

# GERASIMOS BASTAS

## EDUCATION

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- 1997 – 2002    **Brown University**    Providence, RI  
*Biochemistry, B.Sc. with Honors*
- 2002 – 2010    **Boston University School of Medicine  
& Division of Graduate Medical Sciences**    Boston, MA  
*MD/PhD combined-degree program*  
*[Doctor of Medicine / Doctor of Philosophy (PhD) of Molecular Medicine]*

## POST GRADUATE TRAINING

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- 2010 – 2014    **Hospital of the University of Pennsylvania  
Department of Physical Medicine & Rehabilitation**    Philadelphia, PA  
*PM&R Residency Training Program*
- 2014 – 2015    **Vanderbilt University Medical Center  
Department of Physical Medicine & Rehabilitation**    Nashville, TN  
*Research Fellowship*

## FACULTY APPOINTMENTS

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- 09/2014 –    **Assistant Professor**    Nashville, TN  
Department of Physical Medicine & Rehabilitation  
Vanderbilt University Medical Center

## FACULTY POSITIONS

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- 2015 –    **Director of Limb Loss Rehabilitation**    Nashville, TN  
Department of Physical Medicine & Rehabilitation  
Vanderbilt University Medical Center
- 03/2021 –    **Staff Physician**    Nashville, TN  
Department of Physical Medicine & Rehabilitation    Murfreesboro, TN  
Tennessee Valley Healthcare System  
US Department of Veterans Affairs

## FUNDED RESEARCH

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- 1999    **Undergraduate Teaching and Research Assistantship**    Brown Univ., Providence, RI  
*Funded opportunity for independent research. Computer modeling and synthesis of inter-subunit bisquaternary inhibitors. (Prof. Kathryn A. Parker)*
- 2000    **RAB GRANT RECIPIENT**    Brown University, Providence, RI  
*Funded opportunity for student-initiated research.*  
*A novel approach to immunotherapeutics. (Prof. Kathryn A. Parker)*
- 2000    **Undergraduate Teaching and Research Assistantship**    Brown Univ., Providence, RI

*Funded opportunity for independent research.  
A novel approach to immunotherapeutics. (Prof. Kathlyn A. Parker)*

- 2001 – 2002     **ROYCE FELLOWSHIP**     Brown University, Providence, RI  
*Funded opportunity for student-initiated research.  
A novel approach to immunotherapeutics. (Prof. Kathlyn A. Parker)*
- 2006 – 2007     **GRUNEBAUM FELLOWSHIP**     BUSM, Boston, MA  
*Fellowship from the Karin Grunebaum Cancer Research Foundation (Cambridge, MA) for two BUSM  
and two HMS medical students per year, conducting cancer-related doctoral research. (Advisor: Steven A.  
Bogen, MD, PhD)*
- 2014 – 2015     **NINDS Stroke Trials Network**     VUMC, Nashville, TN  
(1U10NS086492-01, PI: Michael Froehler, MD, PhD)  
Role: Research Fellow
- 2015 – 2016     **Vanderbilt Institute for Clinical and Translational Research**     VUMC, Nashville, TN  
(VR 14394/UL1 TR000445 from NCATS/NIH)  
“Objective Assessment Measures for the Clinical Evaluation of Lower Limb Amputee  
Walking Performance.”  
Role: Principal Investigator
- 2015 – 2017     **Vanderbilt Institute for Clinical and Translational Research**     VUMC, Nashville, TN  
(VR 21073/UL1 TR000445 from NCATS/NIH)  
“Fall Prevention by Detection of Impending Bed Exit Events.”  
Role: Principal Investigator
- 2015 – 2018     **Building Interdisciplinary Research Careers in Women’s Health**     VUMC, Nashville, TN  
(5K12HD043483-13, PI: Katherine Hartmann, MD, PhD)  
“Biomechanical Assessment of Gender Differences in Lower Limb Amputee Walking  
Performance.”  
Role: K12 Career Development Award Trainee
- 2015 – 2019     **Congressionally Directed Medical Research Programs**     VUMC, Nashville, TN  
(W81XWH-15-2 from CDMRP/DOD, PI: Michael Goldfarb, PhD)  
“Ambulatory and Non-Ambulatory Benefits of Lower Limb Exoskeleton Use, with and  
without FES, in Clinical and Community Settings.”  
Role: Medical Director for clinical trial site
- 2016 – 2019     **National Science Foundation**     VUMC, Nashville, TN  
(GARDE/CBET 1605200 from NSF, PI: Karl Zelik, PhD)  
“Leveraging Toe Dynamics to Improve Prosthetic Feet and Amputee Mobility.”  
Role: Consultant
- 2017 – 2020     **National Science Foundation**     VUMC, Nashville, TN  
(CBET 1705714 from NSF, PI: Karl Zelik, PhD)  
“Bio-Inspired Ankle-Knee Coupling to Enhance Walking for Individuals with Transtibial  
Amputation.”  
Role: Consultant

**Peer-Reviewed  
Journal Articles**

- [1] Sompuram SR, **Bastas G**, Vani K, Bogen SA.  
Accurate identification of paraprotein antigen targets by epitope reconstruction.  
*Blood*. 2008 Jan 1; 111(1):302-8.  
PMID: 17897933
- [2] **Bastas G**, Sompuram SR, Pierce B, Vani K, Bogen SA.  
Bioinformatic requirements for protein database searching using predicted epitopes from disease-associated antibodies.  
*Mol Cell Proteomics*. 2008 Feb; 7(2):247-56  
PMID: 17878398
- [3] Reish A, **Bastas G**, Popescu A.  
Newly Diagnosed Lumbar Nerve Root Intradural Mass in the Setting of Chronic Lumbar Radicular Pain Refractory to Conservative Management.  
*Pain Physician: January/February 2014; 17: 18-21*.  
PMID: 25675075
- [4] Dallas J, Block JJ, **Bastas G**.  
Femoral Artery Bypass Graft Pseudoaneurysm Rupture in a Transfemoral Amputee: A Case Report.  
*Am J Phys Med Rehabil 2018 Nov;97(11):e104-e106*.  
PMID: 29420314
- [5] **Bastas G**, Fleck JJ, Peters RA, Zelik KE.  
IMU-based gait analysis in lower limb prosthesis users: Comparison of step demarcation algorithms.  
*Gait & posture*. 2018 May 22;64. 30-37.  
PMID: 29807270
- [6] Honert EC, **Bastas G**, Zelik KE.  
Effect of toe joint stiffness and toe shape on walking biomechanics.  
*Bioinspir Biomim 2018 Oct 10;13(6):066007*.  
PMID: 30187893
- [7] Ekelem A, **Bastas G**, Durrrough CM, Goldfarb M.  
Variable Geometry Stair Ascent and Descent Controller for a Powered Lower Limb Exoskeleton.  
*J. Med. Devices 12(3), 031009 (Jul 30, 2018)*.
- [8] Honert EC, **Bastas G**, Zelik KE.  
Effect of toe length, foot arch length and toe joint axis on walking biomechanics.  
*Human Movement Science 70 (2020) 102594*.  
PMID: 32217212
- [9] Pita A, Ziogas IA, Ye F, Chen Y, Rauf MA, Matsuoka LK, Kaur N, Whang G, Zielsdorf SM, **Bastas G**, Izzy M, Alexopoulos.  
Feasibility of Serial Ultrasound Measurements of the Rectus Femoris Muscle Area to Assess Muscle Loss in Patients Awaiting Liver Transplantation in the Intensive Care Unit  
*Transplant Direct 2020 Oct 20;6(11):e618*.  
PMID: 33134494
- [10] McDonald KA, Teater RH, Cruz JP, Kerr JT, **Bastas G**, Zelik KE.  
Adding a toe joint to a prosthesis: walking biomechanics, energetics, and preference of individuals with unilateral below-knee limb loss.

*Sci Rep* **11**, 1924 (2021).  
PMID: 33479374

- [11] **Bastas G**, Dallas J, Miller PB, Kloosterman N, Yannopoulos I.  
Polypharmacy, Dosing Trends and Drug-Drug Interaction Patterns Following High-Level Limb Amputation Surgery.  
*Am J Phys Med Rehabil* 2021 Nov; 100:1087–1092.  
PMID: 33538486
- [12] Huang YJ, Assi PE, Drolet BC, Al Kassis S, **Bastas G**, Chaker S, Manzanera Esteve IV, Perdakis G, Thayer WP.  
A Systematic Review and Meta-Analysis on the Incidence of Patients with Lower-Limb Amputations Who Developed Symptomatic Neuromata in the Residual Limb.  
*Ann Plast Surg.* 2022 May; 88(5): 574-580.  
PMID: 34270470

#### Invited Book Chapters

- [1] **Bastas G.**  
Lower limb amputations.  
*In: Frontera WR, Silver JK, Rizzo Jr T, editors. Essentials of Physical Medicine and Rehabilitation (4th edition), Elsevier, Philadelphia, 2018.*
- [2] Gao C, **Bastas G**, Jain N.  
Rehabilitation: Gait, Amputations, Prostheses, Orthoses and Neurologic Injury.  
*In: Miller's Review of Orthopaedics (8th edition), Chapter 10, Elsevier, Philadelphia 2019*

#### Poster Presentations

- [1] Reish AG, **Bastas G**, Vasudevan JM.  
"Acute Low Back Pain with Debilitating Nocturnal Symptoms As Single Presentation of Rapidly Invasive Lymphoma: A Case Report."  
AAPM&R Annual Assembly, 2013, Washington, DC
- [2] **Bastas G.**  
"A Proposed Transfemoral Socket Medial Wall Modification for Enduring Comfort, Fit and Function: a Case Study."  
AAPM&R Annual Assembly, 2014, San Diego, CA
- [3] Hong T, **Bastas G.**  
"Pelvic Acceleration as an Objective Means of Quantifying Gait Asymmetry."  
GCMAS Annual Conference, 2016, Memphis, TN -(podium presentation)-
- [4] **Bastas G**, Hong T.  
"Assessing the Utility of Pelvic Accelerometry Tracking for the Clinical Evaluation of Lower Limb Amputee Walking Performance."  
GCMAS Annual Conference, 2016, Memphis, TN
- [5] **Bastas G.**  
"Assessing the Utility of Objective Pelvic Motion Tracking for the Clinical Evaluation of Lower Limb Amputee Walking Performance."  
AAP Annual Meeting, 2016, Sacramento, CA
- [6] **Bastas G.**  
"Assessing for Gender Differences in the Walking Patterns of Transfemoral Amputees by Pelvic Accelerometry Tracking."  
BIRCWH Annual Meeting, 2016, Bethesda, MD

- [7] **Bastas G.**  
 "Pelvic Accelerometry for Tracking of Gait Spatio-Temporal Parameters and Inter-Limb Asymmetries in Individuals with Lower Limb Loss."  
 AAP Annual Meeting, 2017, Las Vegas, NV
- [8] Welch SA, **Bastas G.**  
 "Missed Sciatic Neuroma Affecting Prosthesis Use in a Patient with Hip Disarticulation Amputation."  
 AAP Annual Meeting, 2017, Las Vegas, NV
- [9] Honert E, **Bastas G**, Zelik KE.  
 "Quantifying the Effects of Toe and Ankle Joint Stiffness, and Their Interplay, on Walking Biomechanics Using an Adjustable Prosthetic Foot."  
 ASB Annual Conference, 2017, Boulder, CO
- [10] Honert E, **Bastas G**, Zelik KE.  
 "Isolating Effects of Toe and Foot Length on Bipedal Walking."  
 ASB Annual Conference, 2018, Rochester, MN
- [11] Teater HT, McDonald AK, Cook SO, **Bastas G**, Goldfarb M, Zelik KE.  
 "Addition of a Passive Toe Joint: Considerations for Passive and Powered Ankle-Foot Prosthesis Design."  
 ISB/ASB Annual Conference, 2019, Calgary, Canada
- [12] McDonald AK, Teater HT, Cook SO, **Bastas G**, Zelik KE.  
 "The Biomechanical and Met-toe-bolic Effects of Walking on a Passive Prosthetic Foot with an Added Toe Joint."  
 ISB/ASB Annual Conference, 2019, Calgary, Canada

## PROFESSIONAL ACTIVITIES

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### **American Congress of Rehabilitation Medicine**

2016 – 2019 Inaugural Chair of the Limb Care Networking Group (LCNG)  
 2019 – LCNG Executive Committee Member-At-Large

### **Intramural**

2009 – 2010 Boston University School of Medicine, Physical Medicine & Rehabilitation Student Interest Group (Founder and Chairman)  
 2013 – 2014 University of Pennsylvania Physical Medicine & Rehabilitation Residency Training Program Resident Recruitment Committee.  
 2015 Vanderbilt Physical Medicine & Rehabilitation Resident Recruitment Committee.  
 2018 – Falls Committee Stallworth Rehabilitation Hospital  
 2021 Vanderbilt University Summer Research Program (Reviewer)  
 Reviewer of multiple applications submitted jointly by Vanderbilt University undergraduate students and faculty for sponsored summer session research.

### **Extramural**

2014 Grant reviewer for the DoD USA Medical Research and Materiel Command

## INTERNATIONAL LECTURES

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- [1] Cardiovascular and Pulmonary Adaptations Following Amputation Surgery.  
**International Society for Prosthetics & Orthotics (Webinar)** (02/26/2021)
- [2] How Limb Loss Affects Heart and Lung Function.  
**International Society for Prosthetics & Orthotics (ISPO) Pacific Rim Conference**  
Oahu, HI (6/7/2022)
- [3] Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and  
Prosthetic Enablement.  
**International Society for Prosthetics & Orthotics (ISPO) Pacific Rim Conference**  
Oahu, HI (6/7/2022)

## NATIONAL LECTURES

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- [1] Medical Considerations for Prosthetic Candidacy, Enduring Functional Enablement and  
Coordination of Care.  
**ACRM Annual Conference**, 2017, Atlanta, GA
- [2] Distinguishing Prosthetic Performance and Enablement in Clinical Care and Research:  
Challenges and Directions.  
**ACRM Annual Conference**, 2017, Atlanta, GA (Expert Panel Participant)
- [3] Medical Care of the Limb Restoration Patient: Cardiovascular Changes and Adaptations.  
**ACRM Annual Conference**, 2018, Dallas, TX
- [4] Creating Real World Impact: Becoming Deliberate About Interdisciplinary Professional  
Identity Training.  
**ACRM Annual Conference**, 2018, Dallas, TX
- [5] Building a Collaborative Care Environment (A closer look at the multi-disciplinary  
approach to amputee care). (Invited panelist)  
**HANGER LIVE Annual National Conference**, 2020, Nashville, TN
- [6] Physiology of Limb Loss.  
**ACRM Annual Conference**, 2020, Atlanta, GA (Instructional Course: Innovations in  
Limb Loss and Difference Rehabilitation)
- [7] How Limb Loss Affects Heart and Lung Function.  
**ACRM Annual Conference**, 2021, (Virtual) (Instructional Course 7: Innovations in  
Limb Loss and Difference Rehabilitation)
- [8] How Limb Loss Affects Heart and Lung Function.  
**Veteran Affairs Amputation Grand Rounds / Skills Training**  
(Virtual live and repositied talk for the national Veteran Affairs Healthcare  
System)(12/20/2022)

## LOCAL / REGIONAL LECTURES

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- [1] Objective Assessment of Lower Limb Amputee Walking Performance.  
**Physical Medicine & Rehabilitation Grand Rounds, Vanderbilt University Medical**

**Center**

Nashville, TN (5/5/2016)

- [2] Intentionality and Professionalism at the Limits of Knowledge and of Knowing.  
**Ethics Conference, Center for Biomedical Ethics and Society, Vanderbilt University Medical Center**  
Nashville, TN (5/16/2016)
- [3] The PM&R Resident's Guide to: Rehabilitation Emergencies.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (7/1/2016)
- [4] The PM&R Resident's/Attending's Guide to: Handoff of Care / Sign-out.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (7/8/2016)
- [5] The PM&R Resident's Guide to: Journal Club.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (7/20/2016)
- [6] A functional anatomical review and biomechanical principles relating to posture and bipedal locomotion.  
**Vanderbilt University Dpt. of Mechanical Engineering**  
Nashville, TN (5/23/2017)
- [7] Medical and Functional Considerations Surrounding Limb Loss and Limb Restoration Rehabilitation.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (9/7/2017)
- [8] Introduction to Gait.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (10/19/2017)
- [9] Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and Prosthetic Enablement.  
**Ethics Grand Rounds, UT Southwestern Medical Center**  
Dallas, TX (4/10/2018)
- [10] Biomedical Ethics Considerations Stemming from Limb Loss/Difference care and Prosthetic Enablement.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/26/2018)
- [11] Clinical Assessment of Gait.  
**PT/OT Provider In-Service, Vanderbilt University Medical Center**  
Nashville, TN (7/17/2018)
- [12] Limb Loss/Prosthetic Enablement Rehabilitation: Medical and Functional Considerations.  
**PT/OT Provider In-Service, Vanderbilt University Medical Center**

Nashville, TN (8/7/2018)

- [13] Prosthetic Enablement Rehabilitation: Physiologic Reserve / Work Capacity.  
**PT/OT Provider In-Service, Vanderbilt University Medical Center**  
Nashville, TN (9/11/2018)
- [14] Prosthetic Rehabilitation: Impairments and Therapy Goal Planning.  
**PT/OT Provider In-Service, Vanderbilt University Medical Center**  
Nashville, TN (9/24/2018)
- [15] Medical Considerations for Prosthetic Candidacy, Enduring Functional Enablement and Coordination of Care.  
**Tennessee Society of O&P (TSOP), 2018 Meeting**  
Memphis, TN (10/12/2018)
- [16] Medical Care of the Limb Restoration Patient: Cardiovascular and Pulmonary Adaptations Following Major Limb Loss.  
**CREATE (Center for Rehabilitation Engineering and Assistive Technology)**  
**Vanderbilt University Dpt. Of Mechanical Engineering**  
Nashville, TN (10/25/2018)
- [17] Cardiovascular and Pulmonary Adaptations Following Major Limb Loss.  
**Vascular Surgery Conference, Vanderbilt University Medical Center**  
Nashville, TN (10/25/2018)
- [18] When the Body is “Other” (Ethical Concerns with Serious Illness, Injury and Transformation). (-Panelist-).  
**Ethics Grand Rounds, Center for Biomedical Ethics and Society, Vanderbilt University Medical Center**  
Nashville, TN (11/6/2018)
- [19] Prosthetic Device Composition and Prescription.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (1/10/19)
- [20] Prosthetic Gait.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (1/10/19)
- [21] Gait.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (1/10/19)
- [22] Peri-operative Amputation Management.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (1/17/19)
- [23] Limb Loss/Difference Epidemiology and Surgical Considerations.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**



Nashville, TN (1/17/19)

- [24] Medical Care of the Patient with Limb Loss/Difference: Cardiovascular and Pulmonary Adaptations, Pharmacologic Considerations, and Work Capacity.  
**Internal Medicine Grand Rounds, Vanderbilt University Medical Center**  
Nashville, TN (3/6/2019)
- [25] Ethical Challenges in the Care of the Limb Loss/Difference Patient.  
**Ethics Conference, Center for Biomedical Ethics and Society, Vanderbilt University Medical Center**  
Nashville, TN (3/18/2019)
- [26] Medical Care of the Patient with Limb Loss/Difference: Cardiovascular and Pulmonary Adaptations, Pharmacologic Considerations, and Work Capacity.  
**Physical Medicine & Rehabilitation Grand Rounds, Vanderbilt University Medical Center**  
Nashville, TN (4/11/2019)
- [27] Setting Up Patients for Success: Overall Functional Enablement and Coordination of Care. (-Keynote Speaker-).  
**Tennessee Society of O&P (TSOP), 2019 Meeting**  
Nashville, TN (5/3/2019)
- [28] Introduction to Orthotics.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/9/19)
- [29] Setting Up Patients for Success: Overall Functional Enablement and Coordination of Care.  
**Kenney Orthopedics**  
Lexington, KY (6/21/2019)
- [30] Setting Up Patients for Success: Overall Functional Enablement and Coordination of Care.  
**PrimeFare East Regional Scientific Symposium, 2019 Meeting**  
Nashville, TN (7/11/2019)
- [31] Ethical Considerations Surrounding Limb Loss/Difference Medical Decision Making, and Professional Conduct Surrounding O&P Care.  
**PrimeFare East Regional Scientific Symposium, 2019 Meeting**  
Nashville, TN (7/11/2019)
- [32] Setting Up Patients for Success: Overall Functional Enablement and Coordination of Care.  
**Belmont University (Doctoral Program in Physical Therapy Didactics)**  
Nashville, TN (10/10/2019)
- [33] Prosthetic Rehabilitation: Impairments and Therapy Goal Planning.  
**Belmont University (Doctoral Program in Physical Therapy Didactics)**  
Nashville, TN (10/10/2019)
- [34] Cardiovascular and Pulmonary Adaptations, and Specialized Pharmacologic

Considerations, Following Limb Amputation.  
**Cardiology Grand Rounds, Vanderbilt University Medical Center**  
Nashville, TN (11/13/2019)

- [35] Cardiovascular and Pulmonary Adaptations, and Specialized Pharmacologic Considerations, Following Limb Amputation.  
**Physical Medicine & Rehabilitation Grand Rounds, Jefferson University**  
Philadelphia, PA (2/12/2020)
- [36] Introduction to Gait.  
**Vanderbilt University Dpt. Of Mechanical Engineering (Barc Lab)**  
Nashville, TN (3/13/2020)
- [37] THE OUTPATIENT PM&R P&O ENCOUNTER: Medical Considerations for Prosthetic Candidacy, Enduring Functional Enablement and Coordination of Care  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/6/20)
- [38] Cardiopulmonary Adaptations, Pharmacokinetic Considerations, and Phantom Limb Pain Control, Following Limb Amputation.  
**Anesthesiology Grand Rounds, Vanderbilt University Medical Center**  
Nashville, TN (5/8/2020)
- [39] Setting Up Patients for Success: Overall Functional Enablement and Coordination of Care.  
**Star PT** (annual CME activity for PT/OT providers in 70 therapy locations)  
Murfreesboro, TN (1/9/2021)
- [40] Cardiovascular and Pulmonary Adaptations, Following Amputation Surgery.  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (1/13/2021)
- [41] Cardiovascular and Pulmonary Adaptations, Following Amputation Surgery.  
**PM&R Residency Program Didactics, Michigan State University**  
East Lansing, MI (2/22/2021)
- [42] Phantom Limb Pain Following Amputation Surgery.  
**PM&R Residency Program Didactics, Michigan State University**  
East Lansing, MI (2/22/2021)
- [43] Pharmacologic Considerations Following Limb Amputation.  
**PM&R Residency Program Didactics, Michigan State University**  
East Lansing, MI (2/22/2021)
- [44] Biomedical Ethics Considerations Stemming from Limb Loss/Difference and Prosthetic Enablement.  
**PM&R Residency Program Didactics, Michigan State University**  
East Lansing, MI (2/22/2021)
- [45] Cardiovascular and Pulmonary Adaptations Following Amputation Surgery.  
**PM&R Residency Program Didactics, NYMC-Metropolitan HH**

New York, NY (4/1/2021)

- [46] Epidemiology of Limb Loss and Terms.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/2/2021)
  
- [47] Amputation Surgery.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/13/2021)
  
- [48] Phantom Limb Pain Following Amputation Surgery.  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/14/2021)
  
- [49] Pharmacologic Considerations Following Amputation Surgery.  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/14/2021)
  
- [50] Adjustment to Disability.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/16/2021)
  
- [51] Post-Amputation Patient Education.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/20/2021)
  
- [52] Limb Loss Physiology.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/23/2021)
  
- [53] Pharmacological Considerations Following Limb Amputation.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/27/2021)
  
- [54] Phantom Limb Pain Following Limb Amputation.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/28/2021)
  
- [55] Prosthetic Device Composition and Prescription.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/4/2021)
  
- [56] Gait (Typical, Able-Bodied).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/7/2021)
  
- [57] How Limb Loss Affects Heart and Lung Function.  
**New York State Chapter of American Academy of Orthotists and Prosthetists, NY**  
NYSAAOP 2021 Online Conference (5/14/2021)

- [58] Introduction to Orthotics.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/21/2021)
- [59] Post-amputation Pain Syndromes.  
**Tennessee Society of Orthotists and Prosthetists, TN**  
TSOP 2021 Online Conference (5/21/2021)
- [60] Pediatric Limb Loss/Difference.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/25/2021)
- [61] Post-amputation Pain Syndromes.  
**PM&R Residency Program Didactics, NYMC-Metropolitan HH**  
New York, NY (6/10/2021)
- [62] Post-amputation Pain Syndromes.  
**Kentucky Orthotists and Prosthetics Association, KY**  
KOPA 2021 Online Conference (6/11/2021)
- [63] Pharmacological Considerations Following Limb Amputation.  
**PM&R Residency Program Didactics, NYMC-Metropolitan HH**  
New York, NY (6/17/2021)
- [64] How Limb Loss Affects Heart and Lung Function.  
**Texas Society of Orthotic and Prosthetic Professionals, TX**  
TXSOP 2021 Online Conference (6/25/2021)
- [65] Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and Prosthetic Enablement.  
**Alabama Prosthetics and Orthotics Association, AL**  
APOA 2021 Online Conference (8/21/2021)
- [66] Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and Prosthetic Enablement.  
**PM&R Residency Program Didactics, NYMC-Metropolitan HH**  
New York, NY (10/7/2021)
- [67] Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and Prosthetic Enablement.  
**North Carolina Chapter of the American Academy of Orthotists & Prosthetist, NC**  
**South Carolina Chapter of the American Academy of Orthotists & Prosthetist, SC**  
NCAAOP 2021 Online Conference (10/8/2021)
- [68] Physiology of Limb Loss.  
**New Jersey Chapter of the American Academy of Orthotists & Prosthetist, NJ**  
NJAAOP 2021 Annual Meeting, Atlantic City, NJ (11/4/2021)
- [69] How Limb Loss Affects Heart and Lung Function.  
**HANGER Clinic Balanced Diabetic Amputee Online Community**  
HANGER Clinic Online Community Education Outreach (1/3/2022)

- [70-72] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Parts 1-3; 3 hrs** encompassing: terms, basic device composition, causes, epidemiology, decision to amputate, operative considerations, post-amputation pain syndromes, limb loss physiology and pharmacologic considerations, pre-prosthetic education, adjustment to disability, prosthetic candidacy evaluation).  
**PM&R Residency Program Didactics, Michigan State University**  
East Lansing, MI (2/28/2022)
- [73] Trialing Different Microprocessor-Controlled Knee (and other) Components: Patient Experience and Clinical Considerations.  
**CREATE (Center for Rehabilitation Engineering and Assistive Technology)**  
**Vanderbilt University Dpt. Of Mechanical Engineering**  
Nashville, TN (4/1/2022)
- [74] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 1:** terms, basic device composition, causes, epidemiology, decision to amputate, operative considerations).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/5/2022)
- [75] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 1:** terms, basic device composition, causes, epidemiology, decision to amputate, operative considerations).  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/6/2022)
- [76] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 2:** post-amputation pain syndromes, limb loss physiology and pharmacologic considerations).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/7/2022)
- [77] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 3:** pre-prosthetic education, adjustment to disability, prosthetic candidacy evaluation).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/12/2022)
- [78] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 2:** post-amputation phantom limb syndrome, limb loss physiology and pharmacologic considerations).  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/13/2022)
- [79] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 3:** pre-prosthetic education, adjustment to disability, prosthetic candidacy evaluation).  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/20/2022)

- [80] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 4:** prosthetic prescription).  
**PM&R Residency Program Didactics, Walter Reed National Military Medical Center**  
Bethesda, MD (4/27/2022)
- [81] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 4:** prosthetic prescription).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/5/2022)
- [82] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 5:** post-amputation pain syndromes, wound care, gait).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/26/2022)
- [83] Introduction to Orthotics.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (5/31/2022)
- [84] How Limb Loss Affects Heart and Lung Function.  
**PM&R Residency Program Didactics, Eastern Virginia Medical School**  
Norfolk, VA (12/29/2022)
- [85] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 1:** terms, basic device composition, causes, epidemiology, decision to amputate, operative considerations).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (3/30/2023)
- [86] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 1:** terms, basic device composition, causes, epidemiology, decision to amputate, operative considerations).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (3/30/2023)
- [87] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 2:** post-amputation pain syndromes, limb loss physiology and pharmacologic considerations).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (3/30/2023)
- [88] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 3:** pre-prosthetic education, adjustment to disability, prosthetic candidacy evaluation).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/4/2023)
- [89] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 4:** prosthetic prescription).

**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/4/2023)

- [90] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 5:** post-amputation pain syndromes, wound care, gait).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/6/2023)
- [91] Limb Loss/Difference and Prosthetic Enablement Curriculum  
(**Part 6:** prosthetic gait).  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/6/2023)
- [92] Introduction to Orthotics.  
**PM&R Residency Didactics, Vanderbilt University Medical Center**  
Nashville, TN (4/11/2023)
- [93] How Limb Loss Affects Heart and Lung Function.  
**PM&R Residency Grand Rounds, NYMC-Metropolitan HH**  
New York, NY (5/31/2023)

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COURSE DIRECTORSHIPS, MODERATOR AND OTHER TEACHING ROLES

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- [1] **Single-Day Anatomy (Cadaver) Lab (Biomechanics) Course**  
Created and led single-day anatomy course in the cadaver lab for Vanderbilt University Mechanical Engineering Dpt graduate (doctoral candidates) students. I gave an anatomy review presentation before lab, and then led discussion through the cadaver lab.  
**Vanderbilt University Dpt. Of Mechanical Engineering/Vanderbilt University School of Medicine**  
Nashville, TN (5/23/2017)
- [2] **VUMC Therapy Services Course**  
Series of talks developed for (inpatient/outpatient therapy services providers at Vanderbilt University Hospital, Vanderbilt Orthopaedic Institute and Children's Hospitals) PT/OT staff education on the medical considerations, altered physiology and therapy needs for persons following limb amputation surgery.  
**Vanderbilt University Medical Center**  
Nashville, TN (07/2018 – 09/2018)
- [3] **Orthotics Course Director**  
Created and lead the annual PM&R Residency Orthotics Course, comprised of a series of talks and coordination with local orthotists for resident workshop component.  
**PM&R Residency, Vanderbilt University Medical Center**  
Nashville, TN
- [4] **Prosthetics Course Director**  
Created and lead the annual PM&R Residency Prosthetics Course, comprised of a series of talks and coordination with local prosthetists for resident workshop component.  
**PM&R Residency, Vanderbilt University Medical Center**  
Nashville, TN

- 2014 – 2015     **Expert advisor and research supervisor for a group of 3 senior biomedical engineering students undertaking their senior thesis design project.**  
Department of Mechanical Engineering, Vanderbilt University
- 2015            **Thesis Committee member for Daniel Bennett (PhD candidate)**  
Thesis title: “Design and Assessment of a Self-Contained Upper Extremity Prosthetic System.”  
Department of Mechanical Engineering, Vanderbilt University
- 2015            **Research supervisor for VUSM medical Student (Tracey Hong)**
- 2015 – 2018    **Research supervisor for VU undergraduate in Mechanical Engineering (Joshua Fleck)**
- 2017            **Thesis Committee member for Nasser Alshammary (PhD candidate)**  
Thesis title: “Transhumeral Prosthetic System: Control and Assessment.”  
Department of Mechanical Engineering, Vanderbilt University
- 2017 – 2020    **Research supervisor for VUSM medical Student (Jonathan Dallas)**
- 2018            **Thesis Committee member for Andrew Ekelem (PhD candidate)**  
Thesis title: “Control Methods for Improving Mobility for Persons with Lower Limb Paralysis.”  
Department of Mechanical Engineering, Vanderbilt University
- 2018            **Thesis Committee member for Harrison Bartlett (PhD candidate)**  
Thesis title: “Design, Control, and Assessment of a Semi-Powered Ankle Prosthesis.”  
Department of Mechanical Engineering, Vanderbilt University
- 2019            **Thesis Committee member for Eric Honert (PhD candidate)**  
Thesis title: “Ankle and Foot Biomechanics during Human Walking: Powerful Insights on Multiarticular Muscles, Soft Tissues, and Toe Joint Dynamics.”  
Department of Mechanical Engineering, Vanderbilt University
- 2019            **Thesis Committee member for Benjamin Gasser (PhD candidate)**  
Thesis title: “Design of an Upper-Limb Exoskeleton for Functional Assistance of Bi-Manual Activities of Daily Living.”  
Department of Mechanical Engineering, Vanderbilt University
- 2020            **Thesis Committee member for Erik Paul Lamers (PhD candidate)**  
Thesis title: “Design, Development and Evaluation of Quasi-Passive Wearable Assistive Devices: From Ankle Prosthetics to Low Back Exosuits.”  
Department of Mechanical Engineering, Vanderbilt University
- 2021 – 2022    **Thesis Committee member for Maura E. Eveld (PhD candidate)**  
Thesis title: “The Biomechanics of Stumble Recovery: Experimental Insights for the Design and Implementation of Powered Lower-limb Wearable Assistive Device Interventions to Mitigate Falls.”  
Department of Mechanical Engineering, Vanderbilt University
- 2021 – 2022    **Thesis Committee member for Shane King (PhD candidate)**  
Thesis title: “Identification, development, and assessment of prosthesis behaviors to improve the stumble recovery of transfemoral prosthesis users.”  
Department of Mechanical Engineering, Vanderbilt University



## HONORS AND AWARDS

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### Academic Awards

- 2002      **ACADEMIC HONORS**      Brown University, Providence, RI  
*Sc.B. Biochemistry with Academic Honors.*
- 2003      **RESEARCH AWARD**      NEHMDS, Boston, MA  
*For original research poster presentation at the 4<sup>th</sup> Annual Research Symposium of the New England Hellenic Medical and Dental Society.*
- 2003      **THE NATIONAL DEAN'S LIST**  
*26<sup>th</sup> Annual Edition of the National Dean's List honoring the top 0.5% of US college graduates.*
- 2010      **THE WEIN STUDENT RESEARCH AWARD**      BUSM, Boston, MA  
*Awarded to one graduating BUSM student for outstanding cancer-related research.*

### Teaching Awards

- 2014      **OUTSTANDING RESIDENT EDUCATOR AWARD**      UPenn, Philadelphia, PA  
*Awarded to one graduating PM&R resident for demonstration of excellence in the education of PM&R residents.*

### Professional Awards

- 2015 – 2016      **In Appreciation of Service (American Congress of Rehabilitation Medicine)**  
*for serving as Limb Restoration Rehabilitation Group Chair (Chicago, IL 2016)*
- 2016 – 2017      **In Appreciation of Service (American Congress of Rehabilitation Medicine)**  
*for serving as Limb Restoration Rehabilitation Group Chair (Atlanta, GA 2017)*

### Clinical Awards

- 2020      **EXCELLENCE in Patient Experience**      VUMC, Nashville, TN  
*In recognition of outstanding performance and exceptional commitment to service excellence. This award honors clinicians who have reached the 90<sup>th</sup> percentile nationally in patient experience for fiscal year 2020.*
- 2022      **EXCELLENCE in Patient Experience**      VUMC, Nashville, TN  
*In recognition of outstanding performance and exceptional commitment to service excellence. This award honors clinicians who have reached the 90<sup>th</sup> percentile nationally in patient experience for fiscal year 2022.*

### Meritorious Scholarships

- 1997 – 2002      Metropolitan Diocese of Zakynthos      Zakynthos, Greece
- 1997 – 2002      A.G. Leventis Foundation Scholarship      Athens, Greece
- 1997 – 2002      Metropolitan Diocese of Boston      Boston, MA
- 1997      Hellenic Times Scholarship Fund      New York, NY
- 1998 – 2001      Bodossaki Foundation      Athens, Greece
- 2003      Bodossaki Foundation      Athens, Greece
- 1998 – 2000      Vardinoyiannis Foundation      Athens, Greece
- 2002 – 2003      Mehos Scholarship (BUSM)      Boston, MA
- 2003 – 2004      Eleni Gatzoyiannis Scholarship (BUSM)      Boston, MA
- 2003      Hygeia Scholarship Award from the NEHMDS      Boston, MA
- 2004      Bakes Family Foundation      Greenwich, CT

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 JOURNAL REVIEWER
 

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2016 – **Prosthetics and Orthotics International**  
 2017 – **Journal of the American Academy of Orthopedic Surgeons**  
 2017 – **Systematic Reviews**  
 2018 – **Archives of Physical Medicine & Rehabilitation**  
 2021 – **Archives of Rehabilitation Research and Clinical Translation**  
 2021 – **Sensors**

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 CERTIFICATIONS
 

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2015 – 2025 **American Board of Physical Medicine & Rehabilitation Diplomate** Rochester, MN  
*Board Certified in PM&R (11457)*

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 LICENSURE
 

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2010 – 2014 **Pennsylvania Medical License (MT197893)**  
 05/2014 – **Tennessee Medical License (MD51292) (Active)**

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 MEDIA INTERVIEWS
 

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- [1] Innovations in Lower Limb Prosthetics Bolster Quality of Life  
**DISCOVER – Breakthroughs in medical science and patient care from VUMC**  
[\(https://discover.vumc.org/2018/12/innovations-in-limb-restoration-and-prosthetics-bolster-quality-of-life/\)](https://discover.vumc.org/2018/12/innovations-in-limb-restoration-and-prosthetics-bolster-quality-of-life/)(12/11/2018)
- [2] Dr. Gerasimos Bastas, MD, PhD - Talks Physical Medicine & Rehab  
**The Prosthetic Paradigm Podcast (Invited interview - part 1)**  
[\(https://prostheticparadigm.libsyn.com/\)](https://prostheticparadigm.libsyn.com/) (2/18/19)
- [3] Dr. Gerasimos Bastas, MD, PhD - Talks Physical Medicine & Rehab  
**The Prosthetic Paradigm Podcast (Invited interview - part 2)**  
[\(https://prostheticparadigm.libsyn.com/\)](https://prostheticparadigm.libsyn.com/) (3/18/19)
- [4] Polypharmacy in High-level Limb Amputations  
**DISCOVER – Breakthroughs in medical science and patient care from VUMC**  
[\(https://discover.vumc.org/2021/08/polypharmacy-in-high-level-limb-amputations/\)](https://discover.vumc.org/2021/08/polypharmacy-in-high-level-limb-amputations/)(8/18/2021)
- [5] From Above Knee Amputee to Physician with Dr. Bastas  
**Beyond the Disability Podcast (by Dr. Janice Brown - invited interview)**  
[\(https://www.listennotes.com/podcasts/beyond-the-from-above-knee-amputee-to-JEUphsXMLgO/\)](https://www.listennotes.com/podcasts/beyond-the-from-above-knee-amputee-to-JEUphsXMLgO/) (11/4/21)

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 ONLINE FEATURES AND OTHER ONLINE SCHOLARLY PRODUCTS
 

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2017 **Created 3D anatomical models for educational purposes and prosthetic**

component design. Content uploaded to Thingiverse and made available publicly for 3D printing:

<https://www.thingiverse.com/thing:2740390>

<https://www.thingiverse.com/thing:2740401>

<https://www.thingiverse.com/thing:2740412>

<https://www.thingiverse.com/thing:2740380>

2018 Created 3D anatomical models for educational purposes and prosthetic component design. Content uploaded to Thingiverse and made available publicly for 3D printing:

<https://www.thingiverse.com/thing:3290484>

<https://www.thingiverse.com/thing:3290505>

<https://www.thingiverse.com/thing:3233555>

<https://www.thingiverse.com/thing:3233550>

<https://www.thingiverse.com/thing:3231858>

<https://www.thingiverse.com/thing:3231852>

2018 **Ethics Grand Rounds (UT Southwestern Medical Center):** Dallas, TX  
*Bastas G: Biomedical Ethics Considerations Stemming from Limb Loss/Difference Care and Prosthetic Enablement. Talk video-recorded and freely available online. (4/10/2018)*  
(<https://utswmed-ir.tdl.org/handle/2152.5/5069>)

2020 **Anesthesiology Grand Rounds (VUMC)** Nashville, TN  
Cardiopulmonary Adaptations, Pharmacokinetic Considerations, and Phantom Limb Pain Control, Following Limb Amputation.  
(<https://www.youtube.com/watch?v=aaLKRpFEcQw>)

## LANGUAGES

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**Greek** – Native Speaker

**English** – Proficiency Diploma from Cambridge University (Cambridge, UK)

**Japanese** – Advanced Japanese (3<sup>rd</sup> year instruction)

## EXTRACURRICULAR ACTIVITIES & VOLUNTEER WORK

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2021- Application Review Committee Member for the **Jordan Thomas Foundation** (a Brentwood, TN-based national non-profit organization that offers financial assistance for prosthetic enablement to children with congenital or acquired limb loss).

2022 Served as Panel Judge for Vanderbilt University's 2022 SCNO Case Competition (Vanderbilt Students Consulting for Nonprofit Organizations – held 2/20/22) involving 150 students organized in 30 teams, in support of discovery of actionable next growth/development steps for the **Jordan Thomas Foundation** (a Brentwood, TN-based national non-profit organization that offers financial assistance for prosthetic enablement to children with congenital or acquired limb loss).

## PROFESSIONAL ORGANIZATIONS

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Inaugural Chair of the Limb Restoration Rehabilitation Group (now the Limb Care Networking Group) for the American Congress of Rehabilitation Medicine (ACRM)

Member of the American Academy of Physical Medicine and Rehabilitation (AAPM&R)

Member of the Association of Academic Physiatrists (AAP)

Member of the American Academy of Orthotists and Prosthetists (AAOP)

Member of the International Society of Physical Medicine & Rehabilitation (ISPMR)

Member of the International Society for Prosthetics and Orthotics (ISPO)