AOPA’s national assembly ’14
The premier meeting for orthotic, prosthetic, and pedorthic professionals

Sept. 4–7, 2014
Mandalay Bay, Las Vegas

REGISTRATION IS NOW OPEN.
Visit www.AOPAnet.org for updates and additional information.

The AOPA National Assembly is already the most talked about event for 2014—It is the premier destination for the world-wide orthotic, prosthetic and pedorthic community. Register today to participate in the National Assembly.

For information about the show, scan the QR code with a code reader on your smartphone or visit www.AOPAnet.org.
Don’t miss this incredible show as we combine the ENERGY of Las Vegas with the ENERGY of 200 Exhibitors and the ENERGY of more than 2,300 attendees along with top-notch business and clinical experts to give you the dynamic 2014 AOPA National Assembly.
Why You Should Attend

- Earn up to 36 CE credits
- Learn in any of the five dedicated education tracks—providing you with the most relevant education for orthotists, prosthetists, technicians, pedorthists and business managers
- Scientific programs featuring extensive symposia on scoliosis, pediatric orthotics, cranial helmets, microprocessor knees and more
- Unprecedented business education featuring experts in O&P business management, documentation, healthcare reform and marketing
- Innovative four day Pedorthic Education Program focusing on diabetic treatment and wound care from a multidisciplinary faculty of physicians, wound care experts and diabetes educators
- Four days of Technical Education
- New and improved Thranhardt Golf Classic scheduled the day before Manufacturers’ Workshops
- Revised Exhibit Hall Schedule provides more time in the exhibit hall without sacrificing CE credits
- More receptions and networking events
- Networking and career advancement for practitioners and suppliers at all levels of experience—opportunities abound, from receptions to golf, to a happy hour reception, to the wine auction and tasting
- Fabulous shopping, entertainment, championship golf and unparalleled people watching—all of this on the Las Vegas Strip!

No other city competes with the energy, atmosphere, and excitement of Las Vegas—there are many reasons why Las Vegas commands the title as “The Entertainment Capital of the World” and no matter what you call fun, Las Vegas has it. Cirque du Soleil productions, Broadway performances, world-class cuisine, sizzling nightlife, a shopper’s paradise and of course the best people watching!
## Schedule At A Glance

We look forward to four high-energy days of exciting education, networking and Las Vegas entertainment. Here is the Assembly's full schedule:

### WEDNESDAY, SEPTEMBER 3
- 10:00 AM – 6:00 PM: Registration
- 10:00 AM – 6:00 PM: Exhibitor Set-Up
- 1:00 PM: Thranhardt Golf Classic

### THURSDAY, SEPTEMBER 4
- 7:30 AM – 7:00 PM: Registration
- 7:30 AM – 3:00 PM: Exhibitor Set-Up
- 8:00 AM – Noon: Business Certificate Programming
- 8:00 AM – Noon: Manufacturers' Workshops–Tier A
- 8:00 – 10:00 AM: Manufacturers' Workshops–Tier B
- 10:30 AM – 12:30 PM: Manufacturers' Workshops–Tier C
- 1:00 – 5:00PM: Business Certificate Programming
- 1:00 – 5:00PM: Manufacturers' Workshops–Tier D
- 5:00 – 7:30 PM: Viva Las Vegas Welcome Reception Sponsored by Willow Wood

### FRIDAY, SEPTEMBER 5
- 7:00 AM – 6:00 PM: Registration
- 7:00 AM: Breakfast
- 7:15 AM: Opening General Session & Welcoming remarks
- 7:15 – 8:30 AM: Welcome & Keynote Presentation
- 8:45 AM – 10:00 AM: Thranhardt Presentations
- 10:00 AM – 6:30 PM: Exhibit Hall Open & Product Preview Theaters
- 10:00 – 10:45 AM: Break in Exhibit Hall
- 10:45 AM – Noon: Concurrent Education
  - Clinical Orthotic Track
  - Clinical Prosthetic Track
  - Clinical Pedorthic Track
  - Technical Track
  - Business Track
- Noon – 1:00 PM: Lunch in Exhibit Hall
- 1:00 – 2:00 PM: Poster Session
- 2:00 – 5:00 PM: Concurrent Education
  - Clinical Orthotic Track
  - Clinical Prosthetic Track
  - Clinical Pedorthic Track
  - Technical Track
  - Business Track
- 5:00 – 6:00 PM: $5,000 Giveaway—Exhibit Hall Closing Event

### SATURDAY, SEPTEMBER 6
- 7:00 AM – 5:30 PM: Registration
- 7:00 AM: Breakfast
- 7:15- 8:30 AM: Business Meeting and Awards Ceremony
- 8:00- 10:00 AM: Clinical Education
- 8:30 – 10:00 AM: Hamontree Lectures
- 10:00 AM – 6:00 PM: Exhibit Hall Open & Product Preview Theaters
- 10:00 – 11:00 AM: Break in Exhibit Hall
- 11AM – Noon: Concurrent Education
  - Clinical Orthotic Track
  - Clinical Prosthetic Track
  - Clinical Pedorthic Track
  - Technical Track
  - Business Track
- Noon – 1:00 PM: Lunch
- 1:00 – 2:00 PM: Poster Session
- 2:00 – 5:00 PM: Concurrent Education
  - Clinical Orthotic Track
  - Clinical Prosthetic Track
  - Clinical Pedorthic Track
  - Technical Track
  - Business Track
- 5:00 – 6:00 PM: $5,000 Giveaway—Exhibit Hall Closing Event

### SUNDAY, SEPTEMBER 7
- 7:00 AM – Noon: Registration
- 7:30 AM: Breakfast
- 8:00 AM – Noon: Concurrent Education
  - Clinical Orthotic-Pedorthic Track
  - Clinical Prosthetic Track
  - Clinical Pedorthic Track
  - Technical Track
  - Business Track
- 1:00 – 5:00 PM: Manufacturers' Workshops–Tier E

### AOPA's National Assembly '14
Learn about the newest products and the latest technology at the 2014 National Assembly. The AOPA exhibit hall offers more exhibitors, components, devices, tools, supplies and services than any other show of its kind in the United States. Don’t miss your chance to be a part of it. For the most up to date list of exhibitors and links to their websites, visit www.AOPAnet.org.

BOLD listings indicate the exhibitor is a member of the American Orthotic & Prosthetic Association (AOPA)
+
indicates the exhibitor is a Supplier Plus Partner with AOPA.

Ability Dynamics LLC
Abletech Orthopedics Corp.
Advanced O&P Solutions LLC
Aetrex Worldwide Inc.
Algeos USA
+ Allard USA Inc.
ALPS
Alternative Prosthetic Services Inc.
American Academy of Orthotists & Prosthetists (AAOP)
American Board for Certification in Orthotics, Prosthetics and Pedorthics Inc. (ABC)
American Central Fabrication
American Orthotics Manufacturing Corp.
American Plastics, A Division of Curbell Plastics
American Prosthetic Components LLC
+ AMFIT Inc.
Amputee Coalition
AON
AOPM
Apis Footwear Co.
Aquateq Inc.
Arizona AFO Inc.
ARTech Laboratory Inc.
Aspen Medical Products
Atlantic Rim Brace Mfg. Corp.
Becker Orthopedic Appliance Co.
biodesigns Inc.
BiOM
Bioness
BioSculptor Corp.
Board of Certification/Accreditation, Int’l (BOC)
Bledsoe Brace Systems
Bort-Swiss Orthopedic Supply
Boston Brace
BTS Bioengineering Corp.
Bulldog Tools Inc.
Cailor Fleming Insurance
+ Cascade Dafo Inc.
Cascade Orthopedic Supply Inc.
Centri–A Fillauer Co.
CJ Socket Technologies
College Park Industries Inc.
Comfort Products Inc.
Coyote Design
Cybertech Medical
DavMar
DAW Industries Inc.
+ Delcam
Dicarre LLC
DJO
Dr. Comfort
+ Endolite
Exceed-Worldwide
Fabtech Systems LLC
+ Fillauer Companies
Fillauer LLC–A Fillauer Co.
Footmaxx
Freedom Innovations LLC
Fridelles Orthopedic Appliance
Futura International Inc.
Grace Prosthetic Fabrication Inc.
Hersco Ortho Lab
Hosmer Dorrance Corp.–A Fillauer Co.
Janco
JMS Plastics Supply
Kinetic Research
KISS Technologies LLC
KLM Labs
Knit-Rite Inc.
Levy & Rappel
LIM Innovations
Liberating Technologies Inc.
Martin Bionics Innovations
MD Orthopaedics Inc.
Med Spec (ASO)
Medex International Inc.
Medi USA
MHI International LLC/M-Brace
Motion Control–A Fillauer Co.
Nabtesco Proteror – USA
Naked Prosthetics
National Association for the Advancement of O&P (NAAOP)
National Commission on O&P Education (NCOPE)
New Options Sports
New Step Orthotic Lab Inc.
nora systems, Inc.
O&P 1 Central Fabrication
O&P Almanac
O&P Business News and Helio.com by SLACK Inc.
O&P EDGE/Western Media LLC
OPIE Software
O&P Solutions
OPTEC USA, INC
Orfit Industries America
Orthofoot
Orthomerica Products Inc.
Orthotic & Prosthetic Activities Foundation – OPAF & the First Clinics
Orthotic & Prosthetic Equipment Corporation
Orthotic & Prosthetic Group of America (OPGA)
Össur Americas Inc.
OTS Corp.–A Fillauer Co.
Ottobock
Paceline Inc.
Parker Hannifin Corporation–Indego
PEL LLC
Pine Tree Orthopedic Lab Inc.
Pro-Tech Orthopedics
ProtoKinetics LLC
Quality Outcomes
+ Renia GmbH Chemisch Fabrik
+ Restorative Care of America Inc.
Radin 4D
Royal Knit Inc.
Silipos Inc.
Simona America Inc.
Soletech Inc.
+ Spinal Technology Inc.
SPS
STG USA Corp.
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SureStep
Tamarack Habilitation Technologies Inc.
TechMed 3D Inc.
Teh Sen Technology Inc.
ThyssenKrupp AIN Plastics
Tilligies Certified Orthotic Prosthetic Inc.
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Manufacturers’ Workshops

Choose from over 35 Manufacturers’ Workshops featuring the newest products and latest technology presented by leading manufacturers and suppliers from the orthotic, prosthetic and pedorthic profession. Because manufacturers’ workshops are intense, often hands-on learning experiences, participation is limited. Workshops are offered all day Thursday, September 4 and from 1:00 – 5:00 PM on Sunday, September 7. Visit www.AOPAnet.org for updates and complete descriptions of all workshops. This year’s workshop schedule features both 2-hour and 4-hour workshops.

THURSDAY 9/4

TIER A

8:00 AM – Noon (4-Hour Workshops)

The following workshops in Tier A run concurrently within this track

Socket Selection Criteria & Alignment Considerations (MWA-1)
Sponsor: ALPS

Ottobock C-Brace: How to be Successful from Patient Selection to Reimbursement (MWA-2)
Sponsor: Ottobock

What’s New in Socket Technologies from Ottobock (MWA-3)
Sponsor: Ottobock

Low Active Solutions for Above-the-Knee Prosthetic Users (MWA-4)
Sponsor: Össur Americas Inc.

New Innovation for the O&P Market – Introducing the VGK & AK MAGLOCK and more... (MWA-5)
Sponsor: ST&G USA Corp.

Microprocessor Knee and Foot Technology (MWA-6)
Sponsor: Endolite

Canfit: Transforming P&O Practices using CAD/CAM Solutions (MWA-7)
Sponsor: Vorum

OMEGA® by WillowWood® (MWA-8)
Sponsor: WillowWood

bebionic Multi-Articulating Microprocessor Hand Technology (MWA-9)
Sponsor: SteeperUSA

Gomez Orthotic Spine System (MWA-10)
Sponsor: Friddle’s Orthopedic Appliances Inc.

TIER B

8:00 AM – 10:00 AM (2-Hour Workshops)

The following workshops in Tier B run concurrently within this track

SOAP Notes—The Anatomy of a Well Written Note (MWB-1)
Sponsor: Nabtesco Proteor - USA

Are you Keeping Up? The Fast-Changing World of Myoelectric Arms (MWB-2)
Sponsor: Fillauer Companies

CADCAM 101 (MWB-3)
Sponsor: TechMed 3D
Manufacturers’ Workshops

THURSDAY 9/4 (CONT’D.)

TIER C

10:30 AM – 12:30 PM
(2-Hour Workshops)

The following workshops in Tier C run concurrently within this track.

The Cutting Edge of Prosthetic Socket Design—The Infinite Socket from LIM Innovations (MWC-1)
Sponsor: LIM Innovations

My Patient Wants a Foot for What? (MWC-2)
Sponsor: Fillauer Companies

Trust Your Instincts—Documenting Variable Cadence with the Plie 2.0 MPC Knee (MWC-3)
Sponsor: Freedom Innovations

Build a Profitable O&P Business with Technology (MWC-4)
Sponsor: Cascade Orthopedic Supply, Inc.

Innovations in Prosthetic Foot Designs & Composite Materials (MWC-5)
Sponsor: Ability Dynamics

Mobility After Stroke (MWC-6)
Sponsor: Ottobock

TIER D

1:00 PM – 5:00 PM
(4-Hour Workshops)

The following workshops in Tier D run concurrently within this track.

Touch Bionics’ Upper Limb Prosthetic Solutions (MWD-1)
Sponsor: Touch Bionics

The Dual Application Track of Stance Control Orthoses in Chronic and Acute Patients (MWD-9)
Sponsor: Becker Orthopedic

SUNDAY 9/7

TIER E

1:00 PM – 5:00 PM
(4-Hour Workshops)

The following workshops in Tier E run concurrently within this track.

Transfemoral Clinical and Technical Solutions – Including Waterproof Systems and Winning Strategies for Medicare Documentation (MWE-1)
Sponsor: LIM Innovations

Successful Outcomes, Profitable Practice. Making Pediatric Orthotics a Healthy Segment of Your Operation. (MWE-10)
Sponsor: SureStep

Below the Ankle-Looking From The Ground Up (MWE-11)
Sponsor: Aetrex Worldwide

Product Preview Theater Presentations

EXPERIENCE THE ENERGY!

Learn in a lively theater atmosphere right on the exhibit hall show floor.

Allard USA
Tips & Tricks for Carbon Composite AFOs

Aspen Medical
Aspen’s Fully Adjustable Options

Cascade Orthopedic Supply
Current Concepts Using ProComp

Freedom Innovations
Unique Advantages of the Plie 2.0 MPC Knee
Clinical Advantages of the Kinterra Hydraulic Foot and Ankle System

LIM Innovations
Introducing the Infinite Socket with Infinite Possibilities—Unveiling Breakthrough Socket Technology from LIM Innovations
Life in Motion: Meet Users of the Infinite Socket from LIM Innovations

Nabtesco Proteor-USA
Allux Knee—in Pursuit of the World’s Safest Knee
Hydeal Knee—an Ideal Choice

OPIE Software
OPIE Software: Complete Practice Management

Orthomerica Products
Innovative Solutions for Challenging Patients: The Fuzion and Spectrum AFO Systems

Össur Americas, Inc.
New Applications for Unity vacuum System—Expanding Target User Group to K2 and Above-The-Knee Amputees
Össur’s New Rebound Cartilage Brace; Protective Support Solution

Tamarack Habilitation Technologies Inc.
Presentation of a New Intervention for the Management of Skin Breakdown for Amputees

WillowWood
SmartTemp Liner Technology
CORDELL ATKINS, PT, DPT, CWS, CDE, CPED currently serves as the director of the Diabetic Foot Clinic, at the TOSH campus in Salt Lake City. He received his DPT from the University of Utah and has served as president of the American Physical Therapy Association’s Wound Management Special Interest Group. His present clinical load is wound management and diabetic foot care, and he is recognized by the American Academy of Wound Management as a Certified Wound Specialist (CWS). Dr. Atkins is also a Certified Diabetic Educator (CDE) and a Certified Pedorthist.

MARYBETH BARKOCY, PT, DPT received her clinical doctorate in Physical Therapy at AT Still University. Dr. Barkocy has practiced physical therapy at The Children’s Hospital in Denver, Albuquerque Public Schools, in Early Intervention, in home health care, with the Early Childhood Evaluation Program, and has spent a significant portion of her career as an outpatient therapist and clinical instructor at ExplorAbilities Pediatric Therapy Center.

WHAT PARTICIPANTS SAID about the last meeting
“The poster session and the quality of the speakers is what really sets AOPA apart.”

NICOLETA BUGNARIU, PT, PhD currently serves as Associate Professor, Dept of Physical Therapy at UNT Health Science Center. Dr. Bugnariu’s research focuses on the underlying mechanisms controlling motor function in various patient populations across the lifespan. She collaborates with a diverse team of researchers and clinicians, including electrical engineers, robotics engineers, audiologists, physicians, and biomedical scientists from universities, hospitals and industry partners.

MARK BUSSELL, MD, CPO is a graduate from the University Of Illinois College Of Medicine. He is a Physiatrist and ABC Certified practitioner.

STEFANO BRUNELLI, MD is a Physiatrist from Fondazione Santa Lucia, a Scientific Institute for Research, Hospitalization and Health Care (IRCCS) in Rome, Italy. The Institute performs intensive research in the fields of neuromotor rehabilitation and neuroscience.

LORI A. DOLAN, PHD currently serves as Assistant Research Scientist, Department of Orthopaedics and Rehabilitation at the University of Iowa. Dr. Dolan is well-known for her research in the area of adolescent idiopathic scoliosis.

MARNY EULBERG, MD is a family physician who has been the medical director for a Post Polio Clinic in the Denver metro area since 1985; in that time she has seen over 1500 polio survivors with various orthotic needs and using various orthotic devices. In 1985 she founded a non-profit organization, the Human Gait Institute, that provides education and support to orthotic users, organizes training courses for orthotists, and conducts research focused on patient oriented outcomes with various orthoses.

DR. JANOS ERTL, MD is the Chief of Service, Department of Orthopaedic Surgery, Indiana University School of Medicine at Wishard Health Services, Chief Sports Medicine & Arthroscopy, Indiana University School of Medicine and Assistant Professor, Department of Orthopaedic Surgery-Indiana University School of Medicine. He specializes in Adult Orthopaedic Trauma and Sports Medicine/Arthroscopy.

ANDREW HANSEN, PhD is the director of the Minneapolis VA Rehabilitation Engineering Research Programand Associated professor at the University of Minnesota. Dr. Hansen is an internationally recognized expert in ankle-foot prosthetics. His team is actively developing rehabilitation technologies and performing research studies to evaluate effects of medical device user performance.

HUGH HERR, PHD heads the Biomechatronics research group at the MIT Media Lab, is creating bionic limits that emulate the function of natural limbs. In 2011, TIME magazine coined Herr the “Leader of the Bionic Age” because of his revolutionary work in the emerging field of biomechatronics—technology that marries human physiology with electromechanics. A double amputee himself, he is responsible for breakthrough advances in bionic limbs that provide greater mobility and new hope to those with physical disabilities.

DR. HIGHSMITH is a dual licensed prosthetist and physical therapist with a PhD in Medical Science from the USF Morsani College of Medicine. He currently serves as the American Academy of Orthotists and Prosthetists Vice-President and an Assistant Professor at USF in Tampa, FL.

STEVEN KING, DPM, CPED is a podiatrist, pedorthists and researcher. Dr. King is an active member and frequent speaker at the American Society of Testing Materials F13 and E54; American Podiatric Medical Association; Hawaii Podiatric Medical Association; International Society of Biomechanics-Footwear Specialty Group; American Association of Podiatric Sports Medicine and the Advanced Composite Spring Lever Runner.

DONNA ROBERTSON, AT, CPED serves as Consultant of Foot Solutions, Inc. Dr. Robertson is a Certified Pedorthist with unique skills in the sports injury recovery, custom-made orthotics and footwear related products, diabetic foot issues and advanced pedorthic solutions. Dr. Robertson has worked with many sports professionals and is well known throughout the USA for her work and lectures.

URS SCHNEIDER, MD, PHD oversees the Fraunhofer Orthopedics Research Department in Stuttgart. He is a medical doctor and leads the interdisciplinary engineering team with research focused on improved mobility solutions in rehabilitation and orthopedic surgery.

OLENA SEMINOG, MD is a physician concerned with epidemiology of stroke. She is particularly interested in risk factors for stroke. For her project Olena analyses a large linked dataset of electronic hospital records.

TROY S. WATSON, MD is a board certified orthopaedic surgeon specializing in the treatment of foot and ankle disorders and arthroscopy. Dr. Watson has been active with clinical research since beginning the Foot and Ankle Institute and has published several foot and ankle related articles.
Identify educational track categories by using the key code shown at the top of each page.

FRIDAY 9/5

7:00 AM   Breakfast

7:15 AM   Welcome and Opening Remarks

7:30 – 8:30 AM   General Session: Opening Keynote Address

Adrienne Haslet-Davis

Adrienne Haslet-Davis’ life as a dancer was shattered last year at the Boston Marathon bombings. She and her husband Adam, who had just returned from a tour in Afghanistan with the Air Force, were steps away from the second blast. Join us firsthand for her compelling story of hope and thanks. Haslet-Davis has now become an advocate for other amputees. “I feel really passionately about the rights of amputees as well as the advancements in prosthetics,” she said. “I know that the only thing that makes me disabled is not the fact that I don’t have two feet, it’s the fact that what I’m using isn’t advanced enough to make me do the same thing that the person next to me with two feet can do.”

8:45 – 10:00 AM   General Session

Award Winning Thranhardt Lectures (C1)

Don’t miss the “best of the best” at the award winning Thranhardt Lecture series. Launched by a gift from J.E. Hanger in memory of Howard R. Thranhardt, CP, the series offers an honorarium to the winners. This year’s winning presentations are outlined below. (The following sessions run consecutively within this program.)

A Comparative Study of AFO Dynamics During Simulated Gait (C1A)

David Knapp, CPO, Med

This presentation will discuss a method to determine the stiffness profiles for off-the-shelf AFOs and provide insight and discussion of the clinical implications of orthotic ankle management.

Functional Performance and Evaluation of Dynamic Response Feet (C1B)

Nicoleta Bugnariu, PT, PhD
Steven Gordon, CPO/LPO

This collaborative research project combined the expertise from biomechanics, biomedical engineering, physical therapy and CPO/LPO to study the impact of K2 vs K3 feet on functional performance (balance, gait and clinical tests) and quality of life in transtibial amputees.

Evaluation of 1200+ C-Leg Test Fittings in Germany (C1C)

Andreas Hahn, PhD, MSc

We report on 1227 C-Leg test fittings conducted in Germany. Responders span a wide range of age and mobility grades. Fitting success is not predetermined by age, mobility grade, and age at amputation or amputation cause. The analysis underlines the necessity of individual test fittings. The general denial of a C-Leg based on one of the above factors is not supported by this data.

Prosthetists’ Confidence Administering Outcome Measures (C1D)

Susan Spaulding, MS, CPO

We present findings from a study to assess the effects of a mixed-methods training program on prosthetists’ confidence administering two common performance measures, the Amputee Mobility Predictor (AMP) and Timed Up and Go (TUG). Results suggest that targeted training may enhance confidence and be a means to facilitate increased use of outcome measures in clinical practice.

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FRIDAY 9/5

2:00 – 3:30 PM Concurrent Education

O&P Symposium: Generational Factors in Residency Education: Understanding Millennials (C5)
John Brinkmann, MA, CPO, FAAOP
Chris Robinson, MS, MBA, CPO, ATC, FAAOP
Robert Huddler, PT, DPT, BOCOP, FAAOP
Nina Bondre, BS, MPO Candidate
Learning to connect with the Millennial Generation will help you recruit, train, and retain employees. This symposium will help you understand:
- Workforce readiness issues related to generational cohort differences
- Commonly identified features of the Millennial Generation
- Cultural and environment factors contributing to generational cohort features
- Strategies for effectively training millennials
- Changes in residency education over the past decades
- Current requirements and expectations during residency.

Prosthetic Symposium: Microprocessor Controlled Knees Symposium (C6)
Hans Dietl, PhD, CTO
Philip Kamps, MBS
Additional speakers to be announced
Hear from relevant researchers of Microprocessor Controlled Knees (MPK) as they compare and explain how an individual AK Amputee benefits from his/her design in ADL situations. Each researcher has received a video consisting of a combination of ADL situations like walking on level ground, stairs, ramps and stumbling. The researchers will utilize the video as a basis for their presentation and allow you, the audience, to directly compare the different solutions.

Pedorthic Symposium: Diabetic Foot Team Members, Part I (C7A)
Corky Atkins, CPod, PT, CDE
Donna Robertson, CPod, AT
Additional speakers to be announced
Join our multi-disciplinary team of diabetic foot care professionals, including a wound care specialist, pedorthists, diabetes educator, Podiatrist and orthopedic surgeon for a candid discussion on the different team member roles when treating the diabetic foot.

Custom Silicone Injection Techniques (T2)
Alex Brett, RTPO
Create custom urethane AFOs with silicone injection techniques.

The Pitfalls You Need to Be Aware Of When Selling Your Business (B4A)
Barry Smith, Esq. Jeremy Smith, Esq.
Thomas V. DiBello, CO, FAAOP Frank Bostock, CO
Whether you are buying, selling or interested in determining the value of an O&P business—our interesting and informative panel will enlighten you with real life examples and how to avoid the pitfalls that have trapped others. This informative panel will offer insights from an attorney, an accountant and former owners who will discuss their personal experiences of selling their patient care facility.

Hospital-Owned O&P Programs (B5)
Matthew Garibaldi, CPO
Jeffrey Wensman, CPO
This two-hour program will get orthotists, prosthetists and administrators of hospital-owned orthotic and prosthetic programs together to discuss challenges and topics of interest, such as: education, finance, hospital-specific issues, marketing, EHR implementation, ACO’s, reimbursement, and general operations. The intent of this program is to share and learn various ideas and solutions to survive the unique problems created by working in a hospital setting. Those working in a related free-standing rehab hospitals or full-service hospitals are encouraged to attend.

3:30 – 5:00 PM Concurrent Education

Lower Limb Treatment Options (C8)
(The following sessions run consecutively within this program.)

Novel Design for Mechanical Stance-Controlled AFO for Non-Spastic Equinus Gait (C8A)
Mark Geil, PhD
The design of a novel stance-controlled AFO is described. The device is purely mechanical, without microprocessors, and is appropriate for non-spastic equinus in which heel contact should be facilitated but free push-off should be permitted.

Can Older Adults’ Postural Stability be Improved with Ankle Foot Orthoses? (C8B)
Ryan Crews, MS, CCRP
Falls by older adults are a serious challenge to the healthcare system. This study of 30 participants investigated whether postural stability of older adults may be improved with the use of custom made ankle foot orthoses.

A Comparison of Gait Kinetics and Kinematics using Varying Orthotic Designs in a Child with Spastic Diplegia Post Selective Dorsal Rhizotomy (C8C)
Marybeth Barkocy, PT, DPT
Deane Doty, CPO
Children with cerebral palsy often use orthoses to improve standing balance and gait. There is a lack of research regarding orthotic design and gait outcomes in children following Selective Dorsal Rhizotomy for spasticity reduction. This case study is to establish the benefit of the AFO/FO in improving overall function and efficiency of these patients.

Pediatric Partial Foot Prostheses: A New Treatment Option (CBD)
Pamela Hale, CPO
A 7-year old female with quadramembral longitudinal partial foot and hand amputations tested the effects of wearing high top shoes, shoes with toe filler inserts and a tibial tubercle height rigid dynamic carbon composite (RDCC) AFO with custom prosthetic toe filler inserts. Pelvic kinematic data and temporal special data was compared between the three conditions. The RDCC AFO condition was shown to improve pelvic motion and improve overall function.

X-ray Validating Triplanar Skeletal Alignment in Weight-bearing Applications for Lower Limb Orthotics (C8E)
Mark Bussell, MD, CPO
Marmaduke Lake, CPO
The novel approach to lower limb rehabilitation for assurance of better structural alignment utilizing X-rays to help validate alignment. For the same reasons we utilize X-rays for scoliosis orthotic care, weight-bearing X-rays for lower limb orthoses demonstrates validity of skeletal alignment, joint integrity, and reduction of stresses on supporting structures. With better alignment in the Sagittal, Coronal, and Transverse planes, the preservation of all supporting structures, as well as, improving overall balance of the individual.
Amputees Using the Trans-Femoral Socket System (C9B)
Mark Russell, MD, CPO
Orthotic treatment with advanced methods and technologies are now providing outcomes that rival those found in prosthetics. Potential structural and functional outcomes for people in need of lower limb orthoses have always lagged behind those found in prosthetics, until recent developments. With proper training, many benefits utilizing these methods and technologies will be demonstrated, including increased muscle strength, muscle bulk, bone density, function, and structural alignment.

Clinical and Biomechanical Effectiveness of Decompressive Knee Bracing for Medial Compartment Osteoarthritis (C8G)
Eric Lamberg, EdD, PT, CPed
This presentation will focus on results ascertained from a study investigating the effects of using a decompressive knee brace for people with medial compartment osteoarthritis. Both clinical, biomechanical and functional results will be presented.

Prosthetic Management of the Lower Limb (C9)
(To follow the following sessions run consecutively within this program.)

M.A.S. 4 Dimensions Ischial Ramal Containment Socket Design for Hip Disarticulation Prosthesis (C9A)
Marlo Ortiz, CP(M)
Most common problems in the hip disarticulation prosthesis are the discomfort of the ischial weight bearing because in most cases there is no enough soft tissue in the ischium. Suspension and prosthetic control are other issues; with flexible ischial ramal containment in 4 dimension can provide comfort, better suspension and prosthetic control.

Advanced Trans-Femoral Socket System (C9B)
Matthew Wernke, PhD
We report on a new socket system design for transfemoral amputees. The system consists of a streamlined, hose-less side-mounted vacuum pump and internal sealing system. Questionnaire responses and at-home data from 21 test patients is presented.

Determining Functional Limitations of Unilateral Lower Limb Amputees Using the Timed-Up-and-Go Test (C9C)
Sheila Clemens, MPT, BS
Jennifer Lucarevic, PT, DPT
This study investigated differences in Center of Pressure excursion and time taken to perform the Timed-Up-and-Go test under two different conditions: 1) executed toward the sound side, and 2) executed toward the prosthetic side.

Clinical Survey of Hi-Fidelity Transfemoral Interface: A 24-month Retrospective Review From an Early Adopter’s Perspective (C9D)
Thomas Cutler, CPO, FAAP
The Hi-Fi interface follows several other transfemoral socket designs that claim to improve existing socket design. A small practice owner shares practical clinical experience of the past three years. Learning curves, mistakes, and wrapping one’s mind around the dream of “grabbing the femur” have led to benefits in every turn, new challenges, and the conclusion that finally, something has delivered more than it promised.

Development of a BMI Calculator for Amputees (C9E)
George Gondo, MA
Obesity is one of the leading public health problems in the United States. Developing a Body Mass Index calculator for amputees can help prosthetists play a role in combating this public health issue and document the impact of prosthetic care on their patient’s health.
Education Programs

**FRIDAY 9/5**

**Diabetic Foot Team Members, Part II (C7B)**
Corky Atkins, CPed, PT, CDE
Donna Robertson, CPed, AT

Additional speakers to be announced

Part II of this symposium will focus on the team approach to treating the diabetic foot.

**The Rising Costs of Fabrication! Can You Afford It? (T3)**
Brad Mattaeer, CPA, CFo
Glenn Hutnick, CPO, CTP, FAAOP

Is fabricating in-house cost effective anymore? A historical review of the rising cost of goods compared to today's O&P environment.

**Business Valuation and Exit Planning (B4B)**
Allen Oppenheimer, Esq.

Learn how to increase business value in this challenging economy, how to facilitate a business exit plan, the sale of business process, ESOPs and succession planning. Participants will receive a workbook to help them create a personal plan.

**SATURDAY 9/6**

7:00 AM  Breakfast

7:15 – 8:30 AM  Association Membership Meeting and Awards Program

The annual AOPA Membership Meeting and Awards Program has been modified to give you more time to attend education sessions and the exhibit hall. We hope you will participate in an interesting update on what’s happening with your organization and profession. Receive an update from the AOPA Treasurer and learn what accomplishments your membership organization has made over the past year.

An awards program will follow—join us to honor the following:

- Lifetime Achievement Award Winner
- Legislative Advocacy Award Winner
- Technical Fabrication Contest Winners
- The Otto and Lucille Becker Orthotic Award
- Edwin and Kathryn Arbogast Prosthetic Award
- Introduction of AOPA leadership

8:30 – 10:00 AM  General Session: Award Winning Hamontree Business Lectures (B6)

The Sam E. Hamontree, CP Business Education Award was created to recognize the best business education paper or proposal submitted for presentation at the National Assembly. This award is envisioned as a counterpart to the Thranhardt Award given each year to the best clinical abstract(s). The audience will be invited to cast their vote for the award winner. The winner will be announced on Saturday afternoon. (The following presentations run consecutively within this program.)

**So, What Are We Missing? (B6A)**
Eric Burns, CO

Some may feel O&P is facing rough times. Like everyone in healthcare, we have challenges. But are the challenges just unrecognized opportunities? What if O&P can provide answers to healthcare’s biggest question? We are great at telling our stories to patients and referrals. Daily, we demonstrate our value returning mobility and independence to our patients. Daily, we provide the tools allowing our patients to regain their productive lives. We experience this value everyday with every patient visit. But we also provide what healthcare wants: savings. For every dollar spent on O&P, we save healthcare at least four. We reduce inpatient stays, eliminate surgeries, keep patients at home, allow them to return to work, and help restore their independence. We provide the story healthcare wants to hear.

**Build a Stronger Business: Megatrends Impacting Your O&P Practice and What You Need to Do Now to Optimize Your Business (B6B)**
Mike Mallaro, CFO, CPA

O&P is undergoing significant change, threatening the survival of many while also creating tremendous opportunities. The session will explore Megatrends impacting the industry, explain what each means to O&P practices and will discuss strategies to capitalize where possible, and mitigate where necessary. The presenter offers a uniquely pragmatic financial perspective.

**Review of Resources for Orthotic and Prosthetic Practice Management (B6C)**
Jason T. Kahle, MSMS, CPO, FAAOP

Competing with large competitors is difficult without the knowledge of accessing resources that can assist with business development. In today’s environment a clinical practice manager should be well versed in outcomes measures, referrals’ needs, patient resources, web development, revenue generation, the latest research, product selection, and community outreach programs. Accessing the resources to assist a clinician in building their knowledge of the aforementioned, rebranding, clinically differentiating, and ultimately revenue generating will be discussed.

**WHAT PARTICIPANTS SAID about the last meeting**

“*The exhibit hall size and scope was impressive.*”

8:00 – 10:00 AM  Prosthetic Technologies (C11)

8:00 – 9:00 AM  Symposium: Elevated Vacuum and the Client with Transfemoral Amputation—Goals, Observations and Measurements From Bench to Clinic (C11A)

Jason T. Kahle, CPO, MSMS, FAAOP  Cameron Rink, PhD

Matthew Wernke, PhD  Jeffrey A. Denum, CP

Transfemoral amputees (TFA) present many challenges for today’s prosthetist, from achieving a comfortable fitting interface, to achieving secure suspension during ambulation. There is vast interest among clinicians in finding methods to better serve their patients, particularly, a TFA socket design which is compatible with elevated vacuum suspension. There have been a number of qualitative reports of improvements to residual limb (RL) health while using vacuum suspension; however, quantitative outcomes are lacking. Current VA-funded research has focused on the development and quantitative assessment of a socket system designed for TFAs.

9:00 – 10:00 AM  Symposium: Modern Technologies (C11B)

Urs Schneider, MD, PhD  Andrew Hansen, PhD

Dennis Clark, CPO  Eric Rubie, Emotis

Roland Staub, Wittenstein  John E. Ferguson

Bernhard Budaker, PhD

This panel discussion will cover composites, polymers, implant drives, mobile apps, designs for electric drives—including the required identification in biomechanics and simulation.

10:00 AM – 6:00 PM  Exhibit Hall and Product Preview Theater

10:00 – 11:00 AM  Break in Exhibit Hall
Idiopathic Toe Walking (C14C)

Walking Boot for the Treatment Of Achilles Tendon Repair (C14B)

offloading orthosis and having proprioception impairment are at risk of fall. It is not

Balance is one of the vital elements of activity performance. Diabetic patients using

total Contact Insole materials towards reducing pressure variables.

Arjan Buis, PhD

limited toe walking in this population, and should be considered as a potential

This research discovered a simple and potentially effective therapeutic treatment for

Mark Geil, PhD

First bio mechanically engineered walking boot that utilizes adjustable uprights to

The Advanced Composite Spring Lever Orthotic Device is a newly patented prosthetic

Steven King, DPM, CPed

and orthotic gait system that utilizes composite materials and simple machine physics

and pressures that impact the residual limb. Many new components that include

microprocessors take direct measurements to establish the gait parameters needed

by the individuals who are being fitted with them. This includes MP feet, ankles, and

knees as well as the use of load cells to measure forces and moments. Use of Direct

Measurement to design sockets appears to lie in the near future. The goals of this

symposium are to present to both the clinician and researcher the state-of-the-art

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uses and methods of Direct Measurement.

Step by Step Treatment Options for Pedorthists—A Free Paper

Session (C14)

(The following sessions run consecutively within this program.)

Advanced Composite Spring Lever Orthosis (C14A)

Steven King, DPM, CPod

The Advanced Composite Spring Lever Orthotic Device is a newly patented prosthetic

and orthotic gait system that utilizes composite materials and simple machine physics

to enable the user to be more efficient, stable and safer.

Biomechanic Justification for the Use of an Adjustable Upright

Walking Boot for the Treatment Of Achilles Tendon Repair (C14B)

William Cox, CPO

First bio mechanically engineered walking boot that utilizes adjustable uprights to

customize the fit of every walking boot for Achilles tendon repair.

Plantar Foot Surface Ameliorates Equinus Gait in Children with

Idiopathic Toe Walking (C14C)

Mark Gell, PhD

This research discovered a simple and potentially effective therapeutic treatment for

children with idiopathic Toe Walking. Barefoot walking on a gravel surface significantly

limited toe walking in this population, and should be considered as a potential

treatment or a component in future orthosis design.

Minimizing Diabetic Tissue Injury by Reducing the Effects of

Pressure Variables (C14D)

Arjan Buis, PhD

An experimental investigation to determine the suitability and efficacy of commonly

used Total Contact Insole materials towards reducing pressure variables.

Balance and Risk of Fall in Forefoot Offloading in Diabetic

Neuropathy (C14E)

Mahboobeh Mehdi Khani

Balance is one of the vital elements of activity performance. Diabetic patients using

offloading orthosis and having proprioception impairment are at risk of fall. It is not

clearly known whether neuropathy or/and offloading orthoses increased the risk of fall

in diabetic patient. Thus, the aim of this study was to evaluate balance and risk of fall

in diabetic patient while their forefeet were offloaded.

An Alternative Method for Fabricating Trans-tibial Sockets

Through the use of Socket Cones (T4)

Girma Biruda Assena

Community based rehabilitation (CBR) technique demonstrating how to fabricate TT

sockets using cone technology.

Symposium: Clinical Use of Direct Measurement (C13)

Mark Edwards, CP, MPHE Edward Neumann, PhD, CP, PE, FAAOP

Sam Hale, CPO, MSPO Maria Ramos, BSE, EI

Michael Orendurff, PhD Justin Brink, MSE, EI

Laurent Prossard, PhD Toshiki Kobayashi, PhD

Sophie Vertriest, PhD Randall Alley, BS, CP, LP, FAAOP

Direct Measurement involves the clinical measurement of the forces, moments,

and pressures that impact the residual limb. Many new components that include

microprocessors take direct measurements to establish the gait parameters needed

by the individuals who are being fitted with them. This includes MP feet, ankles, and

knees as well as the use of load cells to measure forces and moments. Use of Direct

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offloading orthosis and having proprioception impairment are at risk of fall. It is not

**Education Programs**

**Saturday 9/6**

**2:00 – 5:00 PM  Concurrent Education**

**Evaluations and Research (C17)**

Klaas Postema, MD  
Seamus Kennedy, CPed  
Geza Kogler, PhD

The afternoon program will focus on three very important areas of diabetic foot treatment:
- Diabetic foot evaluation
- Biomechanical/gait issues of the Diabetic patient
- Current research pertaining to the Diabetic foot

**KAFO Fabrication: Theory and Practice (T5)**

Anthony Wickman, CTP0

Review pre-modification, modification and fabrication of several popular KAFO design types. Criteria for evaluating molds and modifications for different diagnoses and then fabricating the devices to best respond to those pathologies will be covered.

**Marketing and More for the Business Owner (B8)**

(The following sessions run consecutively within this program.)

**The Anatomy of a Well Written Note (B8A)**

Leslie Roberts, MSS, CP  
April 21, 2014

The O&P industry has been under attack by relentless RAC audits. One of the main things we can do as practitioners to offset this attack is to learn to write very clear, concise, detailed and transparent notes. This skill will empower the practitioner to most effectively be able to explain their patient interactions.

**Think Small to Get Big! Micro-Target Your Marketing (B8B)**

Elizabeth Mansfield, BA  
April 21, 2014

Twenty years ago target marketing based on zip code was revolutionary. Ten years ago target marketing based on the household was considered leading edge. These days it has become possible to quickly and easily pinpoint your marketing efforts. Learn who to micro-target; what you should and shouldn’t include in your micro-targeting; and how to craft your micro-targeting messages.

**Healthcare Fraud Enforcement from the Trenches; How to Protect Yourself and Your Business (B8C)**

George Breen, JD  
April 21, 2014

The Government continues to focus its enforcement efforts on healthcare providers, manufacturers and suppliers. Attend this session and learn the key fraud and abuse laws the Government uses to pursue healthcare entities, why the Affordable Care Act presents new challenges, and what you can do to protect yourself and your business in a heightened enforcement climate.

**The Story Strategy: Marketing Your O&P Facility with Quality Content (B8D)**

Doug Chartier  
April 21, 2014

Sharing the stories of positive patient outcomes is a proven method in promoting today’s O&P practice. This presentation will discuss the patient case study as a vital component in education-based marketing for O&P facilities and instruct on how to effectively deliver case studies to engage referral sources and patients.

**Improving your Business Processes and Compliance (B8E)**

Jim Lawson, Outreach Development Manager, American Board for Certification in Orthotics, Prosthetics & Pedorthics

In this session you’ll learn to create best business practices and be compliant throughout your entire organization. During this interactive session we’ll review the top issues ABC surveyors find during their accreditation surveys and discover how to avoid them while saving time and money.

**Using Video for Observational Analysis in Practice (B8F)**

Cara Negri, BSME, CP

The Prosthetics and Orthotics Industry is faced with a challenge of justifying our clinical decisions. We need the help of the physicians and our other allied health professionals to properly document and back up our claims. This program will review video systems that are easy to implement in your practice to aid in clinical decision making, collaboration with the health care team, and documentation requirements.

**3:30 – 5:00 PM  Concurrent Education**

**Orthotic Care Based on Sound Research (C18)**

(The following sessions run consecutively within this program.)

**Use of Motek Medical CAREN Extended to Compare the Effects of a Stance Control KAFO in Locked and Stance Modes on Walking and Tripping (C18A)**

Karyn Ross, BSc (Hons), MBAP0, MISP0, FHEA

The Motek CAREN (Computer Assisted Rehabilitation ENvironment) system is a unique laboratory configuration which allows biomechanical assessment of human movement to be conducted in a manner not previously available to researchers and academics. The system comprises a 6 degrees-of-freedom motion platform, a dual belt force instrumented treadmill, a motion capture system, and a large diameter 180° projection screen for displaying virtual reality environments to participants and the provision of biofeedback. The system allows fully instrumented 3D biomechanical motion analysis of the walking participant. Specifically, the study aimed to investigate in normal subjects the differences in gait and the incidence of tripping while wearing a SCO in locked and stance modes. This pilot study also aimed to develop a test protocol which could then be used for patient testing.

**Finding Toe Out: A Literature Review and Clinical Protocol Update (C18B)**

Gary Bedard, CO, FAAOP

The clinemetric tools and techniques of the past are no longer up-to-date for measuring torsion and rotation elements of the lower limb. Hear the current literature evidence that is appropriate for the modern era of positive model based orthotic fabrication.

**Comparison of Some Patient Oriented Outcomes Between Wearing no Orthosis or a Conventional Orthosis and a Dynamic Bracing Solutions Orthosis (C18C)**

Marny Eulberg, MD

Comparison of some outcome measures that make a difference in the lives of orthotic users between no orthosis, various conventional orthoses, and Dynamic Bracing Solutions (DBS) orthoses. Each person served as their own control—prior to being fit with a DBS orthosis and again at 3 months, 6 months and 12 months after being fit with a DBS orthosis(es). Data on a few patients who have been able to transition from a conventional KAFO to only a DBS AFO on the same leg will also be presented.

**C Brace MPK Orthosis—Case Studies (C18D)**

Curt Kowalczyk, CO

An overview of C-Brace function will precede the examination of 8 case studies. Four unilateral and 4 bilateral users will be presented. The users all demonstrate differing abilities using the C-Brace as their muscle strength differs from weakest to strongest user.
One Man’s Journey: Post Polio Syndrome (C18E)
Teresa Alpert-Leibman, BOCO, CPed
Post Polio Syndrome patients in third world countries are often faced with below knee amputations or untreated altogether forcing them to be disadvantaged physically, financially, intellectually, and emotionally. One man’s journey from Africa is a brave story of overcoming all obstacles, and rediscovering what life can be like standing on his legs with both feet after foot and ankle reconstruction.

Clinical Trials of Newly Designed AORI Foot Abduction Brace and Comparison with Dennis Brown Splint (C18F)
Zeshan Zahid, BSc (Hons)
New device was designed due to high rate of non compliance to Dennis Brown Splint and relapse of deformity.

The Orthotronic Mobility System C-Brace and Conventional Knee-Ankle-Foot-Orthoses: Comparative Biomechanical Evaluation of Functionality (C18G)
Andreas Kannenberg, PhD
Eva Pröbsting, Dipl.-Ing
This study investigated the biomechanical effects of the microprocessor stance and swing control of the C-Brace orthotronic mobility system as compared to conventional locked KAFOs and SCOs. Based on the biomechanical tests conducted, it can be stated that the C-Brace supports more natural motion patterns for walking on level ground as well as descending slopes and stairs.

The Effect of Prefabricated Wrist-Hand Orthoses on Flexion Control of the Wrist (C18H)
Karyn Ross, BSc (Hons), MBAPO, MISPO, FHEA
This research raises questions regarding the design of a variety of prefabricated wrist-hand orthoses (WHO) which has essentially remained unchanged for several decades. Variations in the efficacy between the orthoses tested in reducing wrist motion suggest there is potential to develop enhanced WHO designs to facilitate motion restriction.

Optimizing Mobility for the Prosthetic Patient—A Free Paper Session (C19)
(The following sessions run consecutively within this program.)

Comparison Between a Multi-Axial Joint Foot Versus the SACH Foot in Low-Activity Transtibial Amputees: Functional and Self Report Evaluation (C19A)
Stefano Brunelli, MD
Anna Sofia Delussu, MD
Walking energy cost, mobility, balance and satisfaction with the prosthesis have been evaluated with two different feet: the SACH and the multi-axial 1M10 Adjust foot, in low mobility transtibial amputees. In the light of the results recorded, the 1M10 Adjust has the potential to represent an effective alternative to the SACH thanks to its ease of use and its lower cost compared to the most sophisticated dynamic feet.

Mechanical and Physiological Energetics When Using an Echelon Hydraulic Ankle-Foot Device in Unilateral Trans-tibial Amputees (C19B)
Alan De Asha, PhD
This study determined the compensatory joint kinetic alterations and metabolic costs of multiple-speed and declined walking in trans-tibial amputees when using a dynamic-response foot with either rigid or hydraulically articulating ‘ankle’ attachment (Echelon). Findings indicate that use of an Echelon lead to increased walking speed with concurrent reduction in intact-limb compensatory joint work and reduction in the metabolic cost of gait. This occurred despite increased stance-phase energy dissipation when using the Echelon.

Microprocessor-Controlled Bimodal Ankle-Foot System for Enhanced Stability and Mobility (C19C)
Andrew Hansen, PhD
A novel ankle-foot prosthesis with separate modes for standing and walking will be presented along with a case study of the device that shows improvements in standing balance. Recent improvements to this system, including the addition of microprocessor control, will also be described.

A Microprocessor Controlled Ankle-Foot Prosthesis that Supports Full Powered Running (C19D)
Jeffrey Ward, PhD
A powered ankle prosthesis that provides positive torque and power to the step can greatly improve amputee gait. This presentation will focus on the Ruggedized Odyssey Ankle, a powered ankle prosthesis that can support full powered running. Critical design and control methodologies are described and transtibial amputee participant data are discussed.
Bioenergetic Differences in Walking and Running With or Without an Articulating Prosthetic Knee in High Performing Transfemoral Amputees (C19E)

Jason Highsmith, PhD, DPT, CR, FAAOP

Our sample provides compelling evidence with gold standard measures that running with an articulating knee prosthesis requires significantly less energy than does the non-articulating alternative.

Influence of an Integrated Control Approach on Ramp Descent Control Strategies for Transfemoral Gait (C19F)

Nadine Stech, Dipl.-Ing.
David Moser

This study investigated the influence of an integrated control system consisting of a microprocessor controlled foot and a microprocessor controlled knee under a single controller on ramp descent. The measurements highlighted the need to understand the influence of foot damping settings and its impact on knee control. Further, the study showed the potential of an adapted control strategy.

An Analysis of the “Dead Spot” Phenomenon in Prosthetic Stance Phase: A Comparison of Kinetic Properties, Temporal-spatial Parameters, and Subject Perception in Various High-Activity Prosthetic Feet (C19G)

Tyler Klenow, MSOP, CPT

The purpose of this study is the establish a profile of the “dead spot” phenomenon that occurs during midstance in prosthetic feet. Center of pressure progression, its rate of change over stance phase, anterior-posterior ground reaction force, and rollover shape in various prosthetic foot designs is reported. 3D gait analysis and force plates were used to evaluate these factors.

Evidence-based Recommendations for Trial Fittings of Microprocessor Controlled Hydraulic Prosthetic Knee Joints in Limited Community Ambulators (C19H)

Andreas Kannenberg, PhD

Subjects with a transfemoral amputation and MFCL-2 mobility may benefit from MPK use in safety, function, and mobility. Trial fittings are a means to determine whether an individual does or does not benefit from MPK use. Evidence-based outcome measures used in clinical trials may facilitate clinical decision making.

Evaluation of Prosthetic One-Way Valve Pressure Retention (C21A)

Tyler Dunham, MSPO, CPO

This study aimed to compare the effectiveness at which prosthetic one way valves retain negative pressure in a static environment. Quantifying vacuum retention of these components will provide clinicians direction as to which valves are best suited for maintaining negative pressures.

Comparison of Heat and Moisture between Two Prosthetic Socket Systems (C21B)

Matthew Wernke, PhD

We report outcomes data from a study comparing temperature and moisture buildup between two prosthetic socket systems. The data was recorded before, during and after an activity period which consisted of riding a bicycle.

Advancements In Modular Socket Interface Designs: Generation II—NASA Robotics Research Enhances Socket Interface Capabilities (C21C)

Jay Martin, CP, LP, FAAOP

Research and development in conjunction with NASA and the DoD has lead to significant enhancements in clinical prosthetics and orthotics interfaces. A specially designed fabric interface provides an incredibly lightweight socket design, decreases heat and moisture buildup, and provides superior control and comfort over conventional sockets. This presentation will discuss specific clinical case studies, fabrication, and fitting of the modular fabric-based interface designs use in upper and lower extremity prosthetics, and orthotics.

The SiOCX Socket System (C21D)

Mark Edwards, MHPE, CP
Byron Backus, CP

Subjects with a transfemoral amputation wearing traditional resin based sockets experience high impact and shear forces on their limb. Over time, this can produce pain and/or ulcers over bony prominences. A sampling of users using a new type of socket system allows for collection of quantitative and qualitative data to initially assess the material benefits.
The Effects of Vacuum-Assisted Suspension on Residual Limb Physiology, Wound Healing, and Function: A Systematic Review (C21E)
Jason Kahle, MSMS, CP, FAAOP
Jason Highsmith, PhD, DPT, CP, FAAOP
This is a systematic review of the literature available on the topic of vacuum assisted suspension. In this presentation the properties of vacuum assisted suspension which are supported by peer reviewed, graded evidence will be discussed. The process of a proper literature search and scoring of a journal article will be reviewed. Specific evidence of vacuum assisted suspension that can assist the clinician with medical justification will be discussed.

A Comparison of Distal Pressures on Non-Airtight and Airtight Shuttle Locks (C21F)
William Wright, CP BOC/O
Ever wonder what distal pressures go through a patient's limb with a shuttle lock? We explore non-airtight and airtight shuttle locks and the influence they have on distal pressures.

Residual Limb Circulation In Response To Elevated Vacuum Suspension: Case Reports from a Transtibial and Transfemoral Amputee (C21G)
Cameron Rink, PhD
We report first outcomes of an ongoing trial to quantitatively assess residual limb circulation in response to elevated vacuum suspension. Residual limb skin oxygenation and perfusion results from a transtibial and a transfemoral amputee are presented using out-of-socket imaging platforms and in-socket probe based measurements.

New Research Improves Socket Fit Through Improving Limb Health (C21H)
Jay Martin, CP, LP, FAAOP
A newly discovered formulation of clinically active botanical extracts has been scientifically proven to promote circulation and prevent skin breakdown. As circulation and skin regeneration are enhanced, skin and residual limb health are improved, and greater socket comfort and functional outcomes are realized. What could have been the beginning of a skin issue due to poor socket fit, rubbing, or heat and moisture induced issues can now possibly be prevented through using a daily skin protectant.

A Changing Healthcare World and Its Impact on Orthotics and Prosthetics (B10C)
Anthony Potter
This presentation will provide an overview of current Trends and their Implications for the O&P Industry.

Operating in a Post Health Reform Marketplace (B10D)
Ryan Ball
The Affordable Care Act is changing how Americans access health care and how health care is delivered in America with increased focus on the overall health of the patient. Orthotic and prosthetic professionals must be cognizant of the coming changes and begin to quantify our value within the health care continuum to ensure O&P remains an integral part of the health and wellbeing of amputees and patients seeking orthotic intervention.

Current and New Technology in Foot Orthoses Fabrication for Orthotists and Pedorthists (C22)
Seamus Kennedy, CPed
Jeremy Janisse, CPed, COA
Learn from our panel as they discuss current and new technology in foot orthoses fabrication.
Contests and Awards

Participate in the Third Annual Technical Fabrication Contest

This year’s contest is to fabricate a lower extremity orthosis or prosthesis that best reflects the entrant’s interpretation of “energy” as it applies to prosthetics and orthotics. The projects submitted will be judged on ingenuity, design, finish and function. Learn more and enter the contest at http://bit.ly/OP-2014TechContest.

One winner and one runner-up will be selected in each of the three categories: practitioner, technician and student. All three categories will also be entered into the People’s Choice Award—where congress attendees will vote and select their favorite device.

- First Place Winners receive a $500 Cash Prize
- Runners up receive a $200 Cash Prize
- The People’s Choice Award recipient will receive $300
- Special recognition in the form of a trophy and Press Release will be awarded to the school representing the winning students.
Contests and Awards

Calling All Students and Residents—

Gain National Recognition and Advance Your Career

AOPA's national assembly '14

Enter to win one of two prestigious awards—The Student-Resident Poster Award honors two meritorious scientific papers submitted for presentation as a poster at the AOPA National Assembly.

- The Otto and Lucille Becker Award will be presented for the best orthotic abstract submitted; and

- the Edwin and Kathryn Arbogast Award for the best prosthetic abstract submitted by a qualifying student or resident.

The poster must be exhibited and presented at the AOPA National Assembly for the award recipient to receive the prize. The winners will receive a $500 cash award, free registration to the show, coach-class airfare to the National Assembly and three nights hotel. These awards have been made possible by a special endowment by Becker Orthopedic and WillowWood. Learn more and submit your abstract here http://bit.ly/OP2014Posters.
**WEDNESDAY 9/3**

**Thranhardt Golf Classic**
1:00 PM Tee Time
Desert Pines Golf Course, Las Vegas
Experience a fresh event, one-day before the National Assembly kicks off. No more choosing between workshops and golfing—now you can do both. We’ve scheduled the tournament for the afternoon so you can fly in on Wednesday morning, catch the luxury motor coach to the tournament at noon and enjoy a relaxing afternoon of golf with your O&P colleagues.

This year’s premier location, The Desert Pines Golf Club, is located minutes from the Strip.

- Green fees, cart fees and pre-round range balls
- Transportation via luxury motor coach
- Awards Banquet featuring a Southern Style BBQ and open bar
- New contests—including a chance to win $10,000
- New Premier Prizes for winners.

**THURSDAY 9/4**

**Viva Las Vegas Welcome Reception**
5:00 – 7:30 PM / Exhibit Hall
Don’t miss the fun opening reception as exhibitors (and Elvis) welcome you to the National Assembly “Las Vegas Style.” Get your photo taken with Elvis or Marilyn; enjoy refreshments and peruse the massive exhibit hall. The Welcome Reception is included in your full conference registration. This year’s Welcome Reception will be extra special as our sponsor, WillowWood provides you with a special party favor—stop by the WillowWood booth to get your photo taken with Elvis.

**FRIDAY 9/5**

**New**
**Happy Hour Reception**
5:00 – 6:30 PM / Exhibit Hall
What better way of wrapping up a full day of learning than spending an hour in the exhibit hall, enjoying refreshments and networking with your colleagues and exhibitors. The Happy Hour is hosted by exhibitors. A list of sponsors will be included in the final program and on the website to make it easier for you to partake in the fun. The Happy Hour reception is included in your full conference registration.

**SATURDAY 9/6**

**Exhibit Hall Closing Extravaganza and $5,000 GIVEAWAY**
5:00 – 6:00 PM / Exhibit Hall
New for 2014 is a revised exhibit hall schedule and a new exhibit hall closing extravaganza. Win prizes; participate in the $5,000 giveaway; get entertained by Las Vegas performers and participate in the closing ceremony. The closing reception is included in your full conference registration.

Sponsored by AOPA’s national assembly ’14

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**NEW**

**Sponsored by Giant Slot Machine**
Back by popular demand.
As you attend educational sessions, be sure to get your token for the giant slot machine located in the exhibit hall. Test your luck and play your tokens to win fabulous prizes from exhibitors and AOPA—including several chances to win an iPad!
It's Las Vegas! No place has the dining choices, entertainment opportunities or people watching that Vegas provides.

With over 29 dining outlets at the Mandalay Bay, ranging from Charlie Palmers Steakhouse to Border Grill's casual Mexican and everything in between, you will have plenty of choices to keep your palate happy. There is also a food court for those needed a quick snack. Take a moment to visit http://www.mandalay-bay.com/dining/ for a complete review of all the options the Mandalay Bay has to offer.

The Mandalay Bay has many entertainment outlets: The House of Blues, Beach Concert Series, Michael Jackson One Theater, the Mix Lounge and of course a 135,000 square foot casino. For more information visit www.mandalaybay.com/entertainment or www.lasvegas.com for even more options.

Meeting Location
The 2014 AOPA National Assembly will be held at the Mandalay Bay Resort and Casino, 3950 S Las Vegas Blvd, Las Vegas, NV 89119, (702) 632-7777. Located just 3.5 miles away from McCarran International Airport, the resort is a short 12 minute ride. The exhibit hall and education sessions will be held at the Mandalay Bay, South Convention Center, Level 2.

Hotel Accommodations
Attendees are responsible for making their own hotel reservations. AOPA has reserved a block of rooms for Assembly attendees at the Mandalay Bay Resort.

To receive the best possible rate, register online at https://resweb.passkey.com/go/sopa4. The rate varies by day and ranges from $99 - $179 per night. You may contact the hotel directly by calling 877-632-9001 and providing the group code SOPA4, but please note that hotel reservations made via telephone will be subject to a $10 processing fee.

This block of rooms is being held exclusively for Assembly attendees. Those booking rooms are required to register for the Assembly by July 28 or they will not be eligible for the group rate and subject to cancellation. The hotel will likely sell out over the dates of the Assembly. Please be sure your reservation request reaches the hotel prior to July 28, 2014 when any remaining rooms (if any) will be released. There is no guarantee that rooms will be available at the Assembly rate. Rates quoted here are on a space-available basis only. Once the Assembly block of rooms is sold out, which may be earlier that July 28, there is no guarantee that rooms will be available nor that they will be available at the Assembly rate.

Travel
McCarran International Airport is located 3.5 miles from the 2014 National Assembly meeting destination in Las Vegas. Airfare discounts for the 2014 Assembly are available from Delta and American Airlines.

• Reservations and ticketing are available online at www.delta.com. When booking online, select Book A Trip, click on More Search Options and enter the meeting code NMJ2Q in the box provided on the Search Flight page. Delta reservations may also be made by calling Delta’s meeting reservations at 800-328-1111 Mon-Fri 7am-7pm CDT. Please note that telephone registrations are subject to an additional ticketing fee.

• Reservations and ticketing are also available online at www.americanairlines.com/group, or by calling 1-800-433-1790, and using promotion code AGMT05. Please note that telephone registrations are subject to an additional $25 ticketing fee.

Ground Transportation
Mandalay Bay Resort and Casino is located 3.5 miles from McCarran International Airport. Taxi's are plentiful at McCarran Intl Airport. A taxi from the airport to the Mandalay Bay will cost $16-$20 for up to 5 people. Airport Shuttles are $11. For more options and links to shuttles, visit www.mccarran.com/go.
How to Register

Review the registration category descriptions on the left and complete one registration form for each attendee. For your convenience, there are three easy ways to register.

Emails confirming registration will be sent to each registrant. Read your email carefully when it arrives. If corrections or changes are needed, please follow the instructions on your confirmation prior to July 28th. Changes made after that date will only be made on site at the convention.

Badges and event tickets will be distributed on site. On-site registration will open in Las Vegas on Wednesday, September 3rd at 10:00 AM. Each attendee needs to check in at on-site registration. No badges can be picked up for others attending the show. There will be a $50 fee for lost badges.

Registration and Hotel Cancellations
To receive a refund of registration fees, less a $50 processing fee, notification of cancellation must be received in writing no later than July 28th, 2014. Please fax any registration cancellations to AOPA at 571-431-0899, attention Betty Leppin. No refunds will be made for cancellations received after July 28, 2014. Substitutions are allowed but must be in writing. Mandalay Bay Resort & Casino has a 72 hour cancellation policy. If you need to cancel your hotel reservation, please contact Mandalay Bay directly at (702) 632-7777.

Make the Alumni Connection
When completing your Assembly registration, be sure to include your graduating school and year so you can be included to connect with other alumni from your school. (Even if it is the school of hard knocks, connect with your classmates.)

- Connect with your classmates through the Mobile App—your school will be set up as a networking group
- Proudly wear your school button which will be provided at registration
- Join your friends at the Welcome Reception where you will find a table and message board for your school.
- Share pictures, messages and more through the facebook event page.
- Meet your friends at informal social gatherings on Saturday night.
AOPA 2014 NATIONAL ASSEMBLY

Attendee Registration Form

SEPT. 4-7, 2014 • MANDALAY BAY • LAS VEGAS, NV

Visit www.AOPANet.org for complete registration details and instructions.

BADGE INFORMATION
Please type or print legibly and use one registration form per registrant. Provide information as you would like it to appear on your badge.

Nickname: ___________________ First Name: ___________________ Last Name: ___________________ Credential(s): ___________________

Company: ___________________ Job Title: ___________________

Address: ___________________ City: ___________________ State: ________ ZIP Code: ___________________

Telephone: ___________________ Fax: ___________________ E-mail: ___________________

VERY IMPORTANT – For Continuing Education Credit Tracking. [ ] ABC CERT TYPE [ ] ABC ID NUMBER [ ] BOC CERT NUMBER

EXAMPLE: [ ] CR [ ] LP [ ] D1 [ ] 1 [ ] 2 [ ] 3

REGISTRATION CATEGORIES AND FEES
See registration instructions for category descriptions.

<table>
<thead>
<tr>
<th>REGISTRATION CATEGORIES</th>
<th>Early Bird Registration on or before July 28</th>
<th>Registration after July 28</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEMBER</td>
<td>NON-MEMBER</td>
</tr>
<tr>
<td>Full Conference Registration</td>
<td>$595</td>
<td>$935</td>
</tr>
<tr>
<td>Associate Full Conference Registration</td>
<td>$395</td>
<td>$395</td>
</tr>
<tr>
<td>One-Day Conference Registration</td>
<td>$295 per day</td>
<td>$500 per day</td>
</tr>
<tr>
<td>Exhibits Only Full Conference Registration (Valid for Access to Exhibit Hall only for all show dates.)</td>
<td>$275</td>
<td>$375</td>
</tr>
<tr>
<td>Exhibit Only One-Day Registration (Valid for Access to Exhibit Hall only for individual show dates.)</td>
<td>$100 per day</td>
<td>$150 per day</td>
</tr>
<tr>
<td>Full Conference Children Ages 11-17</td>
<td>$100</td>
<td>$100</td>
</tr>
</tbody>
</table>

Group discounts are available for four or more Full Conference registrants. Call 571/431-0876 for more information.

PARTICIPANT INFORMATION

Is your facility a current member of AOPA? [ ] Yes [ ] No

How often do you attend an O&P meeting? [ ] Every year [ ] When close by [ ] Every other year [ ] First time

What are the primary reasons for attending the National Assembly? Please check all that apply:

[ ] CE Credits [ ] Exhibit Hall [ ] Networking [ ] Education [ ] Location [ ] Speakers [ ] Industry Trends [ ] New Products [ ] Professional Development

Which O&P school did you graduate from?

What year did you graduate?

How many years have you been in your profession? [ ] 0-5 [ ] 6-10 [ ] 11-20 [ ] 21+

What is your purchasing authority? [ ] Full-decision making authority [ ] Joint decision making authority [ ] Advisory role [ ] Not involved in purchasing [ ] Other (Student, Unemployed, etc.)

Job Function—Please check all that apply:

[ ] Orthotist [ ] Prosthetist [ ] Pedorthist [ ] Technician [ ] Fitter [ ] Owner [ ] Office/General Manager [ ] Physical Therapist/Occ. Therapist [ ] Student [ ] Resident [ ] Research & Development [ ] Sales/Marketing [ ] Billing [ ] Accounting

SPECIAL EVENTS

Thranhardt Golf Classic – Individual $195 X____=___________
Thranhardt Golf Classic – Foursome $750 X____=___________
Welcome to Las Vegas Reception* Guest Ticket $45 X____=___________
O&P PAC Wine Tasting & Auction** $150 X____=___________

* Full Conference Registrations include admittance to the reception—bring a guest for $45.
** Includes a $100 credit towards your first winning bid.

PAYMENT

Registration Total __________ Special Events Total __________

TOTAL AMOUNT DUE __________

Fax only if paying by credit card. Checks should be made payable to AOPA 2014.

[ ] Check [ ] Visa [ ] MasterCard [ ] Amex

Card # _________ Exp. Date _________

Print Name ___________________

Signature ___________________

MAIL OR FAX completed form to:
AOPA c/o ExpoTrac, P.O. Box 1280, Woonsocket, RI 02895
Fax: 401/765-6677

Customer Service: AOPA@expotracer.com, 401/766-4142.
Visit www.AOPANet.org for cancellation policy.

Are special accommodations required? [ ] Yes [ ] No

If yes, please explain:

Contact Desert Medical Equipment to reserve scooter and wheelchair rentals at 866/711-9171 or online at www.dmelm.com.

REGISTRATION FORMS MUST BE RECEIVED BY JULY 28, 2014 TO QUALIFY FOR EARLY BIRD DISCOUNTS.
ALPS™ new Guardian Suction Liner features raised Grip Gel™ bands that grip against the socket wall to form a secure interface. The low modulus bands stretch against the socket wall, while the inner wall conforms easily to the residual limb. This ensures there is no restriction of blood flow or stiffening to inhibit donning.

Grip Gel™ bands are strategically placed for both transtibial and transfemoral applications.