CURRICULUM VITAE

Joseph Michael Derian 2/12/2022

I. BIOGRAPHICAL INFORMATION

PERSONAL INFORMATION:

University Office: Ostrow School of Dentistry of USC

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Website:

ResearchGate profile: <u>Link</u> Google Scholar profile: <u>Link</u>

Faculty profile: Link

UNIVERSITY EDUCATION:

2013—2016 Doctor of Physical Therapy, University of Southern California, Los

Angeles, CA

2009—2013 B.S. Health and Human Sciences, Minor Business Administration,

Loyola Marymount University, Los Angeles, CA

POSTDOCTORAL TRAINING:

2021—2022 Spine Physical Therapy Fellowship, University of Southern

California, Los Angeles, CA

2016—2017 Orthopedic Physical Therapy Residency, University of Southern

California, Los Angeles, CA

OTHER PREVIOUS EMPLOYMENT:

2017—2020 Staff Physical Therapist. Reiss Physical Therapy, Los Angeles, CA

BOARD CERTIFICATION AND/OR LICENSURE:

Specialty Certification: Board Certified in Orthopaedic Physical Therapy #646354

State Licensure: PT #291847

ACADEMIC APPOINTMENTS:

2020 – Present Instructor of Clinical Physical Therapy

2017 – 2020 Adjunct Instructor of Clinical Physical Therapy

HONORS, AWARDS, FELLOWSHIPS:

2020 Clinician Research Publication Award, California Physical Therapy

Association

2016 Order of the Golden Cane, University of Southern California, Los Angeles,

 $\mathsf{C}\mathsf{A}$

Helen Hislop Scholarship in Support of Vision and Excellence in Physical

Therapy, University of Southern California, Los Angeles, CA

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

2021—Present North American Spine Society

2017—Present American Academy of Orthopaedic Manual Physical Therapists

2016—Present California Orthopaedic Manual Physical Therapy SIG

2013—Present American Physical Therapy Association, Orthopedic Section

II. ADMINISTRATIVE AND SERVICE ACTIVITIES

UNIVERSITY SERVICE:

Division: Primary service role is clinical practice at *Physical Therapy Associates of USC*, HSC Location.

EDITORIAL ACTIVITIES:

Scientific Review for Journal:

2018, 2020 Journal of Applied Biomechanics (2 manuscripts)

2020—2021 Physiotherapy Quarterly (4 manuscripts)

2018 Brazilian Journal of Physical Therapy (1 manuscript)

SERVICE TO PROFESSIONAL ORGANIZATIONS:

2018—Present Secretary/Treasurer, Greater Los Angeles District, California Physical

Therapy Association

2018—2018 Interim Chair, Greater Los Angeles District, California Physical Therapy

Association

OTHER SERVICE ACTIVITIES:

2016—Present Practical Exam Committee, PT521L, University of Southern California,

Los Angeles, CA

2016—Present Medical Station Physical Therapist Supervisor, Finish Line Medical Tent

2, Los Angeles Marathon

III. SCHOLARLY ACTIVITIES

Published Papers in Peer-Reviewed Journals

1. **Derian JM**, Armour Smith J, Wang Y, Lam W, Kulig K. Biomechanical Characteristics of Lumbar Manipulation Performed by Expert, Resident, and Student Physical Therapists. *Musculoskeletal Science and Practice*. 2020.

2. Shoepe TC, Cavedon DK, **Derian JM**, Levy CS, Morales A. The ATLAS project: The effects of a constructionist digital laboratory project on undergraduate laboratory performance. *Anat Sci Educ*. 2014;00. doi:10.1002/ase.1448

Published Papers in Other Journals

 "Ditch the Treatment Table: How to Assess and Treat with Reference and Relative Motion" by Jared Vagy, PT, DPT, OCS, CSCS and **Joseph Derian**, PT, DPT, OCS. Medbridge Blog, December 1st, 2021.

https://www.medbridgeeducation.com/blog/2021/12/ditch-the-treatment-table-how-to-assess-and-treat-with-reference-and-relative-motion/

- Three Common Errors Made By New Climbers, Joseph Derian, https://theclimbingdoctor.com/three-common-errors-made-by-new-climbers/, December 18, 2019
- 3. "Muscle Performance Testing: Create Your Own Dynamometer" by Jared Vagy, PT, DPT, OCS, CSCS and **Joseph Derian**, PT, DPT, OCS. Medbridge Blog, May 29, 2019. https://www.medbridgeeducation.com/blog/2019/05/muscle-performance-testing-create-your-own-dynamometer/

Manuscripts Submitted for Publication

1. Campbell S, **Derian JM**, Hah R, Lantz JM. Identification and Triage of Emergent Spinal Pathology via Telemedicine: A Case Report. *JOSPT Cases*. 2022. In review.

Manuscripts in Preparation

1. Effect of Instruction on Student Performance of Side-Lying Lumbar Manipulation (working title). Goal for submission: June 2022. First author. Corresponding author.

Articles Published in Conference Proceedings

- 1. **Derian JM**, Wang Y, Pham JMS, Kulig K. Can a Speed-Specific Instruction Alter Kinetic Characteristics of a Side-Lying Lumbar Manipulation? APTA Combined Sections Meeting. 2021. POSTER.
- 2. Wang Y, **Derian JM**, Kulig K. Immediate Effects of Speed-Specific Instruction on Practitioner's Pelvic Kinematics During Side-Lying Lumbar Manipulation. APTA Combined Sections Meeting, virtual conference. 2021. POSTER
- 3. **Derian JM**, Wang Y, Pham JMS, Kulig K. Can a Speed-Specific Instruction Alter Kinetic Characteristics of a Side-Lying Lumbar Manipulation? CPTA Annual Conference, Virtual Conference. 2020. POSTER
- 4. Wang Y, **Derian JM**, Kulig K. Immediate Effects of Speed-Specific Instruction on Practitioner's Pelvic Kinematics During Side-Lying Lumbar Manipulation. CPTA Annual Conference, Virtual Meeting. POSTER. 2020
- Derian JM, Pham JMS, Wang Y, Kulig K. Perceived Effects of a Speed-Specific Instruction on Practitioner Performance and Patient Comfort Following Lumbar Manipulation. CPTA Annual Conference, Virtual Meeting. 2020. PLATFORM PRESENTATION
- 6. **Derian JM**, Armour Smith J, Wang Y, Lam W, Kulig K. Biomechanical Characteristics of Lumbar Spine Manipulation in Expert, Resident, and Student Therapists. Combined Sections Meeting of APTA, Washington D.C. 2019. PLATFORM PRESENTATION
- 7. Wang Y, **Derian JM**, Armour Smith J, Dickenson S, Lam W, Kulig K. Operator's Pelvic Kinematics During Lumbar Manipulation: Expert and Novice Comparison. Research day- Ostrow School of Dentistry, Los Angeles, CA. 2018. POSTER.
- 8. Lam W, **Derian JM**, Armour Smith J, Dickenson S, Wang Y, Kulig K. Analyses of Ground Reaction Forces During Lumbar Manipulation. Research day- Ostrow School of Dentistry, Los Angeles, CA. 2018. POSTER.
- 9. **Derian JM**, Armour Smith J, O'Donnell M, Abzug A, Kulig K. Expert and Novice Clinicians Performing Side-lying Lumbar Manipulation: what are the Differences in Movement Dynamics? IFOMPT Conference, Glasgow, Scotland. 2016. POSTER.

- 10. **Derian JM**, O'Donnell M, Armour Smith J, Abzug A, Kulig K, . Ground Reaction Force Profiles During Side-lying Lumbar Manipulation: A Comparison of Expert and Novice Manual Therapists. APTA Combined Sections Meeting, Anaheim, CA. 2016. POSTER.
- 11. O'Donnell M, Armour Smith J, Abzug A, **Derian JM**, Kulig K. How Should We Teach Lumbar Manipulation? A Consensus Study. Combined Sections Meeting of the APTA. 2016. POSTER.
- 12. Shoepe, T.C., Cavedon, D.K., **Derian, J.M.**, Levy, C.S., & Morales, A. The ATLAS Project: Student Preference for iPads and Digital Microscopy Integration in Anatomy and Physiology Laboratory, Paper Presentation to the: Conference Proceedings of the 13th Annual Hawaii International Conference on Education. 2015.
- 13. **Derian, J.M.**, Furie, S., Shoepe, T.C. The Lab Atlas Project: Implementing technology in the anatomy lab using constructivist techniques, The LMU Undergraduate Research Symposium. 2013. PLATFORM.
- 14. Shoepe, T.C., Cavedon, D.K., **Derian, J.M.**, Levy, C.S., & Morales, A. (2012). Engaged technology and experiential learning: the effectiveness of iPads and digital microscopy on student performance. Human Anatomy and Physiology Annual Conference, POSTER.
- 15. Cavedon, D.K., **Derian, J.M.**, Levy, C.S., & Morales, A. & Shoepe, T.C. (2012). Educating the future athletic trainer: The effectiveness of iPads and digital microscopy on student performance in anatomy lab. Far West Athletic Trainer Association Annual Conference, POSTER.

News Releases

 Guest on Podcast. Podcast: American Academy of Orthopaedic Manual Physical Therapists Podcast. Episode: Ep. 50 **Derian**, Smith, and Kulig interview. Published: September 17th, 2020

MANUALS, SYLLABI, PROGRAMMED INSTRUCTION, FILM STRIPS, VIDEO TAPES, etc.

2020 **PT642a/b, Integrated Patient Management Seminar:** translation to hybrid model, participating faculty under Jared Vagy. 2.5 Credits, spring. Oversee and audit filming of content for course development.

GRANTS AND/OR CONTRACTS AWARDED

Principal Investigator

COMPTSIG-Cardon Grant 2018

Derian, J.M.; Kulig, K.

Title: Effect of Instruction on Student Performance of Side-Lying Lumbar Manipulation

Objective: To compare the biomechanical performance of students' lumbar manipulation during

self-selected and instructed conditions.

Role: Principal investigator

Stage: Data analysis/manuscript in preparation

COMPTSIG-Cardon Grant 2016

Derian, J.M.; Armour Smith, J.; O'Donnell, M.; Kulig, K.

Title: Biomechanical Characterization of Side-Lying Lumbar Spine Manipulation among Novice and Student Practitioners.

Objective: To characterize practitioner-specific kinematics and kinetics during lumbar spinal manipulation in student and novice physical therapists.

Role: Co-Co-Principal investigator

Stage: Published

STUDY CLUB MEMBERSHIPS

2020 Skill acquisition and motor learning journal club: Lead and organized 4

meetings to review relevant literature to skill acquisition and motor

learning with other faculty members.

Attendees:

Samuel Franklin – Adjunct Instructor of Clinical Physical Therapy Liz Poppert – Clinical Associate Professor of Clinical Physical Therapy Michael Andersen – Associate Professor of Clinical Physical Therapy Kornelia Kulig – Professor Clinical Scholar of Physical Therapy

Carolee Winstein – Full Professor of Physical Therapy

CURRENT RESEARCH INTERESTS

My research is clinically motivated, and education oriented. I am interested in learning about the biomechanics associated with physical therapists performing manual therapy techniques. I am currently investigating the role of instructional cues on manual therapy skill performance. My goal is to improve the effectiveness of manual therapy education, and translate laboratory data into clinically applicable teaching methods.

MAJOR SCHOLARLY MEETINGS ATTENDED

2016, 2019, 2021 Combined Sections Meeting of the American Physical Therapy

Association

2020 California Physical Therapy Association, Annual Conference

2016 International Federation of Orthopaedic Manipulative Physical Therapists

(IFOMPT) Conference

IV. TEACHING ACTIVITIES

COURSES DEVELOPED AND/OR PRESENTED

University Courses:

2016—Present

PT521L: Basics of Patient Management. 4 Credits, 1 section, fall, 96 students. A lecture and laboratory course designed to introduce first-year clinical doctoral students to the basics of physical therapy examination, evaluation, and assessment. Residential delivery.

Role: Presented lab content to all students and closely supervised group of 10 students in skills practice. Graded student assignments. Organized and proctored practical exams.

2018—Present

DPT@USC Hybrid Immersions 1, 2, 3, 4, 8, 9, 10. This is a lab only intensive held over 1 week that is designed to refine and test clinical doctoral students' skills in physical therapy examination, evaluation, and assessment.

Role: Presented lab content and supervised students in skills practice, along with other faculty members. Proctored practical exams.

2020—Present

PT554: Analytical Anatomy. 3 Credits, 1 section, spring, 96 students. A self-directed, conceptual model to study human movement through interplay of reading, lecture, and laboratory experiences.

Role: present course content in an interactive "concepts" lab, grade student assignments, proctored practical exams.

Note: 2020 and 2021 years were delivered in mixed hybrid model due to COVID-19 pandemic.

2020-2021

PT650: Differential Diagnosis in Physical Therapy. 2 Credits, 2 sections, summer, 24 students. Students are led through differential diagnosis of complex patient cases in a problem-based-learning setting. Hybrid delivery.

Role: lead two, 12-student live sessions, proctored practical exams.

2017—2020

PT621L: Clinical Management of Patient with Musculoskeletal **Dysfunction.** 5 Credits, 1 section, spring, 96 students. This course is designed to provide the first-year physical therapy student with an in-depth opportunity to apply a problem-solving approach to the management of the patient with specific musculoskeletal disorders. Residential delivery. **Role:** Presented lab content to all students and closely supervised a group of 10 students in skills practice. Graded student assignments. Organized

2020

PT642a: Integrated Patient Management Seminar. 2.5 Credits, 1 section, summer/fall, 12 students.

Integration and application of knowledge acquired in first two years of the DPT program. Case based, problem-based learning approach. Hybrid delivery

Role: Lead live session discussion, proctored exams.

and proctored practical exams.

2020 **PT632: Integrated Patient Management Seminar.** 5 Credits, 1 section, summer/fall, 24 students.

Integration and application of knowledge acquired in first two years of the DPT program. Case based, problem-based learning approach. Hybrid delivery.

Role: Co-lead a live session of 24 students, proctored practical exams (delivered in hybrid format due to COVID-19 pandemic).

2020 **PT530b: Special Topics in Therapeutic Exercise.** 2 Credits, 2 sections, summer, 24 students. An in-depth opportunity to apply a problem-solving approach in developing a comprehensive therapeutic exercise program for patients with various co-morbidities. Hybrid delivery.

Role: Residential Course Coordinator. Lead two, 12-student live sessions to practice and apply lecture. Schedule, organize, and assist course director. Proctored practical exams.

2017—2017 **PT551L: Therapeutic Application of Physical Agents.** 3 Credits, 1 section, summer, 96 students. Instruct physical therapy students in the appropriate use of mechanical, electromagnetic, and hydrodynamic therapeutic modalities. Residential delivery.

Role: Presented lab content and supervised students in skills practice, along with other faculty members. Proctored practical exams.

Courses at Other Schools or Universities:

2021 Invited Lecture: Physical Therapy in the Management of Low Back Pain. USC Keck Medical School. 30-minute lecture. 1 lecture per year. Role: Lecture to 2nd year MD students on role of Physical Therapy in common causes of low back pain and screening for non-MSK pathology.

2021 – 2022 Family Medicine 300R. Low Back Pain Pre-Clerkship Musculoskeletal Workshop. 4 Sessions per year.

Role: Assist MD faculty in teaching basic physical exam for low back pain to 3rd year medical students.

2021 – 2022 Introduction to Clinical Medicine 200: Musculoskeletal Physical Exam Workshop. 4 sessions per year.

Role: Assist MD faculty in demonstrating and supervising 2nd year medical students in MSK physical exam of entire body.

NTLS154: Human Anatomy and Physiology Lab II. 1 Credit, 1 section, spring, 16 students. Residential delivery.

Role: Undergraduate teaching assistant. Worked alongside the course director to guide 16 undergraduate students through anatomy and physiology lab material, including microscopy, and various dissections.

2011 NTLS152: Human Anatomy and Physiology Lab I. 1 Credit, 1 section,

fall, 16 students. Residential delivery.

Role: Undergraduate teaching assistant. Worked alongside the course director to guide 16 undergraduate students through anatomy and physiology lab material, including microscopy, and various dissections.

Clinical Education:

2021 **PT600B: 6-Week Clinical Experience**. 3 Credits, summer. 8-week, full-

time clinical experience of 2nd year DPT student. **Role:** Primary clinical instructor for 1 DPT student.

2022 PT660: Integrated Terminal Clinical Education Experience with

Academic Integration. 5 Credits, spring. 16-week, part-time clinical

experience of 3nd year DPT student.

Role: Primary clinical instructor for 1 DPT student.

MENTORING ACTIVITIES

2018 – Present USC Doctor of Physical Therapy Faculty-Student Mentor Program

Role: Faculty mentor for 3 students, one meeting per semester each.

2018 – 2019 USC Orthopaedic Physical Therapy Residency Clinical Mentorship:

Role: Guest Mentored Orthopaedic PT residents at clinical site: Physical

Therapyworks (719 Santa Monica Blvd, Santa Monica, CA 90401).