

Raymond Wiegand, DC

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St. Charles, MO 63304
636-329-8774
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SELECTED OCCUPATIONAL HISTORY

Chiropractor and Clinical Director: Spine Rehabilitation Institute of Missouri, Weldon Spring, Missouri 2001 – present

Research Associate: Logan College of Chiropractic, Chesterfield, MO. 1999-2002

Administrator: Medicare approved facility. Garland Comprehensive Outpatient Rehabilitation Facility (CORF), Garland, TX 1993-1999

Clinic Director: Garland Chiropractic, Garland, TX 1993-1999.

Chiropractor and Clinic Director: Spinal Corrective Research, Acton, MA. 1984-1993

Application Systems Engineer: Philadelphia Gear Corp. Valley Forge, PA. 1976-1980

EDUCATION AND LICENSURE

Doctor of Chiropractic: Licensed in the state of Missouri. License # 2000148953. 2001-present
Licensed in the state of Massachusetts. License # 898. 1984 – 2008

Palmer College of Chiropractic: Doctorate of Chiropractic, Davenport, IA. 1984

Diplomate: National Board of Chiropractic Examiners: 1984

Internship: Palmer College of Chiropractic. 1982-1984.

Ursinus College: Bachelor of Science in Physics. Collegeville, PA. 1975

Masters Study in Engineering: Widener College, Chester, PA 1978

APPOINTMENTS HELD

Instructor of Clinical Biomechanics: Pingle Orthopedic Hospital, Shenzhen, China

Adjunct Research Faculty: Logan College of Chiropractic, Chesterfield, MO.

Vice Chairman: The World Manipulative Medical Association, Foshan, China

SELECTED POSTGRADUATE AFFILIATIONS

Previous Postgraduate Faculty:

Palmer Chiropractic College. Davenport, IA
Sherman Chiropractic College, Spartanburg, NC
Logan College of Chiropractic, Chesterfield, MO
Life College of Chiropractic, Marietta, GA

SELECTED POSTGRADUATE EDUCATION, CERTIFICATIONS AND DIPLOMATS

Continuing Education:

Spinal Biomechanical Engineering Analysis, *Understanding spinal motor units as it relates to the Cartesian system and normal vs. pathological movement. Analyzing normal coupling functions of the spine in relations to gait and pelvic biomechanical function and determining stress units and standards of deviation of segmental dysfunction. Interpreting mensuration lines and block analysis beyond standards of deviation in spinal motor dysfunction about connective tissue failure.* Cleveland University Kansas City, Chiropractic and Health Sciences, New York State Department of Education, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2018

Spinal Biomechanical Engineering Pathology and Clinical Application, *Integrating pathological function based upon the Cartesian system and digital mensuration in developing treatment plans with diagnosed connective tissue failures. Diagnosing corrective vs. clinical management scenarios when considering maximum medical improvement in both the chronic and acute, insidious and traumatically induced patient.* Cleveland University Kansas City, Chiropractic and Health Sciences, New York State Department of Education, Academy of Chiropractic Post-Doctoral Division, Long Island, NY, 2018

Assessment and Management of Extremity Dysfunction. *Examination, assessment and treatment of upper and lower extremities.* Missouri Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

Low Level Laser Treatment. *Use and application of various wavelength low power lasers. Clinical studies.* Missouri Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

MRI. *Bulging, herniated, protruded and extruded disc contemporary nomenclature, analysis and differential diagnosis. Connective tissue physiology and pathology with aberrant biomechanical permanent sequela.* Missouri Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

Coding and Compliance. *Rules and regulations of the office of the attorney general. Medicare requirements and documentation.* Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

Government Compliance. *Rules and regulations of the office of the attorney general. Medicare requirements and documentation.* Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

Manipulation and Mobilization. *Manipulation and mobilization techniques as they apply to musculo-skeletal conditions*. Board of Registration, Missouri Chiropractic Physicians Association. Branson, MO. 65616 2018

MRI Spine Interpretation and Spinal Biomechanics. *Bulging, herniated, protruded and extruded disc contemporary nomenclature, analysis and differential diagnosis. Connective tissue physiology and pathology with aberrant biomechanical permanent sequelae*, Texas Chiropractic College, Academy of Chiropractic, Melville NY, 2017

Contemporary Literature in Spinal Biomechanics, *Normal vs. pathological biomechanical spinal motion both in a single motor unit and coupling actions. Interdisciplinary approach to mechanical spine issues and evidenced based care paths*, Texas Chiropractic College, Academy of Chiropractic, Melville NY, 2017

Documentation of Spinal Trauma. *Interdisciplinary approaches in documentation of spinal related injuries inclusive of connective tissue disorders and biomechanical failure. Clinically correlating history, imaging, advanced imaging and clinical findings to conclude an accurate diagnosis, prognosis and treatment plan*, Texas Chiropractic College, Academy of Chiropractic, Melville NY, 2017

Contemporary Literature of the Chiropractic Spinal Adjustment. *The bio-neuro-mechanical scientific foundation of spinal lesion and the neurological pathways, both in the lower and upper motor neuron pathways. The autonomic sequella of the vertebral subluxation and the effects of the correction and maintenance of those lesions*, Texas Chiropractic College, Academy of Chiropractic, Melville NY, 2017

Primary Spine Care Symposium 3 – Inter-professional Spine Care, *Clinical analysis of anatomic versus biomechanical spine pain and clinical triage protocols. Relating current research trends in the Whole Spine Model of patient including normal versus abnormal sagittal curvature in the adolescent and adult spine, pelvic incidence as a parameter for sagittal balance in the human spine and current methods of assessment. Patient centered approach to Evidenced Based Spine care with a focus on diagnosis, prognosis and triage of the spine pain patient*, Texas Chiropractic College Post-Doctoral Division, Academy of Chiropractic Post-Doctoral Division, Melville NY 2017

Primary Spine Care Symposium 3 – Epidemiology of Spine Pain, *Review of the current Centers for Disease Control [CDC] data on the frequency of musculoskeletal pain in the United States population with emphasis on pain of spinal origin. CDC guidelines on opioid medication were discussed and correlated to persistent pain syndromes. Research was reviewed showing the importance of managing the spine pain patient properly from the entry point of care with a concentration on maintenance of spinal biomechanics*, Texas Chiropractic College Post-Doctoral Division, Academy of Chiropractic Post-Doctoral Division, Melville NY 2017

Diagnostic Imaging, *review of diagnostic imaging including radiographs, CAT and MRI scan to assess genetic, degenerative and traumatic disorders of the cervical, thoracic, lumbar and pelvis*. Missouri State Chiropractic Association. St Louis, MO 2012

Ethical Practices, *review of the doctor-patient relationship in consideration the ethical boundaries. Case studies of various breach of ethics and how to avoid them.* Missouri State Chiropractic Association, St. Louis, MO 2012

Health and Wellness, *differentiating the paradigms of health care models including wellness vs acute care management. Review of US based medical models of poly pharmaceutical, surgical and rehabilitation and how they compare and contrast to wellness models.* Missouri State Chiropractic Association, St. Louis, MO 2012

Disc Failure and MRI Imaging. *identifying and assessing the integrity of the spinal disc through MRI imaging in the frontal, coronal and transverse planes. Current and historical nomenclature of disc injury including bulge, protrusion, herniation and sequestration.* Missouri State Chiropractic Association, St. Louis, MO 2012

Principles and Techniques, *a systematic approach to describing the historical development of the principles and practice of chiropractic. How the historical perspective impacts scope of practice today and how that scope differs from state to state.* Missouri State Chiropractic Association, St. Louis, MO 2012

Case Studies, *a selective review of chiropractic cases studies including asthma, bladder incompetence and blood pressure. Specific case studies from a private doctor's office.* Missouri State Chiropractic Association, St. Louis, MO 2012

Medicare Guidelines, *a review of the guidelines describing E&M coding, documenting the current episode, treatment documentation at each treatment session, reaching maximum medical improvement.* Missouri State Chiropractic Association, St. Louis, MO 2012

Radiographic Diagnosis, *a review of soft and hard tissue pathologies as identified on plane view radiographs. Fractures, degenerative joint diseases and carcinogenic metastasis are reviewed.* Missouri State Chiropractic Association, St. Louis, MO 2011

Record Keeping, *the necessity of documenting the patient condition using SOAP and PART formats. Matching the treatment procedures CPT codes to the diagnostic ICD9codes. Examples of appropriate and inappropriate coding and documentation.* Missouri State Chiropractic Association, St. Louis, MO 2011

Diagnostic Imaging, *a systematic review of radiographic, MRI and CAT. Which imaging technique is appropriate for the suspected pathology. Case studies demonstrating the advantages of imaging techniques. Angiograms and dye enhanced studies are reviewed.* Missouri State Chiropractic Association, St. Louis, MO 2011

Physical Diagnosis, *a review of physical diagnosis including history taking, chief complaint and presenting symptoms, examination and differential diagnosis.* Logan College of Chiropractic, Chesterfield, MO. 2010

Boundary Training, *the patient doctor relationship is examined in the context of ethics, professionalism, including physical and social boundaries. How to protect yourself from claims of unprofessional conduct.* Logan College of Chiropractic, Chesterfield, MO. 2010

Emergency Procedures, a *certification class in emergency procedures including CPR, defibrillation and respiratory distress syndromes*. Logan College of Chiropractic, Chesterfield, MO. 2010

Physical Diagnosis, a *review of physical diagnosis including history taking, chief complaint and presenting symptoms, examination and differential diagnosis*. Logan College of Chiropractic, Chesterfield, MO. 2009

Auricular Therapy, an *introductory course of auricular therapy including location of points, meaning of the points, which points to use and how to administer the needles. Using electro-stimulation and replacement of needles with laser*. Weldon Spring Clinic, The Missouri Chiropractic Board of Registration, Weldon Spring, MO 2009

Physical Diagnosis, a *review of physical diagnosis including history taking, chief complaint and presenting symptoms, examination and differential diagnosis*. Logan College of Chiropractic, Chesterfield, MO 2008

Boundary Training, *review of the doctor patient relationship in consideration of ethics, state law and tort law. How to identify potential conflicts of interest*. Logan College of Chiropractic, Chesterfield, MO 2008

Radiographic Diagnosis, a *review of case studies and how to decide which diagnostic imaging technique is appropriate. How to initially scan a radiograph to separate normal from abnormal. When a finding is suspicious refer for a more specialized review and interpretation*. Logan College of Chiropractic, Chesterfield, MO. 2007

Radiographic Diagnosis, a *review of case studies and how to decide which diagnostic imaging technique is appropriate. How to initially scan a radiograph to separate normal from abnormal. When a finding is suspicious refer for a more specialized review and interpretation*. Logan College of Chiropractic, Chesterfield, MO. 2006

Radiographic Diagnosis, a *review of case studies and how to decide which diagnostic imaging technique is appropriate. How to initially scan a radiograph to separate normal from abnormal. When a finding is suspicious refer for a more specialized review and interpretation*. Logan College of Chiropractic, Chesterfield, MO. 2005

Physical Diagnosis, *case studies of numerous musculoskeletal complaints and how to create a differential diagnosis of visceral and somatic complaints Physical exam, testing and report of findings is presented*. Logan College of Chiropractic, St Louis, MO 2004

Emergency Procedures, a *certification class in emergency procedures including CPR, defibrillation and respiratory distress syndromes*. Logan College of Chiropractic, Chesterfield, MO. 2003

ACC/RAC IX, *scientific and academic conference of national and international chiropractic colleges. Multiple presentations and panel discussions on current research and findings*. 2003

Endocrine and Fibromyalgia, *a comprehensive review of the literature, research and hormonal therapies used in the treatment of fibromyalgia*. Missouri State Chiropractic Association, St. Louis, MO 2003

Radiographic Diagnosis, *a review of case studies and how to decide which diagnostic imaging technique is appropriate. How to initially scan a radiograph to separate normal from abnormal. When a finding is suspicious refer for a more specialized review and interpretation*. Logan College of Chiropractic, Chesterfield, MO. 2003

Emergency Procedures, *a certification class in emergency procedures including CPR, defibrillation and respiratory distress syndromes*. Logan College of Chiropractic, Chesterfield, MO. 2003

ACC/RAC VIII *scientific and academic conference of national and international chiropractic colleges. Multiple presentations and panel discussions on current research and findings. Emergency Procedures, certification in emergency procedures including CPR, defibrillation and respiratory distress syndromes*. Logan College of Chiropractic, Chesterfield, MO. 2003

Diagnostic Imaging, *review of plane film, MRI and CAT in consideration of patient history and complaint. When and why to order advanced diagnostic imaging*. Logan College of Chiropractic, Chesterfield, MO. 2003

Differential Diagnosis, *the why and when to consider a patient complaint to be something other than a neuro-muscular problem*. Logan College of Chiropractic, Chesterfield, MO. 2003

Emergency Procedures, *certification in emergency procedures including CPR, defibrillation and respiratory distress syndromes*. Logan College of Chiropractic, Chesterfield, MO. 2002

Differential Diagnosis, *determining the multiplicity and etiology of neuromuscular dysfunction. Differentiating central and peripheral nervous system problems*. Logan College of Chiropractic, Chesterfield, MO. 2002

Radiographic Pathology, *degenerative pathologies of the spine and pelvis*. Logan College of Chiropractic, Chesterfield, MO. 2002

ICSM, *International Conference on Spinal Manipulation, Research and clinical case studies of spinal manipulative intervention* Toronto, Canada 2002

ACC/RACVII, *Association of Chiropractic Colleges/Research Agenda Conference scientific and academic conference of national and international chiropractic colleges. Multiple presentations and panel discussions on current research and findings* New Orleans, LA 2002

ACC, *Association of Chiropractic Colleges. Research conference on academic subjects including student profiles, classroom procedures and testing outcomes*, Bloomington, IN 2001

Differential Diagnosis, *Adolescent idiopathic scoliosis, etiology including genetic predisposition, hormonal and biomechanical factors*. Logan College of Chiropractic, Chesterfield, MO. 2001

ICSM, *International Conference on Spinal Manipulation*. 2001

ACC, Association of Chiropractic Colleges. *Research conference on academic subjects including student profiles, classroom procedures and testing outcomes.* Orlando, FL 2000

Cervical Trauma, *dynamics of paraspinal muscle and ligament injury in the cervical spine, strength of elastic materials and sudden impulse forces.* Massachusetts Chiropractic Society, Boston, MA. 1992

Video Fluoroscopy and Biomechanical Analysis of the Cervical Spine. *Motion analysis of the cervical spine using video fluoroscopy in the sagittal and frontal planes.* Massachusetts Chiropractic Society, Boston, MA. 1991

MRI Imaging. *History and related technology to develop magnetic resonance imaging.* Massachusetts Chiropractic Society, Boston, MA. 1990

X-ray Pathology. *Review of x-ray pathology.* Massachusetts Chiropractic Society, Boston, MA. 1989

Protocols of Rehabilitation. *100 hours certification course in soft tissue rehabilitation.* Chiropractic Rehabilitation Association, Springfield, IL 1987

SELECTIVE MEDICAL CONFERENCES, LECTURES, CONSULTING

Presenter: The 7th World Integrative Medicine Congress. (WIMCO 2020)
Mechanical Spine Pain: Seven Common Spinal Distortion Patterns, Causes and Correction.
Identification of seven, frontal plane distortion patterns in the frontal plane associated with
mechanical spine pain. Jinan, PRC December 2019

Presenter: SPIE Medical Imaging Conference. 2D Pattern matching of frontal plane radiograph
to 3D model identifies structural and functional deficiencies of the spinal pelvic system in
consideration of mechanical spine pain, San Diego, Ca. February 2019

Instructor: Spinal Biomechanical Engineering, 12 hours, Academy of Chiropractic
St. Louis, MO. January 2019

Instructor: Clinical Biomechanics, 4 hours Missouri Chiropractic Physicians Association,
St Louis, MO . December 2018

Instructor: Spinal Biomechanical Engineering, 8 hours. Guangzhou Baiyun Mountain Hospital
Guangzhou, China November 2018

Instructor: Spinal Biomechanical Engineering, 8 hours. The Academy of Chiropractic
Symposium. Melville, NY 2018

Instructor: Spinal Biomechanical Engineering, 8 hours category 1 AMA PRA 2015 - present
Accreditation Council for Continuing Medical Education

Instructor: Shenzhen University College of Continuing Education Clinical biomechanics and spine rehabilitation 30 hours	2018
Instructor: Shenzhen University College of Continuing Education Clinical biomechanics and spine rehabilitation 30 hours	2017
Presenter: Chinese Medicine Academic Forum. Normal Movements of Gait and Scoliosis Deformity. Shenzhen, PRC	2016
Presenter: Beijing Symposium on Spinal Manipulative Therapy, Spine Mechanics, Structural Organization of the Spine and Scoliosis Rehabilitation	2014
Presenter: Pingle Spine Hospital, Shenzhen, PRC Traditional Spine Manipulation Conference Computer Spinal Modeling	2013
Instructor: Missouri State Chiropractic Association, St. Louis, MO Spinal Biomechanics and Scoliosis 4 hours continuing education	2012
Presenter: Pingle Spine Hospital, Shenzhen, PRC Traditional Spine Manipulation Conference Speaker: Computer Spinal Modeling	2012
Instructor: Pingle Spine Hospital, Shenzhen, PRC Computer Spinal Modeling and Clinical Spinal Biomechanics. 30 hrs CE	2012
Instructor: Pingle Spine Hospital, Shenzhen, PRC Computer Spinal Modeling and Clinical Spinal Biomechanics. 30 hrs CE	2012
Vice Chairman: Traditional Chinese Spinal Manipulation Conference, Foshan, PRC, Keynote Speaker, Computer Spinal Modeling	2011
Instructor: Missouri State Chiropractic Association, St Louis, MO. Spinal Biomechanics, 4 hrs. CE	2011
Presenter: Spinal Manipulation Intervention Conference, Beijing, PRC Air Force Hospital, Speaker	2011
Presenter: The Vocational Training for Specialists in Pain Management Conference Shenzhen, PRC Keynote Speaker.	2010
Instructor: Missouri State Chiropractic Association, St Louis, MO. Spinal Biomechanics and Scoliosis Management, 4 hr. CE	2010
Presenter: Guangdong Chinese Western Medical Combined Rehabilitation Conference Shenzhen, PRC Speaker	

2010	
Presenter: Beijing Symposium on Spinal Manipulation Therapy, Beijing, PRC, Keynote Speaker	2010
Presenter: ACC/RAC Conference, Las Vegas, NV, USA	2009
Instructor: Guangzhou Traditional Medical College. Guangzhou, PRC. Spinal Biomechanics and Chiropractic Part II, 30 hrs CE	2009
Instructor: Guangzhou Traditional Medical College, Guangzhou, PRC. Spinal Biomechanics and Chiropractic Part I, 30 hrs CE	2009
Instructor: Guangzhou Traditional Medical College, Guangzhou, PRC. Spinal Biomechanics and Chiropractic 30 hrs CE	2008
Instructor: Missouri State Chiropractic Association, St Louis, MO. Spinal Biomechanics, 4 hr. CE	2008
Instructor: Missouri State Chiropractic Association, St Louis, MO. Spinal Biomechanics and Physical Findings, 4 hrs CE	2008
Presenter: National Pain Symposium, Beijing, PRC. Principles of Chiropractic.	2007
Instructor: Guangzhou Traditional Medical College. Guangzhou, PRC. Clinical Biomechanics, Shen Zhen, PRC. 16 hrs CE	2006
Instructor: Missouri State Chiropractic Association, St. Louis, MO Clinical Biomechanics, 4 hrs CE	2006
Instructor: Guangzhou Traditional Medical College. Guangzhou, PRC. Clinical Biomechanics, Guang Zhou, PRC 16 hrs CE	2006
Instructor: Guangzhou Traditional Medical College. Guangzhou, PRC. Clinical Biomechanics, 16 hrs CE	2005
Instructor: National Spine Conference, Zhuhai, PRC Clinical Biomechanics and Chiropractic 2005	
Instructor: Peking First University Hospital, Beijing, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2004
Instructor: Shandong University Hospital, Jinan, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2004
Presenter: ACC/RAC VII CONFERENCE Dysfunctional Motion Segments in the Cervical Spine	2004
Presenter: Spinal Orthopaedic-technology Proseminar, Beijing, PRC	

Spinal Biomechanics and Chiropractic	2003
Instructor: China Physical Medicine and Rehabilitation Association, Jinan, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2003
Instructor: China Rehabilitation Medicine Association, Beijing, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2003
Instructor: Jinan Medical Society, Jian, PRC Spinal Biomechanics and Chiropractic Techniques, 24 hrs CE	2003
Instructor: ACC/RAC Conference, New Orleans, LA Intra and Inter Reliability Study of Radiographic Digitizing	2003
Instructor: Ba Yei Spineck Disease Hospital, Beijing, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2002
Instructor: Beijing Spine Research, Beijing, PRC Spinal Biomechanics and Chiropractic, 24 hrs CE	2002
Instructor: ACC/RACVII Conference, New Orleans, LA Lumbar Segmental Flexion In Side Posture Positioning for L5 Adjustment	2002
Presenter: ACC Conference	2001
Presenter: ICSM Conference	2001
Instructor: Beijing Medical Air Force Hospital, Beijing PRC Spinal Biomechanics, 4 hrs CE	2001
Instructor: Beijing Medical Hospital 301, Beijing, PRC Spinal Biomechanics, 4 hrs CE	2001
Instructor: Beijing Medical Hospital 301, Beijing, PRC Spinal Biomechanics, 8 hrs CE	2000
Presenter: ICSM Conference	2000
Presenter: Life Upper Cervical Conference, Marietta, GA Computer Modeling and Spinal Biomechanics	1999
Presenter: Logan College of Chiropractic, Chesterfield, MO Computer Modeling and Spinal Biomechanics	1998
Presenter: Sherman College of Straight Chiropractic, SC Computer Modeling and Spinal Biomechanics	1998
Presenter: Life University, Marietta GA. Computer Modeling and Spinal Biomechanics	1998

Instructor: Seoul Medical Hospital, Seoul, S. Korea
Spinal Biomechanics and Chiropractic, 30 hrs CE 1997

Presenter: Logan College of Chiropractic, Chesterfield, MO
Computer Modeling and Spinal Biomechanics 1997

Presenter: Life University, Marietta, GA.
Computer Modeling and Spinal Biomechanics 1997

Presenter: Upper Cervical Conference, Marietta, GA.
Computer Modeling and Spinal Biomechanics 1997

Instructor: Seoul Medical Hospital, Seoul, S Korea
Spinal Biomechanics and Chiropractic, 30 hrs CE
1996

Instructor: Palmer College of Chiropractic, Davenport, IA
Computer Modeling and Spinal Biomechanics, 12 hrs CE 1992-1996

Instructor: Pennsylvania Chiropractic Society, Harrisburg, PA.
Biomechanical Analysis of the Spinal-Pelvic System, 12 hrs CE 1996

Presenter: Logan College of Chiropractic, Chesterfield, MO
Computer Modeling and Spinal Biomechanics 1996

Presenter: Upper Cervical Conference, Marietta, GA.
Computer Modeling and Full Spine Biomechanics 1996

Instructor: Chiropractic Centennial, Washington, DC
Multivariable Element Analysis of the Spinal-Pelvic System Using Digital X-ray
Analysis, 4 hrs CE 1995

Instructor: Pennsylvania Chiropractic Society, Harrisburg, PA.
Biomechanical Analysis of the Spinal-Pelvic System, 12 hrs CE 1995

Presenter: Upper Cervical Conference, Marietta, GA.
Cervical Motion Study Analysis 1995

Instructor: Seoul Medical Hospital, Seoul, S. Korea
Spinal Biomechanics and Chiropractic, 30 hrs CE 1995

Presenter: Upper Cervical Conference, Marietta, GA. 1994

Instructor: Seoul Medical Hospital, Seoul, S. Korea
Spinal Biomechanics and Chiropractic, 60 hrs CE 1994

Instructor: Chong Hau Hospital, Philippine Medical Society, Sebu , Phillipines

Spinal Biomechanics and Chiropractic, 30 hrs CE	1994
Instructor: Seoul Medical Society, Pusan, Korea Spinal Biomechanics and Chiropractic, 60 hrs CE	1993
Instructor: Spinal Corrective Research, Westford, MA. Computer Modeling and Spinal Biomechanics, 16 hrs CE	1993
Instructor: Pettibon Institute, Tacoma, WA. Computer Modeling and Spinal Biomechanics, 8 hrs	1993
Instructor: Spinal Corrective Research, Westford, MA. Computer Modeling and Spinal Biomechanics, 16 hrs CE	1989-1993
Presenter: Upper Cervical Spine Conference, Marietta, GA. EMG Indications, Application, and Interpretation	1992
Instructor: Parker Seminar Series, Dallas, TX Computer Modeling and Spinal Biomechanics, 4 hrs	1990 - 1992
Presenter: Sherman Chiropractic College, Spartanburg, SC Computer Modeling and Spinal Biomechanics	1992
Presenter: National Subluxation Conference, Spartanburg, SC Computer Modeling and Spinal Biomechanics	1992
Instructor: Parker Chiropractic College, Dallas, TX Computer Modeling and Spinal Biomechanics, 8 hrs CE	1989

SELECTIVE PUBLICATIONS

1. Wiegand R. 2D pattern matching of frontal plane radiograph to 3D model identifies structural and function deficiencies of the spinal pelvic system in consideration of mechanical spine pain. Society of Photo-Optical Instrumentation Engineers (SPIE) Presentation . San Diego Feb 2019
2. Ruhan Sa, William Owens, Raymond Wiegand et al. Intervertebral disc detection in x-ray images using faster R-CNN: A Deep learning approach. State University of New York at Buffalo Research. 2018.
3. Wiegand R, Zhang D, Lee Z, Marquina N. Sagittal Plane Lumbar Spine Geometry Indicative of Patients with Disruptive Disc Pathology of Bulge or Protrusion. The Spine Journal (submitted in editorial review) 2012
4. Wiegand, R. Graphical Analysis and Frequency Distribution of Dysfunctional Motion Segments in the Cervical Spine. Journal of Chiropractic Education. Proceedings, Association of Chiropractic Colleges and Research Agenda Conference, Las Vegas. 2009
5. Wiegand R, Costantino S, Zhang Q, Kettner NW. Paraspinal surface electromyography of an adolescent idiopathic scoliosis patient during a novel multi-factorial treatment regimen.

- Journal of Chiropractic Education. Proceedings, Association of Chiropractic Colleges and Research Agenda Conference, Los Vegas. 2004
6. Wiegand R, Kettner NW, Brahee D, Marquina N. Cervical spine geometry correlated to cervical degenerative disease in a symptomatic group. JMPT 2003;26:341-6.
 7. Wiegand R, Pfeifer M. Inter and Intra-reliability measurements of Electromagnetic Grids. Journal of Chiropractic Education, Proceedings, Association of Chiropractic Colleges and Research Agenda Conference, New Orleans. 2003
 8. Wiegand R. Logan Basic Methods and Low Force Adjusting. Journal of Chiropractic Education, Proceedings, Association of Chiropractic Colleges and Research Agenda Conference, New Orleans. 2003
 9. Wiegand R. A Computer-aided Spinal Displacement Model of the Neutral Lateral Cervical Curve to Determine Average and Optimum Geometry. Journal of Chiropractic Education, Proceedings, Association of Chiropractic Colleges and Research Agenda Conference, New Orleans. 2003
 10. Wiegand R, Wilke S. Graphical Analysis and Frequency Distribution of Dysfunctional Motion Segments of the Cervical Spine in the Sagittal Plane. Proceedings, World Federation of Chiropractic, Orlando, FL.2003
 11. Wiegand, R. A Computer-aided Spinal Displacement Model of the Neutral Lateral Cervical Curve to Determine Average and Optimum Geometry. World Federation of Chiropractic, Orlando, FL.2003
 12. Wiegand R, Pfeifer M. Lateral Cervical Geometry of Incoming Chiropractic Students. Proceedings of the International Conference on Spinal Manipulation, Toronto. 2002
 13. Wiegand R, Zhang, J. Segmental Flexion Reserve in Side Posture Pelvic Set-up. Proceedings of the ACC/RACVII, New Orleans 2002. Accepted for winter publication JNMS
 14. Wiegand, R. Analysis of Chiropractic Adjusting to Effect Improved Sagittal Plane Spinal Geometry, Gravitational Loading, Cervical Dynamic Function and Patient Subjective Complaints. Proceedings of the ACC/RACVII, New Orleans 2002.
 15. Wiegand R, Zhang, J. Segmental Flexion Reserve in Side Posture Pelvic Set-up. Proceedings of the ACC/RACVII, New Orleans 2002. The Journal of Chiropractic Education. Vol 11, number 1: 2002. Accepted for publication JNMS.
 16. Wiegand R. Review of Chiropractic Effectiveness Through A Retrospective Study of Patient Subjective Progress Reports. Journal of Chiropractic Case Reports. Vol.1, Num 1. Jan.1993.
 17. Wiegand R. Your Clinical Trial. Journal of Chiropractic Case Reports. Vol.2, Num 1 1993.

18. Wiegand R, Wilke ST. Spinal Modeling Identifies Predictable Configuration Patterns in the Frontal Plane Resulting from X-ray Distortion, Patient Position, and Postural Adaptation. The Journal of Chiropractic Education. Vol 13, number 1: 1999.
19. Wiegand R, Wilke ST. Graphical Analysis and Frequency Distribution of Dysfunctional Motion Segments of the Cervical Spine in the Sagittal Plane. The Journal of Chiropractic Education. Vol 13, number 1: 1999.

BOOKS PUBLISHED

Wiegand R. Spinal Biomechanics: Graphical Pattern Analysis of Vertebral Body Rotation. Spinal Corrective Research, Inc. 1989 - present

Wiegand, R. Spinal Analysis and Clinical Research Systems. Spinal Corrective Research, Inc. 1992-present.

SOFTWARE COPYRIGHTS

Wiegand, R. Spinal Analysis System. 1991- present. Integrated package of x-ray digitizing, geometric measurements, stress analyses, data base operations, statistical analysis and report generation for patient management consideration. Software calculates geometric variables for baseline studies by performing in excess of 500 singular measurements with quantitative analyses.

Wiegand, R. Vertebral Body Rotational Analysis. 1991-present. Quantitative measurement and analysis of the spinal pelvic system describing normal compensation and physical findings.

PATENTS

U.S. Patent # 5,582,186 Spinal Analysis System. This software program records the architecture, alignment and function of the human spine and pelvis. It provides a comprehensive graphical and statistical analysis algorithm for determining correction of biomechanical deficiencies of the human spinal pelvic system

PROFESSIONAL AFFILIATIONS

Missouri Chiropractic Association	2003 - present
International Chiropractic Association.	1985 - present
Massachusetts Chiropractic Association.	1985 - 1994
Middlesex Chiropractic Association.	1985 - 1994
We Care Chiropractic and Research	1986 - 1994

PROFESSIONAL CONSULTATIONS

Structural and functional radiographic analysis of the spine. Radiographic review providing potential impairment ratings and treatment recommendations to chiropractors and pain

management doctors. US and International. 1990-present

SELECTIVE ORGANIZATIONAL ACTIVITIES

Missouri State Chiropractic Association. Continuing education. 2003-present.

China Continuing Education. Guangzhou Traditional Medical College. Continuing education. 2004-present.

Massachusetts Chiropractic Association 1985 -1994

Logan College of Chiropractic. Select classroom and seminar presentations. Two to four presentations per year. 1987 to present.