. Joosse, J. M. Jurist: Bone loss in women, Wisconsin Orthopedic Society, Oct. 17, 1975, Oshkosh, Wisconsin

33. H. D. Hoeksema, J. M. Jurist: Tibial resonance frequency studies, Wisconsin Orthopedic Society, Oct. 17, 1975, Oshkosh, Wisconsin

34. E. L. Markey, J. M. Jurist: Tibial resonant frequency measurements as index of strength of fracture union, Society of Military Orthopedic Surgeons, Nov. 12, 1975, San Diego, California

35. D. J. Rolnick, A. S. Foltz, J. M. Jurist: The relationships between bending stiffness, mineral content, geometry, and strength of the human ulna, International Conference on Bone Mineral Measurement, Jan. 26, 1976, New Orleans, Louisiana

36. J. M. Jurist, H. D. Hoeksema: Resonant frequencies of healing long bones, International Conference on Medical and Biological Engineering, Aug. 3, 1976, Ottawa, Canada

37. J. M. Jurist: Tibial resonant frequency in healing fractures, Eastern Rockies Orthopedic Group, Dec. 4, 1976, Billings, Montana

38. H. D. Hoeksema, J. M. Jurist: Resonant frequency and strength of healing dog femora, Orthopaedic Research Society, Feb. 12, 1977, Las Vegas, Nevada

39. J. M. Jurist: Metabolic bone disease, Montana Society for Medical Technology, Apr. 31, 1977, Billings, Montana

40. J. M. Jurist: Osteoporosis, Eastern Rockies Orthopedic Group, Apr. 9, 1977, Billings, Montana

41. J. M. Jurist: Biomechanics of fractures, Eastern Rockies Orthopedic Group, June 11, 1977, Billings, Montana

42. J. M. Jurist: Biomechanics of the foot, Eastern Rockies Orthopedic Group, Oct. 8, 1977, Billings, Montana

43. J. M. Jurist, R. K. Snider: Bone strength, mineral content, and resonant frequency, American Society of Biomechanics, Oct. 26-27, 1978, Ann Arbor, Michigan

44. R. K. Snider, J. M. Jurist: Office applications of microcomputers, American Academy of Orthopedic Surgeons Instructional Course Lecture, Feb. 26, 1979, San Francisco, California

45. J. M. Jurist, D. B. Myers: Stress thermography of the female breast, 15th Annual Meeting of the Montana - Wyoming Chapter of the American College of Surgeons, Aug. 10, 1979, Big Sky, Montana

46. R. K. Snider, J. M. Jurist: Progression in female idiopathic scoliosis during adolescence, Western Orthopedic Association, Oct. 14-18, 1979, Las Vegas, Nevada

47. D. O. Blackketter, S. Radons, J. M. Jurist, R. K. Snider: Frequency response analysis of the *in vivo* human spine, Winter Annual Meeting of the American Society of Mechanical Engineers, Dec. 5, 1979, New York, New York

48. D. O. Blackketter, J. Hagelin, J. M. Jurist, R. K. Snider: An analytical model of the patellofemoral joint, Winter Annual Meeting of the American Society of Mechanical Engineers, Dec. 6, 1979, New York, New York

49. J. M. Jurist, D. B. Myers: Stress thermography of the breast, Eighth Annual Northeast Bioengineering Conference, Mar. 27, 1980, Cambridge, Massachusetts

50. J. M. Jurist, D. B. Myers: Stress thermography in breast cancer, Eighteenth Annual Rocky Mountain Bioengineering Symposium and Eighteenth International ISA Biomedical Sciences Instrumentation Symposium, Apr. 20, 1981, Laramie, Wyoming

51. J. M. Jurist: Stress thermography for breast cancer screening, Oncology Workshop, Dec. 14, 1981, Bozeman, Montana

52. J. M. Jurist, D. B. Myers: Stress telethermography of the breast, American Thermographic Society, May 14, 1982, Washington, D.C.

53. J. M. Jurist, D. B. Myers: Computer assisted thermographic screening in breast cancer, Fourteenth Annual Meeting of the American Academy of Thermology, May 31, 1985, Arlington, Virginia

54. J. M. Jurist (Session Co-chairman): Breast thermography, Fourteenth Annual Meeting of the American Academy of Thermology, May 31, 1985, Arlington, Virginia

55. J. M. Jurist, D. R. Khoe, R. T. Ruble, M. L. Warren: Role of portable microcomputers in community hospital-based anesthesiology, Computers in Anesthesia VII, Oct. 22, 1986, Grand Canyon, Arizona

56. J. M. Jurist, J. Painter: Rockets as educational vehicles, Montana Association of Gifted and Talented Education 1988 Conference, Billings, Montana

57. J. M. Jurist, J. Painter: Rocketry, Montana Association of Gifted and Talented Education 1989 Conference, April 13, 1989, Bozeman, Montana

58. J. M. Jurist, R. K. Snider, H. D. Hoeksema: Resonant Frequency and Strength of Rabbit Humeri, 11th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Nov. 11, 1989, Seattle, Washington

59. J. Coyle-Dennis, J. M. Jurist, R. K. Snider: Bone Loss in Women: A 15-Year Longitudinal Study, 43rd Annual Meeting of the Gerontological Society of America, Nov. 18, 1990, Boston, Massachusetts

60. R. K. Snider, J. M. Jurist, J. Coyle-Dennis: Long-term Changes in Skeletal Bone Mass: Is Osteoporosis Inevitable? North Pacific Orthopaedic Society Annual Meeting, Sept. 13, 1991, Salishan, Oregon

61. R. K. Snider, J. M. Jurist: Scoliosis Prediction: A Model, North Pacific Orthopaedic Society Annual Meeting, Sept. 13, 1991, Salishan, Oregon

62. R. K. Snider, J. M. Jurist: Progression in Idiopathic Scoliosis: Validation of a Model, Western Orthopaedic Association 55th Annual Meeting, Oct. 21, 1991, Tucson, Arizona

63. J. M. Jurist, J. L. Reiser, R. K. Snider: Dog Femoral Strength in 3 Point Bending, 13th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Oct. 31, 1991, Orlando, Florida

64. J. M. Jurist, R. K. Snider, J. Coyle-Dennis: Appendicular Bone Loss is not Inevitable in Aging Women, Aging: The Quality of Life (NIH-FDA conference), Feb. 11, 1992, Washington, D.C.

65. J. M. Jurist, J. Painter, K. Bowen: The Sky's the Limit! Rocketry in the Classroom, Montana Association of Gifted and Talented Education 1993 Conference, Apr. 2, 1993, Billings, Montana

66. J. M. Jurist, R. K. Snider, J. Coyle-Dennis: Appendicular Bone Loss is not Inevitable in Aging Women, Western Orthopaedic Association 57th Annual Meeting, Aug. 30, 1993, Seattle, Washington

67. M. Kejariwal, K. Kaster, J. M. Jurist, J. Pakanati: Breast Cancer Detection Using Electrical Impedance Tomography: SPICE Simulation, 15th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Oct. 28, 1993, San Diego, California

68. R. K. Snider, J. M. Jurist, L. Snider: Anemia and Lumbar Fusion, International Society for the Study of the Lumbar Spine, June 25, 1994, Seattle, Washington

69. R. K. Snider, J. M. Jurist, L. Snider: Effect of Anemia on Spinal Fusion, Western Orthopaedic Association 58th Annual Meeting, Aug. 15, 1994, Long Beach, California

70. J. M. Jurist, R. K. Snider, J. Coyle-Dennis: Followup on Bone Mass Study with New Update, North Pacific Orthopaedic Society, Sept. 16, 1994, Coeur d'Alene, Idaho

71. R. K. Snider, J. M. Jurist, L. Snider: Outcome of Leg and Back Pain in Lumbar Fusion, North Pacific Orthopaedic Society, Sept. 17, 1994, Coeur d'Alene, Idaho

72. M. L. Kejariwal, J. M. Jurist: Breast Cancer Screening Using Electrical Impedance Tomography: A Review, 1996 Canadian Conference on Electrical and Computer Engineering (IEEE), May 26-29, 1996, Calgary, Alberta, Canada

73. R. K. Snider, L. J. Snider, J. M. Jurist: Decision Analysis in One Level Lumbar Fusion, Western Orthopaedic Association 60th Annual Meeting, Aug. 4, 1996, Lihue, Hawaii

74. R. K. Snider, N. K. Krumwiede, L. J. Snider, J. M. Jurist, R. A. Lew, J. N. Katz: Factors affecting patient satisfaction in lumbar spinal stenosis, Western Orthopaedic Association 63rd Annual Meeting, July 31, 1999, San Diego, California

75. J. M. Jurist: Biomedical aspects of suborbital flight, Space Access Society 11th Annual Meeting, April 26, 2003, Scottsdale, Arizona

76. J. M. Jurist, S. Dinkin, D. Livingston: The challenge of cheap orbital access, Space Access Society 13th Annual Meeting, April 29, 2005, Phoenix, Arizona

77. D. Livingston, J. M. Jurist, S. Dinkin: The challenge of affordable orbital space access: A look at physics, economics and reality, 2005 International Mars Society Conference, August 12, 2005, Boulder, Colorado

78. J. M. Jurist, S. Dinkin, D. Livingston: When physics, economics, and reality collide, AIAA Space 2005 Conference, September 1, 2005, Long Beach, California

79. J. M. Jurist, D. C. Hook, D. Livingston, J. R. Wertz, R. Conger, T. Bauer: A short term solution to the small unit space transport and insertion problem with a 3-stage modular expendable launch system, National Security Space Technology Forum, February 24, 2009, Lackland Air Force Base, Texas (open presentation – closed presentation listed as Invited Seminar)

80. J. M. Jurist, D. C. Hook, D. Livingston: Small Unit Space Transport and Insertion (SUSTAIN), Seventh Responsive Space Conference, April 28, 2009, Los Angeles, California

81. V. Y. Rygalov, J. M. Jurist, S. Ford: High altitude free fall: Theoretical analysis of g-forces impacting human subjects, 41st International Conference on Environmental Systems, July 19, 2011, Portland, Oregon (July 2011)

Invited Seminars:

1. Bone induction, University of Wisconsin Medical Physics Seminar, Oct. 16, 1968, Madison, Wisconsin

2. Medical benefits of space research at the University of Wisconsin, Colloquium on the Applications of Space Technology to Human Needs, Oct. 20, 1969, Madison, Wisconsin

3. Objective evaluation of the skeleton, Schering Corporation Seminar, Jan. 2, 1970, Bloomfield, New Jersey

4. Objective evaluation of the skeleton, Madison Orthopedic Club, Oct. 5, 1970, Madison, Wisconsin

5. Nondestructive measurements of bone, University of Wisconsin Space Science and Engineering Center Colloquium, Oct. 7, 1970, Madison, Wisconsin

6. Osteoporosis in rheumatoid arthritis (with M. N. Mueller), Madison General Hospital Grand Rounds, Feb. 5, 1971, Madison, Wisconsin

7. Measurement of ulnar resonant frequency, Orthopedic Surgery Seminar, University of California, Mar. 22, 1971, Los Angeles, California

8. Effect of sodium fluoride on bone mineral content, Orthopedic Surgery Grand Rounds, University of California, Apr. 22, 1972, Los Angeles, California

9. Prospective study of sodium fluoride effect in osteoporosis, Madison Orthopedic Club, Oct. 16, 1972, Madison, Wisconsin

10. Tibial resonant frequency in Paget's disease, Madison Orthopedic Club, Oct. 8, 1973, Madison, Wisconsin

11. Nondestructive evaluation of osteoporosis, Mechanical and Aerospace Engineering Seminar, Montana State University, Apr. 22, 1974, Bozeman, Montana

12. The biophysicist in clinical orthopedics, Mechanical and Aerospace Engineering Seminar, Montana State University, Apr. 22, 1974, Bozeman, Montana

13. Stress concentrations in bone, Orthopedic Surgery Seminar, Methodist Hospital, Apr. 30, 1974, Madison, Wisconsin

14. Use of an interactive computer terminal for project financial management, Third Annual Computer Fair and Applications Symposium, Sept. 19, 1974, Madison, Wisconsin

15. Bone loss in women, Madison Orthopedic Club, Nov. 23, 1974, Madison, Wisconsin

16. Vibratory studies of bone, University of Wisconsin Biomedical Engineering Seminar, Dec. 2, 1974, Madison, Wisconsin

17. Vibratory studies of bone, University of Wisconsin Engineering Mechanics Seminar, Jan. 23, 1975, Madison, Wisconsin

18. Resonant frequency of tibial fractures (with H. D. Hoeksema), Cook County Hospital Fracture Conference, Aug. 15, 1975, Chicago, Illinois

19. Vibratory properties of long bones, Cook County Hospital Orthopedic Grand Rounds, Aug. 16, 1975, Chicago, Illinois

20. Resonant frequency of healing tibial fractures (with H. D. Hoeksema), Orthopedic Surgery Seminar, Methodist Hospital, Nov. 25, 1975, Madison, Wisconsin

21. Theoretical and clinical implications of the newest information on bone regeneration, articular cartilage repair, and bone grafting, University of Wisconsin Plastic Surgery Seminar, Dec. 19, 1975, Madison, Wisconsin

22. Dynamic studies of the human skeletal system, Mechanical Engineering Seminar, Montana State University, Jan. 13, 1976, Bozeman, Montana

23. Osteoporosis, Madison Convalescent Center Inservice Educational Program, July 28, 1976, Madison, Wisconsin

24. The tones of your bones, Montana Chapter of the American Society of Mechanical Engineers, Nov. 17, 1976, Billings, Montana

25. Osteomalacia secondary to alcoholism (with P. V. Teal), Saint Vincent Hospital Surgical Case Conference, Dec. 29, 1976, Billings, Montana

26. Osteoporosis, Billings Physical Therapy Association Seminar, Mar. 2, 1977, Billings, Montana

27. Resonant frequency of healing tibial fractures (with R. K. Snider), Utah Orthopedic Alumni Association Scientific Session, Mar. 26, 1977, Salt Lake City, Utah

28. Metabolic bone disease, Northern Rockies Regional Cancer Treatment Center Seminar, Mar. 28, 1977, Billings, Montana

29. Osteoporosis, Orthopedic Nursing Workshop, Jan. 25, 1978, Billings, Montana

30. Traction and traction practicum, Orthopedic Nursing Workshop, Jan. 26, 1978, Billings, Montana

31. Osteoporosis (with P. V. Teal), Saint Vincent Hospital Medical Case Conference, Feb. 8, 1978, Billings, Montana

32. Fracture healing, Zimmer * USA Seminar, Mar. 7, 1978, Warsaw, Indiana

33. Natural history of adolescent scoliosis (with R. K. Snider), Utah Orthopedic Alumni Association Scientific Session, June 8, 1978, Salt Lake City, Utah

34. Stress thermography (with D. B. Myers), Saint Vincent Hospital Medical Case Conference, Dec. 20, 1978, Billings, Montana

35. Metabolic bone disease, Endocrinology Seminar, Montana State University, Feb. 16, 1979, Bozeman, Montana

36. Breast thermography, WAMI Seminar, Montana State University, Feb. 16, 1979, Bozeman, Montana

37. Ocular hazards associated with the solar eclipse (with W. E. Butler), Saint Vincent Hospital Medical Staff Seminar, Feb. 21, 1979, Billings, Montana

38. Microcomputers in the medical office, Montana Medical Assistant's Association Meeting, May 20, 1979, Billings, Montana

39. Stress thermography update, Saint Vincent Hospital Medical Case Conference, Sept. 5, 1979, Billings, Montana

40. Noninvasive measurement of bone strength, University of California Bioengineering Seminar, Jan. 8, 1980, Berkeley, California

41. Medical office applications of microcomputers, Montana Medical Assistant's Association Meeting, Feb. 23, 1980, Livingston, Montana

42. Graphic stress telethermometry - report of a blinded study, American College of Obstetricians and Gynecologists, April 30, 1981, Las Vegas, Nevada

43. Stress telethermometry, Montana Medical Assistant's Association Meeting, June 10, 1981, Billings, Montana

44. Thermography revisited (with D. B. Myers), Saint Vincent Hospital Medical Case Conference, July 15, 1981, Billings, Montana

45. Thermometry, algorithms, and breast disease. Controversies in the Diagnosis and Management of Breast Disease, American College of Obstetricians and Gynecologists, Apr. 28, 1982, Dallas, Texas

46. Resonant frequency measurements in tibial fractures, (1983 Visiting Professor of Orthopedic Surgery) University of Texas Southwestern Medical School, University of Texas, Aug. 4, 1983, Dallas, Texas

47. Integrating computers into the medical office, Intermountain Computer Exposition, Eastern Montana College, Mar. 29, 1984, Billings, Montana

48. Medical computer applications, Intermountain Computer Exposition, Eastern Montana College, Mar. 30, 1984, Billings, Montana

49. Implementing a computer in the medical office (with R. K. Snider), Intermountain Computer Exposition, Eastern Montana College, Mar. 28, 1985, Billings, Montana

50. Resonant frequency in monitoring fracture healing, 2nd Annual Perry M. Berg Orthopedic Symposium, Saint Vincent Hospital, Nov. 23, 1985, Billings, Montana

51. A solution in search of a problem: Mathematically oriented approaches to diagnosis, 3rd Annual Perry M. Berg Orthopedic Symposium, Saint Vincent Hospital, Nov. 1, 1986, Billings, Montana

52. Bone loss in women -- a 15-year longitudinal study, 7th Annual Perry M. Berg Orthopedic Symposium, Saint Vincent Hospital, Nov. 17, 1990, Billings, Montana

53. Biomechanics of automobile accidents, Farmers Insurance Group Seminar, Sept. 27, 1995, Billings, Montana

54. Natural history of osteoporosis, Biology Department Seminar, Montana State University - Billings, Mar. 11, 1997, Billings, Montana

55. Biomechanics -- can you really get hurt in a low-impact collision? State Bar of Montana Continuing Legal Education Seminar, Mar. 16, 2000, Butte, Montana

56. Biomechanical evaluations, Medical School for Lawyers Seminar, Montana Trial Lawyers Association, Apr. 14, 2000, Billings, Montana

57. Biomedical factors associated with space flight, The Space Show, KKNW 1150 AM, July 8, 2003, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

58. Life support in space flight, The Space Show, KKNW 1150 AM, July 25, 2004, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

59. Investing in the alt.space community, The Space Show, KKNW 1150 AM, March 20, 2005, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

60. When physics, economics and reality collide (with S. Dinkin and D. Livingston), Graduate School of Space Studies Colloquium and Workshop, University of North Dakota, April 11, 2005, Grand Forks, North Dakota

61. Volunteer Expert Witness, Advanced Trial Advocacy Program, School of Law, University of Montana, May 25, 2005, Missoula, Montana

62. Human factors in space flight, The Space Show, KKNW 1150 AM, September 27, 2005, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

63. Human factors in suborbital flight, Graduate School of Space Studies guest lecture, University of North Dakota, October 6, 2005, Grand Forks, North Dakota

64. Physical, economic, and business considerations in commercial space flight, Graduate School of Space Studies, University of North Dakota guest lecture, October 6, 2005, Grand Forks, North Dakota

65. Human factors and space medicine, Graduate School of Space Studies guest lecture, University of North Dakota, April 5, 2006, Grand Forks, North Dakota

66. Investment in commercial space ventures, Graduate School of Space Studies, University of North Dakota guest lecture, April 5, 2006, Grand Forks, North Dakota

67. Commercial space access, The Space Show, KKNW 1150 AM, April 9, 2006, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

68. An entrepreneur's view of new space investing, The Space Show, KKNW 1150 AM, May 15, 2007, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

69. Advanced Topics in Space Studies – Human Factors, Graduate School of Space Studies, University of North Dakota guest lecture, September 24, 2007. Grand Forks, North Dakota

70. Interview of Jay Barbree (NBC Space Correspondent) as cohost, The Space Show, KKNW 1150 AM, September 24, 2007, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

71. Interview of the University of North Dakota's Dr. Mike Gaffey and graduate student Vishnu Reddy Kanupuru as cohost, The Space Show, KKNW 1150 AM, September 25, 2007, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

72. Interview of the University of North Dakota graduate students Beth Reynolds and Driss Takir as cohost, The Space Show, KKNW 1150 AM, September 26, 2007, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

73. Advanced Topics in Space Studies – Investor Concerns, Graduate School of Space Studies, University of North Dakota guest lecture, November 15, 2007. Grand Forks, North Dakota

74. Commercial space development trends, The Space Show, KKNW 1150 AM, February 10, 2008, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

75. Space cadet behavior, The Space Show, KKNW 1150 AM, March 21, 2008, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

76. Panel discussion on space solar power, The Space Show, KKNW 1150 AM, March 21, 2008, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

77. Project SUSTAIN and national security, The Space Show, KKNW 1150 AM, January 18, 2009, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

78. Project SUSTAIN closed briefing to USMC Commandant's Office staff, US Security Space Office staff, USAF Security Forces Center Headquarters staff, and US Special Operations Command staff on Project SUSTAIN, February 26, 2009, Lackland Air Force Base, Texas (open presentation on February 24, 2009 listed as Presentation at Meeting)

79. Starship Troopers: Human Factors Issues Related to Troop Insertion and Extraction for Project SUSTAIN, Graduate School of Space Studies Seminar, University of North Dakota, April 8, 2009, Grand Forks, North Dakota

80. NewSpace and launch economics, The Space Show, KKNW 1150 AM, May 31, 2008, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

81. Discussion of Aries-I, space policy, and crew safety issues with Charles Precourt, Trina Patterson, and David Livingston, The Space Show, KKNW 1150 AM, August 14, 2008, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

82. Some Thoughts on Global Warming, Citizens for Balanced Use, 3rd Annual Summit, October 20, 2009, Bozeman, Montana

83. Aviation and Space Commercial Ventures – Financial Considerations, Aviation Program guest lecture, October 27, 2009, Rocky Mountain College, Billings, Montana

84. Aerospace Physiology – Altitude Effects and Acceleration Responses, Aviation Program guest lecture, October 27, 2009, Rocky Mountain College, Billings, Montana

85. Some Thoughts on STEM Education, Rotary Club (Downtown), December 14, 2009, Billings, Montana

86. Discussion of Space Advocacy, The Space Show, KKNW 1150 AM, December 18, 2009, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

87. Discussion of High Speed and Altitude Bailout with Sarah Ford, Captain, USAF, The Space Show, KKNW 1150 AM, December 20, 2009, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

88. Women's Health and Human Space Flight, The Space Show, KKNW 1150 AM, to be broadcast January 11, 2010, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

89. The Space Show Classroom Series, Cohosted by David Livingston, John Jurist, and James Logan, broadcast on www.newschannel 1150.com, Guest discussants listed by individual program:

    i. Feb. 2, 2010 Introduction.

    ii. Feb. 9, 2010 The rocket equation. Guest: Paul Breed, Unreasonable Rockets.

    iii. Feb. 16, 2010 Orbital dynamics. Guest: Dan Adamo, NASA (retired).

    iv. Mar. 7, 2010 Analysis, due diligence, finance, marketing, and management. Guest: Bruce Pittman.

    v. Mar. 30, 2010 NewSpace capabilities, realities, and potential. Guest: Paul Breed.

    vi. Apr. 6, 2010 I. Launch industry: Commercial and newspace. Guest: Dr. Jeff Foust, Futron Corp.

    vii. Apr. 27, 2010 II. Launch industry: Government and DOD. Guest: Dr. Henry Hertzfeld, George Washington University.

    viii. May 16, 2010 I. Aerospace medicine: Issues for space participants, suborbital and orbital space travel; differences between medical and engineering needs.

    ix. May 18, 2010 II. Aerospace medicine: Issues for habitation, long duration spaceflight and beyond LEO.

    x. June 6, 2010 Space policy for the US and others as a subset of foreign policy. Guest: Dr. Eligar Sadeh, USAF Academy.

    xi. July 11, 2010 Facts of earth orbit and its relevance to everything. Guest: Brian Weeden, Secure World Foundation.

    xii. July 18, 2010 Review and wrapup.

    xiii. Sept. 23, 2010 Special added topic: Orbital propellant depots. Guests: Dan Adamo, Dallas Bienhoff (Boeing).

    xiv. Jan. 23, 2011 Introduction to New Classroom Series.

    xv. April 5, 2011 Propellant depots. Guests: Dan Adamo, Johnathon Goff.

    xvi. May 3, 2011 Artificial gravity. Guest: Joe Carroll.

    xvii. May 6. 2012 Bisphosphonates in human space flight. Guests: Dr. Adrian LeBlanc, Baylor College of Medicine and Dr. Thomas Lang, University of California San Francisco School of Medicine.

    xviii. Nov. 19, 2013 Trajectory challenges faced by orbiting infrastructure supporting multiple earth departures for Mars. Guest: Dan Adamo

    xix. Dec. 17, 2013 Radiation issues for deep space travel, Mars and Moon settlements

    xx. Jan. 6, 2014 Space advocacy and reality

90. Dynamics of Astronaut Atmospheric Entry from LEO, Graduate School of Space Studies Seminar, University of North Dakota, September 29, 2010, Grand Forks, North Dakota

91. The Technology Development and Advancement Process, Graduate School of Space Studies, University of North Dakota guest lecture, January 26, 2011, Grand Forks, North Dakota

92. Advanced Topics in Space Studies – Technology and Orbital Dynamics, Graduate School of Space Studies, University of North Dakota guest lecture, April 15, 2011. Grand Forks, North Dakota

93. Advanced Topics in Space Studies – Issues Related to Human Factors, Graduate School of Space Studies, University of North Dakota guest lecture, April 18, 2011, 2007. Grand Forks, North Dakota

94. Interview of Dr. Michael Griffin (former NASA Administrator) as cohost, The Space Show, KKNW 1150 AM, April 26, 2011, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

95. Interview of Microcosm's President Dr. James Wertz as cohost, The Space Show, KKNW 1150 AM, August 12, 2011, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

96. The Space Show Webinar Series hosted by David Livingston: Specific topics are listed by individual program:

    i. August 29, 2011: Life support needs for a deep space/Mars mission (with Dr. Vadim Rygalov and Joe Carroll)

    ii. October 28, 2012: Rocket reliability, multilaunch mission planning, risk and cost analysis

    iii. November 25, 2012: Trajectory analyses (Cohost – with guest Dan Adamo, NASA (retired))

    iv. February 17, 2013: Behind the scenes engineering for space structures and infrastructure (Cohost – with guest Dr. Haym Benaroya)

    v. July 14, 2013: Space and STEM education outreach (Cohost – with guests Christine Nobbe, BarbaraSprungman-David, and Lynne Zielinski)

97. Bone Physiology, Loss in Microgravity, and Bisphosphonates, The Space Show, KKNW 1150 AM, March 27, 2012, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

98. Current US Space Policy, guest with Dr. Haym Benaroya, The Space Show, KKNW 1150 AM, April 9, 2012, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

99. Get Me Down Alive, Rocky Mountain College Science Seminar, April 18, 2012, Billings, Montana

100. Human Atmospheric Entry (with I. McKay [presenter], J. M. Jurist, V. Rygalov, and K. Donin) Montana Space Grant Consortium Student Research Symposium, April 20, 2012, Bozeman, Montana

101. Human Atmospheric Entry – Impact Tolerance Model for Prolonged Acceleration Profiles (with K. Donin [presenter], J. M. Jurist, V. Rygalov, and I. McKay) Montana Space Grant Consortium Student Research Symposium, April 20, 2012, Bozeman, Montana

102. Human Atmospheric Entry, The Space Show, KKNW 1150 AM, April 29, 2012, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

103. Space Cynics, guest with Tom Olson, The Space Show, KKNW 1150 AM, June 22, 2012, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

104. Interview of Bas Lansdorp as cohost, The Space Show, KKNW 1150 AM, August 12, 2011, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

105. The Brinkley Dynamic Response Index, Rocky Mountain College Mathematics Seminar, October 22, 2012, Billings, Montana

106. Hemodynamics, Rocky Mountain College Physiology Seminar, March 11, 2013, Billings, Montana.

107. Lunar Characteristics, organizer with guest Harrison Schmitt (Apollo 17), Rocky Mountain College Geology Seminar, March 21, 2013, Billings, Montana

108. Leadership Forum (with Harrison Schmitt, Walter Cunningham, Loren Acton, and David Livingston), Rocky Mountain College, March 22, 2013, Billings, Montana

109. Flight Training Discussion (organizer with Harrison Schmitt, Walter Cunningham, and Loren Acton), Rocky Mountain College Aviation Seminar, March 22, 2013, Billings, Montana

110. Public Forum (with Harrison Schmitt, Walter Cunningham, Loren Acton, and David Livingston), Rocky Mountain College, March 22, 2013, Billings, Montana

111. Brinkley Dynamic Response Index Applied to Motor Vehicle Accidents (with B. Zotovich [presenter], J. M. Jurist) Montana Space Grant Consortium Student Research Symposium, April 19, 2013, Bozeman, Montana

112. 2,000th Show Recognition, cohost with Doug Plata, The Space Show, KKNW 1150 AM, May 7, 2013, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

113. Space, STEM, and US Society, Community Lecture, Universalist Fellowship, June 12, 2013, Billings, Montana

114. Interview of Robert Meurer (ATK Space Division) as cohost, The Space Show, KKNW 1150 AM, August 16, 2013 Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

115. Interview of George Torres (ATK Aerospace Group) as cohost, The Space Show, KKNW 1150 AM, August 16, 2013 Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com)

116. Cardiovascular Physiology and Hemodynamics, Rocky Mountain College Physician's Assistant Program Seminar, July 25, 2013, Billings, Montana

117. Lymphatic System, Rocky Mountain College Physician's Assistant Program Seminar, July 26, 2013, Billings, Montana

118. Experimental Design, Rocky Mountain College Physician's Assistant Program Seminar, November 8, 2013, Billings, Montana

119. Bias and Confounding, Rocky Mountain College Physician's Assistant Program Seminar, November 12, 2013, Billings, Montana

120. Principles of Predictive Value, Rocky Mountain College Physician's Assistant Program Seminar, November 18, 2013, Billings, Montana

121. Artificial Gravity in Space, The Space Show, KKNW 1150 AM, February 16, 2014, Seattle, Washington (also broadcast as The Space Show Special Edition on www.newschannel 1150.com