*CURRICULUM VITAE*

**AMIR H. FAYYAZI, M.D.**

**PERSONAL DATA**

**ADDRESS:** OAA Orthopaedic Specialists

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**EDUCATIONAL BACKGROUND**

McDonogh School

Owings Mills, Maryland

September 1987 - June 1990

Johns Hopkins University

Bachelor of Science, Biomedical Engineering

Baltimore, Maryland

September 1990 - May 1994

Washington University School of Medicine

Doctor of Medicine

St. Louis, Missouri

August 1994 - May 1998

**PROFESSIONAL TRAINING**

**INTERNSHIP:** General Surgery, July 1, 1998 – June 30, 1999

The Milton S. Hershey Medical Center

Hershey, Pennsylvania

**RESIDENCY:** Orthopaedic Surgery, July 1, 1999 – June 30, 2003

The Milton S. Hershey Medical Center

Hershey, Pennsylvania

**FELLOWSHIP:** Spine Surgery, August 1, 2003 – July 31, 2004

Rush-Presbyterian, St. Luke Medical Center

Chicago, Illinois

**HONORS AND AWARDS**

Johns Hopkins University:

National Science Foundation Summer Fellowship, 1991

Provost’s Award for Research Excellence, 1992

Biomedical Engineering Undergraduate Research Award, 1993

Tau Beta Pi (Engineering Honor Society), 1993-1994

The Milton S. Hershey Medical Center:

Bristol-Myers Squibb Scholar of Surgery Award, 1999

Pennsylvania Ortho. Assoc. Resident Research Award, 2002

Vernon Nickel Award, Orthopaedic Rehabilitation Assoc., 2002

VSAS Orthopaedics

Patients Choice Award, 2011

**CERTIFICATION**

Board Certified in Orthopaedic Surgery, July 2006

Recertified in Orthopaedic Surgery, 2015

American Board of Orthopaedic Surgeons (ABOS)

**LICENSURE**

**LICENSES:** Commonwealth of Pennsylvania, Department of State

Medical Physician and Surgeon – Active

Illinois Department of Professional Regulation

Physician and Surgeon – Inactive

New York State Educational Department

Physician – Inactive

**PROFESSIONAL MEMBERSHIPS**

*Cervical Spine Research Society (CSRS)*

*American Academy of Orthopaedic Surgery (AAOS)*

*North American Spine Society (NASS)*

*International Society for Advancement of Spine Surgery*

*(Formerly, Spine Arthroplasty Society)*

**JOURNAL REVIEWER**

*International Journal of Spine Surgery*

*Spine Journal*

**EMPLOYMENT**

9/1/2004-8/1/2007

Assistant Professor, Institute for Spine Care

Orthopedic and Neurological Surgery

Department of Orthopedic Surgery

550 Harrison Street

Syracuse, New York 13202-3072

8/1/2007-11/10/14

VSAS Orthopaedics

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**HOSPITAL PRIVILEGES**

Lehigh Valley Hospital

1200 S. Cedar Crest Blvd

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(610) 402-8000

Easton Hospital,

250 S. 21st Street

Easton, PA 18042

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St. Luke’s Hospital, Allentown Campus

1837 W Linden St.

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Coordinated Heath System

1503 N. Cedar Crest Blvd.

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(610) 861-8080

Surgical Center of Allentown

250 Cetronia Rd #300

Allentown, PA 18104

(484) 223-2880

**PUBLICATIONS (Peer-Reviewed)**

1. **Fayazi, A.H.**, Lapidot, S.A., Huang, B.K., Tucker, R.W., Phair, R.D.: Resolution of the Basal Plasma Membrane Calcium Flux in Vascular Smooth Muscle Cells. *American Journal of Physiology* 270: H1972-H1978, 1996.
2. Lapidot, S.A., Huang, B.K., Russek, L.N., Brooks, A.E., **Fayazi, A.H.**, Phair, R.D.: Mechanisms for Ca Signaling in Vascular Smooth Muscle: Resolved from 45Ca Uptake and Efflux Experiments. *Cell Calcium* 19: 167-184, 1996.
3. **Fayazi, A.H.**, Phair, R.D.: Calcium Release by the InsP3 Receptor is Incremental, not Quantal. *Circulation* 90: I37, 1994.
4. Phair, R.D., **Fayazi, A.H.**: A Three-State Ion Channel Model for Quantal Ca2+ Release by the Inositol Trisphosphate Receptor. *Biophysical Journal* 68: A122, 1995.
5. Silva, M.J., Hollstien, S.B., **Fayazi, A.H.**, Adler, P., Gelberman, R.H., and Boyer, Martin I.: The Effects of Multiple-Strand Suture Techniques on the Tensile Properties of Repair of the Flexor Digitorum Profundus Tendon to Bone. *The Journal of Bone and Joint Surgery* 80A(10): 1507-1514, October 1998.
6. **Fayazi, A.H.**, Reid, J.S., and Juliano, P.J.: Percutaneous Pinning of Talar Neck Fractures. *American Journal of Orthopaedics*. 31(2): 76-78, February 2002.
7. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction. *Foot and Ankle International*. 23(12): 1107-1111, December 2002.
8. **Fayyazi, A.H.**, Ludwig, S.C., Dabbah, M., Butler, R.B. and Gelb, D.E.: Preliminary Results of staged anterior debridement and reconstruction using titanium mesh cages in the treatment of thoracolumbar osteomyelitis. *The Spine Journal*. 4(4): 388-395
9. **Fayyazi, A.H.**, Hugate, R.R., Pennypacker, J.L., Gelb, D.E., and Ludwig, S.C.: Accuracy of Computed Tomography in Assessing Thoracic Pedicle Screw Malposition. *Journal of Spinal Disorder and Technique*. 17(5): 367-371, October 2004
10. **Fayyazi, A.H.** and Segal, L.S.: Surgical Excision of Symptomatic Lumbar Spinous Process Pseudoarthrosis. *Journal of Spinal Disorder and Technique*. 17(5): 439-441, October 2004
11. Ordway, N.R., Zhang, X., Cheng, C.C., Lu, Y.M., Fang, H., & **Fayyazi, A.H.**: Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density. *European Spine Journal.* 16(12): 2104-9, August 22, 2007

**PUBLICATIONS (Peer-Reviewed, continued)**

1. Cheng, C.C., Ordway, N.R., Zhang, X., Lu, Y.M., Fang, H., & **Fayyazi, A.H.**: Loss of Cervical Endplate Integrity Following Minimal Surface Preparation. *Spine. 32(17):1852-1855, August 2007*
2. Zhang, X., Ordway, N.R., Tan, R., Rim, B.C., Fang, H., & **Fayyazi, A.H.**: Correlation of CT Measured Bone Density and Cervical Disc Bone-Endplate Strength and Stress. *Journal of Disorder and Techniques. 21(6):400-405, August 2008*
3. Ordway, N.R., **Fayyazi, A.H.**, Abjornson, C., Calabrese, J., Park, S.A., Fredrickson, B.E., Yonemura, K., & Yuan, H.A.: Twelve Month Follow-up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement Using Radiostereometric Analysis. *Spine Arthroplasty Society Journal 2:9-15, Winter 2008*
4. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., & Yuan, H.A.: Measurement of Paradoxical and Coupling Motions Following Lumbar Total Disc Replacement. *Spine Arthroplasty Society. 2:137–139, Summer 2008*
5. Park, S.A., **Fayyazi, A.H.**, Ordway, N.R., Sun, M.H., Fredrickson, B.E., & Yuan, H.A.: Correlation of Radiostereometric Measured Cervical Range of Motion with Radiographic Finding Following Anterior Cervical Discectomy and Fusion. *Spine. 34(7):680-6, April 1, 2009*
6. **Fayyazi, A.H.**, Ordway, N.R., Park, S.A., Yonemura, K., Fredrickson, B.E., & Yuan, H.A.: Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis. *Journal of Spinal Disorder and Technique, January 2010*
7. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., & Yuan, H.A.: Comparison of Cobb Technique, Quantitative Motion Analysis, and Radiostereometric Analysis in Measurement of Segmental Range of Motions Following Lumbar Total Disc Arthroplasty. *Journal of Spinal Disorder and Technique. 22(8):602-9, December 2008*
8. Hussain, M., Natarajan, R., **Fayyazi, A.H.**, Braaksma, B.R., Anderson, G.B., & An, H.S.: Screw angulation affects bone-screw stresses and bone graft load-sharing in anterior cervical corpectomy fusion with a rigid screw-plate construct: a finite element model study. *Spine Journal. 9(12):1016-23, December 2009*
9. Ordway, N.R., Rim, B.C., Tan, R., Hickman, R., & **Fayyazi, A.H.**: Anterior Cervical Interbody Constructs: Effect of a Repetitive Compressive Force on the Endplate. *Journal of Orthopaedic Research. 30(4):587-92, October 2011*
10. Rodrigues, D.C., Ordway, N.R., Ma, C., **Fayyazi, A.H.**, & Hasenwinkel, J.H.: An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements in Vertebroplasty. *Spine Journal 11(5):432-9, May 2011*

**PUBLICATIONS (Peer-Reviewed, continued)**

1. Park, S., **Fayyazi, A.H.**, Ordway, N.R., Yonemura, K.S., Fredrickson, B.E., & Yuan, H.A.: In Vivo Kinematics Using Radiostereometric Analysis for Dynamic Lumbar Stabilization in Comparison with Lumbar Discectomy and Posterior Lumbar Fusion. *The International Journal of Spine* *6(1), 87–92, December 2012*
2. **Fayyazi, A.H.**, Taormina, J., Svach, D., Stein, J., & Ordway, N.R.: Assessment of Magnetic Resonance Imaging Artifact Following Cervical Total Disc Arthroplasty.  *International Journal od Spine Surgery 9(30), July 2015*
3. Lavelle, W.F, Ordway, N.R., Araghi, A., Buckley, R.A., **Fayyazi, A.H.**: An In Vitro Study Examining a Novel Suction Curette Device for Lumbar Discectomy Compared to Standard Manual Discectomy. *J Neurosurg Spine 26(4), April 2017*
4. **Fayyazi, A.H.**, Tan, R., Rim, B.C., Hickman, R., & Ordway, N.R.: Biomechanical Evaluation of Endplate Preparation and Fatigue on the Implant-Bone Interface Following Prodisc-C Total Disc Replacement. *In Preparation for Journal of Orthopaedic Research*

**PUBLICATIONS (Invited)**

1. **Fayyazi, A.H.**, Gelb, D.E., and Ludwig, S.C.: Thoracic Pedicle Screw Instrumentation. *Current Opinion in Orthopaedics*. 13(3): 200-206, June 2002.
2. **Fayyazi, A.H.**, Gelb, D.E., and Ludwig, S.C.: Thoracic Pedicle Screw Instrumentation. *Contemporary Spine Surgery*. 3(12): 89-95, December 2002.
3. Philip S. Yuan, Alexander R. Vaccaro, Stephen J. Timon, and **Fayyazi, A.H.**, Cervical disc degeneration becomes higher priority in light of aging population. *Orthopaedic Today.* 27:30, 2007

**BOOK CHAPTERS**

1. **Fayazi, A.H.**,Juliano, P.J.: "Percutaneous Pinning of Talus Fractures". In Lippert FG III, and Hansen S.T. (Eds.), *Foot and Ankle Disorders: Tricks of the Trade,* Thieme Medical and Scientific Publishers, New York, NY, May 2003.
2. **Fayyazi, A.H.**, An, H.S.: “Optima Spinal Fixation System: Instrumentation Technique”. In Kim DH, Vaccaro AR, and Fessler RG (Eds.), *Spinal Instrumentation, Surgical Techniques*, Thieme Medical Publishers, New York, NY, May 2005.
3. **Fayyazi,** **A.H.**, Biyani, A., An, H.S.: “Laminoplasty Techniques”. In Kim DH, Henn J, Vaccaro AR, and Dickman C (Eds.), *Surgical Anatomy and Techniques to the Spine*, Elsevier, Philadelphia, PA, November 2005.
4. **Fayyazi,** **A.H.**, Phillips, F.: “Kyphoplasty”. In Slipman CW, Derby R, Simeone FA, and Mayer TG (Eds.), *Interventional Spine: An Alogorithmic Approach,* Saunders, London, UK, February 2007
5. **Fayyazi, A.H.**, An, H.S.: “Anterior / Posterior Cervical Instrumentation”. In Jenis LG and An HS (Eds.), *Spine Surgery Complications: Treatment and Prevention,* Lippincott Williams & Wilkins, New York, NY, November 2005
6. Faizan, A., Ordway, N.R., Goel, V.K., **Fayyazi, A.H.**, and Yuan, H.,: “Biomechanics of Spinal Instrumentation: Application for Trauma”. In Zigler, J.E., Eismont, F.J., Garfin, S.R., and Vaccaro, A.R. (Eds), *Spine Trauma (2nd Edition)*, American Academy of Orthopaedic Surgeons, Rosemont, IL 2011
7. **Fayyazi, A.H.**, Yuan, H.: “Nucleoplasty”. In Vaccaro, AR, Papadopoulos, S, Traynelis, V, Haid, R. Jr., and Sasso, R (Eds.), *Spine Arthroplasty: The Preservation of Motion*, Elsevier, Philadelphia, PA, January 2007

**PRESENTATIONS**

1. **Fayazi, A.H.**, Reid, J.S., and Juliano, P.J.: "Percutaneous Pinning of Talar Neck Fractures: Technical Pearls". Society of Military Orthopaedic Surgeons, December 2000 (San Antonio, Texas), Poster
2. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Orthopaedic Association Resident Meeting, March 2001 (Hershey, Pennsylvania), Podium Presentation
3. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Orthopaedic Foot and Ankle Society, July 2001 (San Diego, California), Podium Presentation
4. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: "Thoracolumbar Osteomyelitis Treated with Staged Anterior Debridement and Reconstruction Using Titanium Cages Followed by Delayed Posterior Spinal Fusion: Preliminary Results". International Meeting on Advanced Spine Techniques, July 2001 (Nassau, Bahamas), Podium Presentation
5. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: "Thoracolumbar Osteomyelitis Treated with Staged Anterior Debridement and Reconstruction Using Titanium Cages Followed by Delayed Posterior Spinal Fusion: Preliminary Result". Eastern Orthopaedic Association, October 2001 (Bermuda), Podium Presentation
6. **Fayazi,** **A.H.**, Hugate, R.R., Gelb, D.E., Pennypacker, J., and Ludwig, S.C.: "A Comparison of Three Methods of Thoracic Pedicle Screw Placement". Eastern Orthopaedic Association, October 2001 (Bermuda), Podium Presentation
7. **Fayazi, A.H.**, Ludwig, S.C., and Gelb, D.E.: “Staged Anterior Debridement and Reconstruction Using Titanium Mesh Cages in Treatment of Thoracolumbar Osteomyelitis: Preliminary Result”. American Orthopaedic Association Resident Meeting, April 2002 (Memphis, Tennessee), Podium Presentation
8. **Fayazi, A.H.**, Hugate, R.R., Pennypacker, J., Gelb, D.G., and Ludwig, S.C.: “Placement of Pedicle Screws in the Thoracic Spine: Comparative Accuracy of Three Techniques”. American Orthopaedic Association Resident Meeting, April 2002 (Memphis, Tennessee), Podium Presentation
9. **Fayazi, A.H.**, Ludwig, S.C., Hugate, R., Pennypacker, J., Wallach, D.M., and Gelb, D.E.: “Accuracy of Computed Tomography in Assessment of Thoracic Pedicle Screw Position”. International Meeting on Advanced Spine Techniques, July 2002 (Switzerland), Podium Presentation

**PRESENTATIONS (continued)**

1. **Fayazi, A.H.**, Hugate, R., Pennypacker, J., Ludwig, S.C., and Gelb, D.E.: “Placement of Pedicle Screws in the Thoracic Spine: Comparative Accuracy of Three Techniques”. International Meeting on Advanced Spine Techniques, July 2002 (Switzerland), E-Poster.
2. **Fayazi, A.H.**, Hugate, R.R., Pennypacker, J., Gelb, D.E., and Ludwig, S.C.: “Accuracy of Computed Tomography in Assessment of Thoracic Pedicle Screw Position”. North American Spine Society, October 2002 (Montreal, Canada), Podium Presentation
3. **Fayazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". Annual Meeting of Pennsylvania Orthopaedic Society, November 2002 (Philadelphia, Pennsylvania), Podium Presentation – Second Place, Resident Research Award.
4. **Fayyazi, A.H.**, Nguyen, H.A., and Juliano, P.J.: "Intermediate Term Follow Up of Calcaneal Osteotomy and Flexor Digitorum Longus Transfer for Treatment of Posterior Tibial Tendon Dysfunction". American Association of Orthopaedic Surgeons, Specialty Day, March 2004 (San Francisco, California), Podium Presentation – Vernon Nickel Award
5. **Fayyazi**, **A.H.**, Hussain, M., Natarajan, R., Phillips, F., & An, H.S.: “Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study”. Second Annual Depuy Spine Fellows Course, June 2004 (Boston, Massachusetts), Podium Presentation – Best Basic Science Paper
6. **Fayyazi, A.H.,** Hussain M., Natarajan, R., Phillips, F, and An, H.S.: “Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study”. IMAST, July 2005 (Banff, Alberta, Canada), E-Poster.
7. **Fayyazi, A.H.,** Hussain M., Natarajan, R., Phillips, F, and An, H.S.: "Effect of Screw Angulation on the Bone Graft Load Sharing and Bone-Screw Stresses in Anterior Cervical Corpectomy Fusion with Rigid Plate Screw Construct: A Finite-Element Model Study", World Spine III, August 2005 (Rio de Janeiro, Brazil), Podium Presentation
8. **Fayyazi, A.H.,** Hussain M., Natarajan, R., Phillips, F., and An, H.S.: "Effect of Graft-Endplate Contact Surface Morphology on the Biomechanics of Anterior Cervical Corpectomy Fusion and Rigid Plating: A Finite-Element Model Study", World Spine III, August 2005 (Rio de Janeiro, Brazil), Podium Presentation

**PRESENTATIONS (continued)**

1. Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., Ordway, N.R., **Fayyazi, A.H.**: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Cervical Spine Research Society, December 2005 (San Diego, California), Podium Presentation
2. Cheng, C.C., Lu, Y.M., Fang, H., Zhang, X., Ordway, N.R., **Fayyazi, A.H.**: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Cervical Spine Research Society, December 2005 (San Diego, California), Podium Presentation
3. Ordway, N.R., Cheng, C.C., Lu, Y.M., Fang, H., Zhang, X., **Fayyazi, A.H.**: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Orthopaedic Research Society, March 2006 (Chicago, Illinois), Poster
4. **Fayyazi, A.H.**, Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., and Ordway, N.R.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Orthopaedic Research Society, March 2006 (Chicago, Illinois), Poster
5. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., Zhang, X., Bisen, V.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Podium Presentation
6. **Fayyazi, A.H**., Ordway, N.R., Cheng, C.C., Lu, Y.M.., Fang, H., Zhang, X., Bisen, V.: “Loss of Endplate Integrity Following Minimal Surface Preparation”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Podium Presentation
7. Ordway, N.R., Fredrickson, B.E., Yonemura, K., **Fayyazi, A.H.**, and Yuan, H.A.: “Eighteen Month Follow-up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement Using Radiostereometric Analysis”, Spine Arthroplasty Society, May 2006 (Montreal, Canada), Poster
8. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., Yonemura, K., and Yuan, H.A.: “Eighteen Month Follow-Up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement using Radiostereometric Analysis”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster
9. **Fayyazi, A.H.**, Ordway, N.R., Zhang, X., Rim, B., Tan, R., and Abjornson, C.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster

**PRESENTATIONS (continued)**

1. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., and Yuan, H.A.: “Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster
2. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., and Yuan, H.A.: “Radiostereometric Analysis Comparing a Variable Angle Locking and a Dynamic Cervical Plate”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster
3. **Fayyazi, A.H.**, Ordway, N.R., Zhang, X., Rim, B., Cheng, C.C., and Tan, R.: “Correlation of CT Measured Bone Density and Prodisc-C-Bone Endplate Strength and Stress”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster
4. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., and Zhang, X.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, International Meeting of Advanced Spine Techniques, July 2006 (Athens, Greece), E-Poster
5. **Fayyazi, A.H**., Ordway, N.R., Cheng, C.C., Lu, Y.M.., Fang, H., and Zhang, X: “Loss of Endplate Integrity Following Minimal Surface Preparation”, International Meeting of Advanced Spine Techniques, July, 2006 (Athens, Greece), E-Poster
6. Hussain, M., **Fayyazi, A.H.**, Natarajan, R.N., Andersson, G.B., and An, H.S.: “Effect of Uni- And Bi-Cortical Screw Angulation on the Stability of Multi-Level Corpectomy Construct – A Finite Element Model Study”, Annual Meeting of American Society of Biomechanics, September 2006 (Blacksburg, Virginia), Podium Presentation
7. **Fayyazi, A.H.**, Ordway, N.R., Lu, Y.M., Cheng, C.C., Fang, H., and Zhang, X.: “Correlation of Cervical Endplate Strength with CT Measured Subchondral Bone Density”, Scoliosis Research Society, September 2006 (Monterey, California), Poster
8. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., Yonemura, K., and Yuan, H.A.: “Eighteen Month Follow-Up of Lumbar Spine Range of Motion Following Intervertebral Disc Replacement using Radiostereometric Analysis”, North American Spine Society, September 2006 (Seattle, Washington), Poster
9. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., and Tan, R.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, Cervical Spine Research Society, November 2006 (Palm Beach, Florida), Poster

**PRESENTATIONS (continued)**

1. Rim, B.C., Tan, R., Hickman, R.H., **Fayyazi, A.H.**, & Ordway, N.R.: “Influence of the Cortical Shell and the Trabecular Bone Mineral Density on The Stiffness of the Cervical Endplate”, Orthopaedic Research Society, February 2007 (San Diego, California), Poster
2. **Fayyazi, A.H.**, Ordway, N.R., Calabrese, J., Fredrickson, B.E., and Yuan, H.A.: “Six Month Follow-Up Comparing a Variable Angle Locking and a Dynamic Cervical Plate Using Radiostereometric Analysis”, Orthopaedic Research Society, February 2007 (San Diego, California), Poster
3. **Fayyazi, A.H.**, Ordway, N.R., Rim, B.C., and Tan, R.: “Evaluation of Magnetic Resonance Imaging Techniques for Reduction of Artifact Surrounding Cervical Total Disc Arthroplasty”, Spine Arthroplasty Society, May 2007 (Berlin, Germany), Poster
4. Ordway, N.R., **Fayyaz**i, **A.H.**, Rim, B.C., Tan, R., Hickman, R.: “Correlation of Prodisc-C Failure Strength with Bone Mineral Content and Endplate Strength”, Spine Arthroplasty Society, May 2007 (Berlin, Germany), Poster
5. Ordway, N.R., **Fayyaz**i, **A.H.**, Rim, B.C., Tan, R., Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Spine Arthroplasty Society, May 2007 (Berlin, Germany), Poster
6. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**: “Intervertebral Kinematics following Lumbar Discectomy: Preliminary Study of 1-year follow-up”, International Meeting of Advanced Spine Technique, July 2007 (Nassau, Bahamas), E-Poster
7. Ordway, N.R., **Fayyaz**i, **A.H.**, Rim, B.C., Tan, R., Hickman, R.: “Biomechanical Analysis of Anterior Cervical Implant Subsidence with Repetitive Compressive Force”, International Meeting of Advanced Spine Technique, July 2007 (Nassau, Bahamas), E-Poster
8. Ordway, N.R., **Fayyaz**i, **A.H.**, Rim, B.C., Tan, R., Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, International Meeting of Advanced Spine Technique, July 2007 (Nassau, Bahamas), E-Poster
9. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., & Yuan, H.A.: “In Vivo Biomechanical Evaluation of Third Generation Anterior Cervical Plate: A Radiostereometric Analysis”, World Spine, August 2007 (Istanbul, Turkey), Podium Presentation

**PRESENTATIONS (continued)**

1. **Fayyazi, A.H.**, Ordway, N.R., Fredrickson, B.E., & Yuan, H.A.: “Radiostereometric Analysis of Postoperative Motion Following Application of Dynesys Dynamic Posterior Stabilization System for Treatment of Degenerative Spondylolisthesis”, World Spine, August 2007 (Istanbul, Turkey), E-Poster
2. **Fayyaz**i, **A.H.**, Ordway, N.R., Rim, B.C., Tan, R., & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, World Spine, August 2007 (Istanbul, Turkey), Podium Presentation
3. Park, S.A., Ordway, N.R., Calabrese, J, Yuan, H.A. & **Fayyazi, A.H.:** "Can Intervertebral Kinematics Predict Clinical Outcome of Lumbar Discectomy?", American society of Biomechanics, August 2007 (Stanford University), Poster
4. Park, S.A., Ordway, N.R., Yuan, H.A., Fredrickson, B.E., Sun, M., **Fayyazi, A.H.**: "Accuracy of Radiographic Intervertebral Kinematics as a Determinant of Lumbar Fusion", American society of Biomechanics, August 2007 (Stanford University), Poster
5. **Fayyazi, A.H.**, Park, S.A., Ordway, N.R., Fredrickson, B.E., Yuan, H.A.: “In Vivo Biomechanical Evaluation of Third Generation Anterior Cervical Plate: A Radiostereometric Analysis”, Cervical Spine Research Society, November 2007 (San Francisco, California), Poster
6. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R, & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Cervical Spine Research Society, November 2007 (San Francisco, California), Poster
7. Park, S.A., Ordway, N.R., Fredrickson, B.E., Yuan, H.A., Sun, M.H., & **Fayyazi, A.H.**; “Segmental Micro-kinematics of Plated Two-Level Anterior Cervical Discectomy and Fusion: Effects of Time, Level and Grade of Fusion”, Cervical Spine Research Society, November 2007 (San Francisco, California), Poster
8. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., and Yuan, H.A.; **“**Measurement of Paradoxical and Coupling Motions following Lumbar Total Disc Replacement”, Asia-Pacific Spine Arthroplasty Society, January 2008 (Seoul, Korea), Podium Presentation
9. Park, S.A., Ordway, N.R., **Fayyazi, A.H.**, Fredrickson, B.E., and Yuan, H.A.;“In Vivo Kinematics Using Radiostereometric Analysis for Dynamic Lumbar Stabilization in Comparison with Lumbar Discectomy and Posterior Lumbar Fusion”, Asia-Pacific Spine Arthroplasty Society, January 2008 (Seoul, Korea), Podium Presentation

**PRESENTATIONS (continued)**

1. Ordway, N.R., Park, S.A., Fredrickson, B.E., Yuan, H.A., **Fayyazi, A.H.**; “In Vivo Kinematics Following Dynamic Lumbar Stabilization”: A Comparison to Lumbar Discectomy and Posterior Lumbar Fusion”, Orthopaedic Research Society, Marc, 2008 (San Francisco, California), Poster
2. Ordway, N.R., **Fayyazi, A.H.**, Rim, B.C., Tan, R., Hickman, R.; “Biomechanical Analysis of Anterior Cervical Implant Subsidence with Repetitive Compressive Force”: A Comparison to Lumbar Discectomy and Posterior Lumbar Fusion”, Orthopaedic Research Society, March 2008 (San Francisco, California), Poster
3. Ordway, N.R., Tan, R., Rim, B.C., Hickman, R.,Allen, M.J., **Fayyazi, A.H.**; “The Effect of Endplate Preparation and Fatigue on the Implant-Bone Interface of a Prodisc-C Total Disc Replacement”, Orthopaedic Research Society, March 2008 (San Francisco, California), Podium Presentation
4. Park, S.A., **Fayyazi A.H.**, Ordway N.R., Fredrickson B.E., Yuan H.A.; “Assessment of Motion Quality Following Lumbar Total Disc Arthroplasty and Lumbar Discectomy”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Podium Presentation
5. Park, S.A., Ordway N.R., **Fayyazi A.H.**, Fredrickson B.E., Yuan H.A.; “Assessment of Lumbar Segmental Range of Motion Following Dynamic Stabilization in Comparison to Lumbar Discectomy and to Posterior Fusion with Pedicle Instrumentation”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Podium Presentation
6. Park, S.A., Ordway N.R., **Fayyazi A.H.**, Fredrickson B.E., Yuan H.A.; “Comparison of Cobb Technique and Radiostereometric Analysis in Measurement of Segmental Range of Motions Following Lumbar Total Disc Arthroplasty”, Spine Arthroplasty Society, May 2008 (Miami, Florida), Poster
7. **Fayyaz**i, **A.H.**, Ordway, N.R., Rim, B.C., Tan, R., & Hickman, R.: “The Effect of Endplate Preparation and Fatigue on the Cervical Total Disc Implant-Bone Interface”, North American Spine Society, October 2008 (Toronto, Canada), E-Poster
8. **Fayyaz**i, **A.H.**, Svach D., Hanson S., Chen J., Taoramina J, & Ordway, N.R.; “Evaluation of the Quantity and the Quality of MRI Artifact Following Cervical Total Disc Arthroplasty”, NASS Spring Break, April 2009 (Puerto Rico), Podium Presentation
9. Sun, M., Ordway, N.R., **Fayyazi, A.H.**, Yuan, H.A., Fredrickson, B.E.; “Radiostereometric Range of Motion Analysis of Prodisc Lumbar Arthroplasty at Two Year Follow-Up”, North American Spine Society, November 2009 (San Francisco, California), E-Poster

**PRESENTATIONS (continued)**

1. **Fayyazi, A.H.**, Svach, D., Hanson, S., Chen, J., Taormina, J, & Ordway, N.R., “Improved Assessment of MRI Artifact Following Cervical Total Disc Arthroplasty”, Cervical Spine Research Society, December 2009 (Salt Lake City, Utah). Podium Presentation
2. Rodrigues, D., Ma, C., Ordway, N.R., Schroeder, A, Miller, M, **Fayyazi, A.H.**, & Hasenwinkel, J.M., “An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements Containing Cross-linked Poly(methyl methacrylate) Particles in Vertebroplasty”, Orthopaedic Research Society, March 2010 (New Orleans, Louisiana). Poster
3. **Fayyazi, A.H.**, Svach, D., Hanson, S., Chen, J., Taormina, J, & Ordway, N.R., “Improved Assessment of MRI Artifact Following Cervical Total Disc Arthroplasty”, Spine Arthroplasty Society, April 2010 (New Orleans, Louisiana). Oral Poster Presentation
4. Rodrigues, D., Ma, C., Ordway, N.R., Schroeder, A, Miller, M, **Fayyazi, A.H.**, & Hasenwinkel, J.M., “An Ex Vivo Exothermal and Mechanical Evaluation of Two-solution Bone Cements Containing Cross-linked PMMA Particles in Vertebroplasty”, Spine Arthroplasty Society, April 2010 (New Orleans, Louisiana). Poster Presentation
5. **Fayyazi, A.H.**, Buckley, R, Lorio, M., Yuan, P., DeVine, J.G., & Smith, K.K., “Evaluation of Radiographic and Patient Outcomes Following Lumbar Spine Fusion Using Demineralized Bone Matrix (DBM) Mixed with Autograft”, North American Spine Society, October 2010 (Orlando, Florida). Focused Presentation
6. **Fayyazi, A.H.**, Smith, K.K., Buckley, R, Lorio, M., Yuan, P., & DeVine, J.G., “Comparison of patients undergoing 1- and 2-level Lumbar Fusions Using Demineralized Bone Matrix (Optecure, Exactech Inc.) as a Bone graft extender when compared with Autograft”, International Society for Advancement of Spinal Surgery, April 2011 (Las Vegas, Nevada), Podium Presentation
7. Araghi, A., Buckley, R., **Fayyazi, A.H.**, Lavelle, W.F., & Ordway, N.R., “Novel Suction Curette is Safe, Effective, and Efficient in Discectomy and Endplate Preparation”, Society for Minimally Invasive Spine Surgery, November 2013 (Las Vegas, Nevada), E-Poster
8. Lavelle, W.F, Ordway, N.R., **Fayyazi, A.H.**, Buckley, R., Araghi, A., “Comparison of Suction Curette versus Standard Discectomy in Transformaminal Lumbar Interbody Fusion”, American Association of Orthopaedic Surgeons, March 2014 (New Orleans, LA), Poster

**PRESENTATIONS (continued)**

1. **Fayyazi, A.H.**, Ordway, N.R., Lavelle, W.F., Buckley, R., & Araghi, A., “Safety and Efficacy of a Novel Suction Curette Device When Compared to Standard Discectomy”, International Society for Advancement of Spine Surgery, April-May 2014 (Miami, FL), Oral Poster
2. Ordway, N.R., Lavelle, W.F., Araghi, A., Buckley, R., & **Fayyazi, A.H.**, “A Quantitative Analysis of Lumbar Discectomy Using Two Surgical Techniques During a Simulated TLIF Procedure”

**INVITED SPEAKER**

1. **Fayyazi, A.H.**: “Idiopathic Scoliosis”, Rush Neurosurgery / Orthopaedics Spine Review Course, November 2003 (Chicago, IL)
2. **Fayyazi, A.H.**: “Spine Terminology”, AO North America Nursing Continuing Education, November 12, 2005 (Detroit, MI)
3. **Fayyazi, A.H.**: “Adjacent Level Disease”, Motion Preservation in the Treatment of Cervical Radiculopathy and Myelopathy Course Symposium, World Spine III, August 2005 (Rio de Janeiro, Brazil)
4. **Fayyazi, A.H.**: “Adjacent Level Disease”, Spine Fellows Reunion, August 12, 2005 (Savanah Dhu Lodge, NY)
5. **Fayyazi, A.H.**: “Potential Role of Radiostreometric Analysis(RSA) in Evaluating Spinal Segment Motion”, SUNY Upstate, Ground Rounds, February 8, 2006 (Syracuse, NY)
6. **Fayyazi, A.H.**: “Treatment of Cervical Disk Disease: past, present and future”, NY International Association for Rehabilitation Professionals (IARP), April 6, 2006 (Syracuse, NY)
7. **Fayyazi, A.H.**, Ordway, N.R.: “Radiostereometric Analysis (RSA) in Evaluating Spinal Segment Motion”, Syracuse/Upstate Biomaterials/Biomechanics (SUBB) Group Meeting, April 7, 2006 (Syracuse, NY)
8. **Fayyazi, A.H.**: “Advances in Cervical Spine Treatment”, Health Link, September 7, 2006 (Syracuse, NY)
9. **Fayyazi, A.H.**: “Thoracolumbar Trauma”, New Technologies, Old Complications: The Surgical Treatment of Spinal Disorders, October 26-28, 2006 (Niagara on The Lake, Ontario)

**INVITED SPEAKER (continued)**

1. **Fayyazi, A.H.**: “Cervical Adjacent Segment Disease”, New Technologies, Old Complications: The Surgical Treatment of Spinal Disorders, October 26-28, 2006 (Niagara on The Lake, Ontario)
2. **Fayyazi, A.H.**: “Lumbar Spine Pathologies”, PMR Lecture, March 8, 2007 (Syracuse, NY)
3. **Fayyazi, A.H.**: “Adult Spinal Deformity”, NYC Deformity Meeting, April 27, 2007 (New York, NY)
4. **Fayyazi, A.H.**:“Anatomy Review and Neuromonitoring”, Synthes Spine Lateral Lumbar Approach with Oracle Spacer System, August 22, 2009 (West Chester, PA)
5. **Fayyazi, A.H.**: “Oracle Implantation Technique”, Synthes Spine Lateral Lumbar Approach with Oracle Spacer System, August 22, 2009 (West Chester, PA)
6. **Fayyazi, A.H.**: “RSA Evaluation of Spinal Kinematics”, International Symposium on Clinical and Scientific Research in RSA, October 22-25, 2009 (Cape Breton, Nova Scotia)
7. **Fayyazi, A.H.**: “Oracle Implantation Technique”, Synthes Spine Lateral Lumbar Approach with Oracle Spacer System, April 17, 2010 (Charlotte, NC)
8. **Fayyazi, A.H.**: “Cervical Spine – Anatomy, Terminology, and Radiographic Imaging”, AO North America Nursing Continuing Education, May 15, 2010 (Bethlehem, PA)
9. **Fayyazi, A.H.**: “Cervical Spine – Degenerative Spine, Surgical Approaches, and Non-Fusion Technologies”, AO North America Nursing Continuing Education, May 15, 2010 (Bethlehem, PA)
10. **Fayyazi, A.H.**:“Anatomy Review and Neuromonitoring”, Synthes Spine Lateral Lumbar Approach with Oracle Spacer System, June 26, 2010 (Tampa, FL)
11. **Fayyazi, A.H.**:“Lateral Lumbar Approach”, Synthes Spine Lateral Lumbar Approach with Oracle Spacer System, June 26, 2010 (Charlotte, NC)
12. **Fayyazi, A.H.**: “Innovations in Spine Surgery”, AO North America Nursing Continuing Education, February 6, 2011 (Milwaukee, WI)

1. **Fayyazi, A.H.**: “Treatment of Cervical Degenerative Disc Disease”, Alliance Impairment Annual Meeting, May 12, 2011 (Reading, PA)

**INVITED SPEAKER (continued)**

1. **Fayyazi, A.H.**: “Short-term result of anterior cervical discectomy and fusion”, Titan Incorporated, November 19, 2011 (Miami, FL)
2. **Fayyazi, A.H.**: “Complication Avoidance in MIS Surgery”, DePuy Synthes Spine Future Leaders Workshop: Principles of Minimally Invasive Spine Surgery, March 9, 2013 (Westchester, PA)
3. **Fayyazi, A.H.**: “Why Use the lateral approach to interbody fusion?” DePuy Synthes Spine Future Leaders Workshop: Principles of Minimally Invasive Spine Surgery, March 9, 2013 (Westchester, PA)
4. **Fayyazi, A.H.**: “Anterior Cervical Discectomy and Fusion – Biomechanics”, Advancement in the Surgical Treatment of the Cervical Spine, April 5, 2014, IMSE Spine Meeting (Bethlehem, PA)
5. **Fayyazi, A.H.**: “Adjacent Segment Degeneration”, Advancement in the Surgical Treatment of the Cervical Spine, IMSE Spine Meeting, April 5, 2014 (Bethlehem, PA)
6. **Fayyazi, A.H.**: “Mobi-C Total Disc Arthroplasty”, Local Meeting, October 22, 2014
7. **Fayyazi, A.H.**: “Diagnosis and Treatment of Common Causes of Back Pain”, Orthopaedics for Primary Care, September 12, 2015 (Bethlehem, PA)
8. **Fayyazi, A.H.**: “The Aging Spine”, Orthopaedics for Primary Care, September 12, 2015 (Bethlehem, PA)
9. **Fayyazi, A.H.**: “Treatment of Common Causes of Low Back Pain”, Workers Compensation Meeting, September 24, 2015 (Allentown, PA)
10. **Fayyazi, A.H.**: “Delayed Presentation of Lumbosacral Pseudoarthrosis”, Spine Study Group, May 7, 2016 (Miami, FL)
11. **Fayyazi, A. H.**: “Chronic Low Back Pain: What are the Treatment Options and Supporting Clinical Evidence?”, Nurse Case Manager Course, July 19, 2017 (Allentown, PA)
12. **Fayyazi, A. H.**: “Why My Back Hurt?”, Patient Education Presentation, Lehigh Valley Health Network, September 27, 2017 (Allentown, PA)
13. **Fayyazi, A. H.**: “Cervical Disc Replacements”, Everest Case Management Annual Meeting, April 12, 2018 (Lancaster, PA)
14. **Fayyazi, A. H.**: “Neck Pain”, Lehigh Valley Health Network, April 25, 2018 (Allentown, PA)

**INVITED SPEAKER (continued)**

1. **Fayyazi, A. H.**: “Chronic Low Back Pain: What are the Treatment Options”, Susquehanna Valley Occupational Health Nurses Conference, September 26, 2018 (Wilkes-Barre, PA)

**CLINICAL RESEARCH STUDIES**

**SUNY Upstate Medical University (August 2004 – August 2007)**

1. “Settling Characteristic of Anterior Cervical Plates”: Primary Investigator, Supported by Abbott Spine, SUNY Upstate University
2. “A Single Blind, Multi-Center, Two Armed, Randomized, Prospective Clinical Study Comparing Opte-Cure TM Autograft Extender to Autograft Only in Posterior Lumbar Fusion and Anterior Lumbar Interbody Fusion”: Primary Investigator, Supported by Exactech Inc., SUNY Upstate University
3. “A Prospective Randomized Clinical Investigation of the Cervitech, Inc. Porous Coated Motion Artificial Disk for Stabilization of the Cervical Spine at One Level between C3-4 and C7-T1”: Primary Investigator, Supported by Cervitech Inc., SUNY Upstate University
4. “Use of Radiostereometric Analysis (RSA) for Measuring Spinal Motion Following Lumbar or Cervical Spinal Surgery”, Primary Investigator, Supported by DePuy Spine, SUNY Upstate University
5. “Stabilimax NZ®, Dynamic Spine Stabilization System”, Primary Investigator, Supported by Applied Spinal Technologies Inc., SUNY Upstate University
6. “Comparison of DISCOVER™ Artificial Cervical Disc and ACDF for Treatment of Cervical DDD”, Co-Investigator, Supported by DePuy Spine, SUNY Upstate University

**Lehigh Valley Hospital (August 2007 – December 2010)**

1. “Stabilimax NZ®, Dynamic Spine Stabilization System”, Co-Investigator, Supported by Applied Spinal Technologies Inc., Lehigh Valley Hospital

**BASIC SCIENCE RESEARCH**

**Syracuse University**

1. “Novel Two-Solution Based Bone Cements for Vertebroplasty and Kyphoplasty”, Clinical Co-Investigator, Wallace H. Coulter Foundation, Syracuse University