

45th Annual Meeting

MUSCULOSKELETAL IMAGING COURSE

September 26-28, 2018

COURSE HIGHLIGHTS

- ► Case-Based Interactive Audience Response Sessions
- ▶ 4 Self-Assessment Module Offerings
- ► Recommendations for MSK Dilemmas
- ► Hot Topics in Musculoskeletal Imaging
- ► Orthopedic Pathology Course
- Musculoskeletal Ultrasound Course



The International Skeletal Society (ISS) invites you to its 45th annual refresher course in Musculoskeletal Radiology. The program is exceptional on numerous counts. All aspects of MSK radiology are covered over three days. The speakers are international experts who have literally written the books on MSK MRI, CT, ultrasound and radiography.

Parallel tracks give participants the option of attending lectures focusing on either sports medicine or other MSK disorders such as neoplasm, infection, arthritis and metabolic disease. In the sports track, lectures emphasize the current thinking about anatomy, physiology and traumatic mechanisms of injury. The program is designed for depth of knowledge. In the MSK disorders track, speakers will address hot topics including bone marrow, peripheral nerves, orthopedic hardware and cartilage. Interventional topics encompass injections, percutaneous treatments and biopsy techniques comparing ultrasound, CT and fluoroscopic guidance.

Here are some highlights:

- · Opening session on bone marrow imaging with histopathological correlation
- · MSK imaging dilemmas with evidence-based recommendations
- · ISS meets DGMSR: imaging of the shoulder
- Self-assessment modules (SAM)
- · Interactive audience response sessions (ARS)
- · Sports-specific injuries involving joints and muscles
- · Rapid-fire presentations on bone and soft tissue tumors
- · Traditional film quiz panel

Several optional courses are available. The one-day MSK ultrasound course takes place on Tuesday. Space is limited for the small group tutorials in which participants can scan models under the supervision of experienced tutors. The one-day radiology-pathology correlation course happens on Sunday. Participants in this pathology course are welcome to join ISS members for case presentations during the Members Meeting on Monday and Tuesday.

In 2018, the ISS refresher course will take place in Berlin at the InterContinental Hotel. The InterCon is recently updated and well located in the Tiergarten district of Berlin, minutes from the Zoo, KaDeWe and Bikini Berlin. Berlin is Germany's largest city and its capital since the reunification of East and West Germany in 1990. Most importantly, Berlin is an extraordinarily vibrant, profoundly historical and cuttingedge cultural city.

We hope you will join us in Berlin.

William Palmer ISS President

Laura Bancroft Chair, Program Committee Andreas Heuck
Chair, Local Organizing Committee

Berlin, the German capital, is renowned for its exceptional variety of attractions, its flourishing cultural scene and a way of life that's both fast-paced and relaxed. Contrasts between historical buildings and modern architecture, between the traditional and the modern are what set the city apart from the rest. The sights of Berlin – from the Brandenburg Gate to the Federal Chancellery – tell the story of an entire nation.



MUSCULOSKELETAL IMAGING COURSE FACULTY

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OVERALL MEETING DESIGN

During this six-day meeting, all attendees are welcome to register for the three-day refresher course, our main educational activity. All attendees can also register for our one-day Pathology Orthopedic Course and Hands-On Ultrasound Course. The Members Meeting, our two-day scientific program, is open to ISS members. The multiple sessions are designed to meet the needs of the multi-disciplinary physicians attending the course. The course focus is targeted towards, pathologists, radiologists, researchers, sonographers, allied health providers and other professionals interested in musculoskeletal imaging.

The primary goal of the refresher course is to provide a rich educational experience for attendees. The wide variety of educational sessions allows participants to remedy educational gaps, regardless of experience or scope of practice. Attendees of the course can expect to gain in depth knowledge of common clinical entities and exposure to uncommon disorders, while also learning of the latest innovations in advanced imaging and therapeutic interventions.

EDUCATIONAL OBJECTIVES

At the conclusion of the ISS 45th Annual Meeting and Musculoskeletal Imaging Course, attendees should be able to:

- Explain the pathophysiology and imaging findings of commonly encountered musculoskeletal disorders and sports related injuries.
- 2. Identify appropriate utilization of radiographs, CT, MRI and ultrasound for evaluating musculoskeletal disorders.

ULTRASOUND AND GUIDED INTERVENTION: MUSCLE, NERVE AND FAT

The need for the hands-on ultrasound workshop and lectures has been established from discussions with the ISS program committee, the feedback from past ISS program committee, the feedback from past ISS program committee and past ISS hands-on workshops, and faculty participation in other similar hands-on ultrasound workshops across the world. The topic chosen for this year's course is ultrasound of Muscle, Nerve and Fat. In addition to didactic lectures, the attendees will participate in hands-on scanning tutorials, allowing the delegates to work in small groups with experts to practice their scanning of muscles, nerves, and fat.

ACCREDITATION

Please visit the website for CME and Sonographer accreditation updates: www.internatonalskeletalsociety.com

EDUCATIONAL NEEDS

Musculoskeletal imaging involves a broad spectrum of pathology including sports related injuries, trauma, arthritis, infection, osseous and soft tissue tumors, and metabolic bone disease. The diagnosis and management of musculoskeletal disorders increasingly relies upon advanced imaging. Further, image guided biopsy and therapeutic interventions play an important role in the management of musculoskeletal disorders. Given these demands, musculoskeletal imagers require ongoing education to maintain an extensive knowledge base, be skilled in state-of-the-art imaging techniques, and understand the latest advances in clinical management.

The refresher course is structured to fully address the educational needs of musculoskeletal imagers. Two parallel tracks in sports medicine imaging and musculoskeletal imaging provide attendees a wide selection of activities to fulfill their individual educational needs. Educational sessions within each track concentrate on specific pathology and anatomic regions. Conventional didactic lectures are supplemented by highly focused "rapid fire" sessions to maximize the educational yield for participants. To facilitate integration of educational material into clinical practice, attendees are encouraged to participate in case interpretation sessions. Interactive events include a film interpretation panel and an innovative "at the PACS" session combining real-time interpretation with didactic materials.

The sports medicine imaging track includes topics reviewing anatomy and pathology of the shoulder, elbow, wrist, hip, knee, ankle and foot. Rapid fire sessions focus on sites of complex anatomy and specific injuries. Special sessions addressing tendon, cartilage, bone and muscle emphasize the evaluation of musculoskeletal structural substrates, affording an in depth exploration of biomechanics, pathophysiology, and advanced imaging. Attendees are assured of an expansive educational experience with offerings that include tendon histopathology, advanced cartilage imaging, pediatric sports injuries, postoperative imaging, and numerous specific sports related injuries.

The musculoskeletal disease track covers a broader array of pathology, acting as both a comprehensive review and update on recent advances. Common musculoskeletal findings are discussed in an introductory "differential and diagnosis" session, with subsequent sessions on trauma, bone and soft tissue tumors, metabolic bone disease and arthritis. Additional sessions address disorders of the spine and peripheral nerves, imaging of orthopedic hardware, and musculoskeletal therapeutic interventions. Advanced imaging techniques are discussed using the popular rapid fire format, including whole body MRI, dual energy CT and metal artifact reduction methods.

EDUCATIONAL

MUSCULOSKELETAL IMAGING COURSE

7:00 - 17:00 REGISTR

16:30 - 16:45

16:45 - 17:00

Sports Specific: Hand and Wrist Climbing Injuries

Sports Specific: Hand and Wrist Tennis Injuries

Andrea Rosskopf, MD

Jenny Bencardino, MD

REGISTRATION/INFORMATION DESK HOURS

7:00 - 16:00

EXHIBIT HALL HOURS

DAY 1

WEDNESDAY, SEPTEMBER 26, 2018

COMBINED SESSION - POT	SDAM I/III
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8:00 - 8:10	INTRODUCTION Laura Bancroft, MD, FACR	8:55 - 9:15	Pediatric Marrow Disorders Nancy Chauvin, MD
8:10 - 10:00	Opening Session: Bone Marrow Moderators: Lawrence White, MD, Michael Tuite, MD	9:15 - 9:35	Bone Marrow Changes in Arthritis, What Are They and Why Do They Matter? <i>Frank Roemer, MD</i>
8:10 - 8:35	Bone Marrow Changes Related to Injury: Anatomy, Pathophysiology, and Terminology <i>Donald Resnick, MD</i>	9:35 - 10:00	Bone Tumors with Prominent Marrow Edema: A Useful Sign in Differential Diagnosis <i>Mark Murphey, MD</i>
8:35 - 8:55	Bone Marrow Histopathology, for Correlation with		

SPORTS	MEDICINE IMAGING - POTSDAM I	MUSCULO	SKELETAL DISEASE - POTSDAM III
10:00 - 10:30	BREAK	10:00 - 10:30	BREAK
10:30 - 12:00	Hot Topics Moderators: Michael Recht, MD, Patrick Omoumi, MD, PhD	10:30 - 12:00	MSK Intervention Moderators: Nicolas Amoretti, MD, Antonio Barile, MD
10:30 - 10:45	Al and MSK Radiology: What is its Role?	10:30 - 10:45	PRP: What is it Good For? Jon Jacobson, MD
10 15 11 00	Michael Recht, MD	10:45 - 11:00	Stem Cells: Ready for Prime Time? Stacy Smith, MD
10:45 - 11:00	New Pulse Sequences in MSK MR: What, When, and Why? Garry Gold, MD	11:00 – 11:15	Can We Treat the Joint? <i>Marnix Van Holsbeeck, MD</i>
11:00 - 11:15	MSK MR Imaging: Have We Gone Overboard with Resolution and Image Quality at the Expense of	11:15 - 11:25	US Guided Percutaneous Treatment for Trigger Finger and Carpal Tunnel Syndrome <i>David Petrover, MD</i>
11:15 - 11:30	Cost and Speed? Naveen Subhas, MD	11:25 - 11:35	Joint and Soft Tissue Injections: US vs Fluoroscopic Guidance <i>Georgina Allen, FRCR, MScSEM</i>
	3D Printing and vr/ar: Do They Have a Role in MSK Imaging? <i>Benjamin Howe, MD</i>	11:35 - 11:45	Spine Procedures: CT vs. Flouro <i>Luca Sconfienza, MD, PhD</i>
11:30 - 11:45	Resurgence of MSK CT <i>Kambiz Motamedi, MD</i>	11:45 - 12:00	Palliative Cementplasty Peter Munk, MDCM, FRCPC, FSIR
11:45 - 12:00	Will Metal Artifact Reduction, Low Dose and Dual Energy Lead to a Resurgence of MSK CT Imaging?	12:00 - 13:30	LUNCH
12:00 - 13:30	Hugue Ouellette, MD	13:30 - 15:00	MSK Imaging Dilemmas: Evidence-Based Recommendations Moderators: Laura Bancroft, MD, FACR, Klaus Bohndorf, MD
13:30 - 15:00	Imaging Sports Injury of the Elbow	13:30 - 13:45	MSK Interventions for Tissue Healing: What Should We Be Injecting and When? <i>Kenneth Lee, MD</i>
12.20 12.50	Moderators: Lynne Steinbach, MD, Simon Ostlere, FRCR	13:45 - 14:00	Subspecialty MSK Teleradiology: Who Does it Help and
13:30 – 13:50	Mechanics and Injury of the Throwers Elbow Mark Anderson, MD		Hurt? Andrew Sonin, MD, FACR
13:50 - 14:10	Biceps and Triceps, Anatomy and Pathology, Does Knowing the Anatomy Matter? <i>David Fessel, MD</i>	14:00 - 14:15	Early Rheumatoid Arthritis: When to Use MR or US Andrea Klauser, MD
14:10 - 14:30	Elbow Ligament Anatomy, Injury Patterns and Lesion Visualization <i>Lynne Steinbach, MD</i>	14:15 - 14:30	Screening for Osteoporosis: Who to Examine and How? Wilfred Peh, MD
14:30 - 14:45	Epicondylitis, Imaging Guided Diagnosis and Treatment Philip O'Connor, MD	14:30 - 14:45	and How Often? Marc-André Weber, MD, MSc
14:45 - 15:00	Sports Injury of the Pediatric Elbow Kathryn Stevens, MD, BS (hons)	14:45 – 15:00	Suspected Diabetic Foot Infections: What Imaging Affects Management? <i>Mark Schweitzer, MD</i>
15:00 - 15:30	BREAK	15:00 - 15:30	BREAK
15:30 - 17:00	Wrist & Hand Sports Injuries: State of the Art Imaging Moderators: Hiroshi Yoshioka, MD, PhD, Jean-Denis Laredo, MD	15:30 - 17:00	Metabolic and Systemic - (SAM) Moderators: Anastasia Fotiadou, MD, PhD, Alberto Bazzocchi, MD, PhD
15:30 - 15:45	MRI: State of the Art Diagnosis of Sports Injuries	15:30 - 15:45	Osteoporosis: Pearls and Pitfalls Giuseppe Guglielmi, MD
	Michael Tuite, MD	15:45 - 16:00	Sarcopenia: Past, Present, and Future <i>Robert Boutin, MD</i>
15:45 - 16:00	Ultrasound in Hand and Wrist Sports Diagnosis: Advantages, Limitations and Intervention	16:00 - 16:15	Adiposity: Musculoskeletal Implications Miriam Bredella, MD
	James Teh, MBBS, MRCP, FRCR	16:15 - 16:30	Renal Disease of Bone <i>Leon Lenchik, MD</i>
16:00 – 16:15	Post-op Hand and Wrist MRI in Sports Robert Campbell, MD	16:30 - 16:45	Drug Induced Musculoskeletal Disorders Michael Richardson, MD
16:15 - 16:30	Sports Specific: Wrist Golf Injuries Bruce Forster, MD, MSc, FRCPC	16:45 - 17:00	Atypical Infections <i>Johnny Monu, MB, BS, MS</i>

WELCOME RECEPTION - POTSDAM II 18:30 - 20:30

Groin Lawrence White, MD

DAY 2

THURSDAY, SEPTEMBER 27, 2018

SPORTS MEDICINE IMAGING - POTSDAM I MUSCULOSKELETAL DISEASE - POTSDAM III 8:00 - 10:00 **Shoulder: ISS Meets DGMSR** 8:00 - 10:00 **Arthritis for Residency and Beyond** Moderators: Anne Jurik, DMSc, Neils Egund, MD, DMSc Moderators: Andreas Heuck, MD, Klaus Bohndorf, MD 8:00 - 8:15 Hands and Feet Pitfalls for Diagnosis Anne Cotten, MD 8.00 - 8.15Rotator Cuff: Current Concepts in Anatomy and 8:15 - 8:30 What Crystals Do and What They Look Like Classification Simone Waldt, MD George Hermann, MD 8:15 - 8:30 Biceps Pulley and Rotator Interval 8:30 - 8:45 What Does MRI Tell Us About the Pathophysiology of Rainer Schmitt, MD, PhD Rheumatoid Arthritis *Monique Reijnierse*, *MD*, *PhD* External and Internal Impingement Syndromes 8:30 - 8:45 8:45 - 9:00 What Does MRI Tell Us About the Pathophysiology of Andreas Heuck, MD Osteoarthritis Ali Guermazi, MD, PhD 8:45 - 9:00 Shoulder Instability Karl-Friedrich Kreitner, MD 9:00 - 9:15 Synovial Masses Presenting as Monoarthritis 9:00 - 9:15 Calcific Tendinitis Christian Glaser, MD Iris-Melanie Noebauer-Huhmann, MD 9:15 - 9:30 Pectoralis, Latissiumus and Teres Major 9:15 - 9:30 CRMO, SAPHO and SCCH: Unravelling the Rheumatological Alphabet Soup Robert Lambert, MB, FRCPC Marco Zanetti, MD 9:30 - 9:45 MRI of the Axial Spine: When is it Spondyloarthritis and When 9:30 - 9:45 Sick Scapula Syndrome, Scapular Impingement and is it Not? Winston Rennie, MB, MSc(SEM), FRCR Periscapular Bursitis Christoph Schaeffeler, MD 9:45 - 10:00 Sacroiliac Joint: Degenerative Versus Inflammatory Arthritis 9:45 - 10:00 Post-Operative Shoulder Reto Sutter, MD Jean-Denis Laredo, MD 10:00 - 10:30 BREAK 10:00 - 10:30 **BREAK** 10:30 - 12:00 Trauma/Stress Injuries (ARS) 10:30 - 12:00 Spine Imaging (SAM) Moderators: Howard Galloway, FRANZCR, Moderators: David Wilson, FRCP, FRCR, E. Remide Arkun, MD Michael Zlatkin, MD 10:30 - 10:45 CT Spine Imaging Pitfalls Tudor Hughes, FRCR 10:30 - 10:45 Upper Extremity Stress Injuries Lionel Pesquer, MD MR Spine Imaging Pitfalls Marcelo De Abreu, MD 10:45 - 11:00 10:45 - 11:00 Axial Skeleton Stress Injuries 11:00 - 11:15 Imaging of Spinal Trauma D. Lee Bennett, MD, MA, MBA Radhesh Lalam, MBBS, MRCS, FRCR 11:15 - 11:30 Spine Infection Suphaneewan Jaovisidha, MD 11:00 - 11:15 Sacral Stress Fractures Mary Hochman, MD 11:30 - 11:45 Osteoporotic Fractures James Griffith, MB, BCh, BAO, MD 11:15 - 11:30 Hip and Knee Stress Injuries How Did I Break 11:45 - 12:00 Degenerative Disk Disease Prudencia Tyrrell, MD My Hip Running? Tudor Hughes, FRCR 12:00 - 13:30 LUNCH Tibia Stress Injuries in Athletes and Military Recruits 11:30 - 11:45 13:30 - 15:00 Rapid Fire ST Tumors (ARS) Nogah Shabshin, MD, MBA, BSc Moderators: Hassan Douis MD, MRCP, FRCR, Frederic LeCouvet, MD 11:45 - 12:00 Ankle and Foot How Did I Break My Foot Sightseeing in 13:30 - 13:40 What's New from the WHO Classification in Soft Tissue Berlin? Daniel M. Walz, MD Tumors Julie Fanburg-Smith, MD 12:00 - 13:30 LUNCH High Water Content Masses: When Do I Need to Worry? 13:40 - 13:50 13:30 - 15:00 Muscle Injury, Edema and Beyond Mark D. Murphey, MD Moderators: Atul Taneja, MD, PhD, Robert Boutin, MD 13:50 - 14:00 Benian versus Malianant Peripheral Nerve Sheath Tumors: 13:30 - 13:45 Patterns of Muscle Abnormalities on MR Imaging Radiologic Rules of the Road Laura Fayad, MD Robert Boutin, MD 14:00 - 14:15 Lipoma vs. Well-Differentiated Liposarcoma: 13:45 - 14:00 Imaging of Muscle Trauma: Role of MR and US Imaging Distinction Francesca D. Beaman, MD Michel Crema, MD 14:15 - 14:30 Surgical Implications of Lipoma vs. Well-Differentiated Liposarcoma: What are the Options? Carol D. Morris, MD, MS 14:00 - 14:15 Muscle Injuries of the Hip and Thigh Marc-André Weber, MD, MSc 14:30 - 14:40 Biopsy Technique: Does it Matter Where I Biopsy? Jeffrey Peterson, MD 14:15 - 14:30 Grading of Muscle Injury: Current Concepts 14:40 - 14:50 Soft Tissue Tumor Local Recurrence: Tricks of the Trade Steven James, MB, ChB, FRCR David M. Panicek, MD 14:30 - 14:45 Skeletal Muscle Imaging in Children 14:50 - 15:00 Imaging of Synovial Neoplasms Hillary W. Garner, MD Hee Kyung Kim, MD 15:00 - 15:30 **BREAK** 14:45 - 15:00 Novel Imaging Techniques for Assessment of Muscle 15:30 - 17:00 Rapid Fire Bone Tumors (ARS) Jim Wu, MD Moderators: Violeta Vasilevska Nikodinovska MD, PhD, MSc, 15:00 - 15:30 BREAK Paul O'Donnell, MBBS, FRCP, FRCR 15:30 - 17:00 Core Curriculum: Sports Injuries in the Pelvis & Trunk 15:30 - 15:40 What's New in the WHO Classification in Bone Tumors? Moderators: David Rubin, MD, Antoine Moraux, MD S. Fiona Bonar, MB, FRCPath, FRCPA Radiology Report for Bone Neoplasms: What's Important for 15:40 - 15:50 15:30 - 15:45 Groin and Trunk Muscle Injuries: Anatomy and Imaging Approach Eugene McNally, MD Staging? Leanne L. Seeger, MD, FACR 15:50 - 16:00 Whole Body MRI for Tumor Imaging Koenraad Verstraete, MD 15:45 - 16:00 Acute Athletic Groin Injuries: Flexors and Adductors 16:00 - 16:10 Enchondroma vs. Chondrosarcoma: Imaging Criteria James Linklater, MBBS Hakan Ilaslan, MD 16:00 - 16:15 Lateral Pelvic and IT Band Injuries Miriam Bredella, MD 16:10 - 16:20 Enchondroma vs. Chondrosarcoma: Surgical Perspective 16:15 - 16:30 Pelvic Apophyseal Injuries Julia Crim, MD Earl W. Brien, MD 16:30 - 16:45 Nerve Blocks & Injections for Pelvic Sports Injuries 16:20 - 16:30 Update on Multiple Myeloma Michael E. Mulligan, MD Jan Fritz, MD 16:30 - 16:40 Imaging of Surface Bone Tumors Daniel Vanel, MD 16:45 - 17:00 Thoracic & Abdominal Wall Muscle Injuries Outside the

16:40 - 16:50

16:50 - 17:00

Bone Tumor or Not That is the Dilemma Rainer Erlemann, MD

Vertebral Bone Marrow: Metastasis or Mimicker

Andrea Baur-Melnyk, MD

DAY 3

FRIDAY, SEPTEMBER 28, 2018

SPORTS MEDICINE IMAGING- POTSDAM I

8:00 - 10:00	Knee	8:00 - 10:00
	Moderators: Ian Beggs, FRCPE, FRCR	
	Andrea Rosskopf, MD	
8:00 - 8:15	Bone/OCD Klaus Bohndorf, MD	8:00 - 8:15
8:15 - 8:30	Cruciate Ligaments <i>Nancy Major, MD</i>	
8:30 - 8:45	Post-Op ACL <i>Philip Robinson, FRCR</i>	8:15 – 8:30
8:45 - 9:00	Menisci Andrew Grainger, BM, BS, MRCP, FRCR	8:30 - 9:00
9:00 - 9:15	Posterolateral Corner William Palmer, MD	0:30 - 9:00
9:15 - 9:30	Soft Tissue, Nerves, and Vascular Structures John Crues, MD, MS	9:00 - 9:20
9:30 - 9:45	Extensor Mechanism <i>David Rubin</i> , MD	9:20 - 9:40
9:45 - 10:00	Lesions About the Proximal Tibiofibular Joint Josef Kramer, MD	9:40 - 10:00
10:00 - 10:30	BREAK	10.00 10.20
10:30 - 12:00	Hip	10:00 - 10:30
	Moderators: Suzanne Anderson, MD, PhD Hema Choudur, MBBS, FRCPC	10:30 - 12:00
10:30 - 10:45	Hip Joint MRI Assessment: Pitfalls, Variation and Myths	
	Patrick Omoumi, MD, PhD	10:30 - 10:55
10:45 – 11:00	Pediatric Hip Imaging Filip Vanhoenacker, MD, PhD	
11:00 - 11:15	MRI of FAI: How to Assess and What to Report Donna Blankenbaker, MD	10:55 - 11:05
11:15 - 11:30	Hip Surgery: How Does Imaging Help? Michael Dienst, MD	11:05 - 11:20
11:30 - 11:45	Post-op Hip MRI: Differentiating Normal from Abnormal <i>Tobias Dietrich, MD</i>	11:20 - 11:30
11:45 - 12:00	Hip Intervention: Its Role in Diagnosis and Treatment Luca Sconfienza, MD	11:30 - 11:45
12:00 - 13:30	LUNCH	11:45 - 12:00
13:30 - 15:00	Foot/Ankle: An MRI Alone Will Make the	11.43 - 12.00
	Diagnosis - Or Will It?	12:00 - 13:30
	Moderators: Joseph Craig, MB, ChB, Charles Bush, MD	13:30 - 15:00
13:30 - 13:45	Lateral Ankle Ligament Anatomy and Injuries Maryam Shahabpour, MD	10.00
13:45 - 14:00	Medial Sided Ankle Pain: Deltoid Ligament and Beyond	13:30 - 13:45
10.15	Julia Crim, MD	13:45 – 13:55
14:00 - 14:15	Midfoot Sprains - More than Just the Lisfranc Ligament Carolyn Sofka, MD	13:55 - 14:05
14:15 - 14:30	Making a Break For It: Tendon Subluxation/Dislocation Ramy Mansour, MD	14:05 - 14:15
14:30 - 14:50	Turf Toe - Not Just for American Football Players Hilary Umans, MD	14:15 - 14:30 14:30 - 14:45
14:50 - 15:00	Ultrasound of Acute Foot and Ankle Sports Injuries	14:45 - 15:00

MUSCULOSKELETAL DISEASE - POTSDAM III

Imaging Orthopedic Hardware

0.00 - 10.00	Moderators: Thomas LeCorroller, MD, PhD Theodore Miller, MD
8:00 - 8:15	MR Imaging of Metal: How To Do It Christian Pfirrmann, MD, MBA
8:15 - 8:30	CT Scanning of Metal: How To Do It Kenneth Buckwalter, MD, MS, MBA
8:30 - 9:00	Multimodality Imaging of Hip and Knee Replacements Theodore Miller, MD, FACR
9:00 - 9:20	Imaging of Shoulder Replacements Alice, Ha, MD, MS
9:20 - 9:40	Imaging of Ankle Replacements Laura Bancroft, MD, FACR
9:40 - 10:00	Plates and Screws - What Do They Do? Marcelo Bordalo-Rodrigues, MD, PhD
10:00 - 10:30	BREAK
10:30 - 12:00	Imaging Peripheral Nerves with Detailed Anatomy and Lesion Characterization Moderators: Carlo Martinoli, MD
	Avneesh Chhabra, MD
10:30 – 10:55	Ultrasound of the Brachial Plexus, Pathology and Technique Made Easy <i>Carlo Martinoli, MD</i>
10:55 – 11:05	MR Neurography: Current Perspectives and Literature Review <i>Gustav Andreisek, MD, MBA</i>
11:05 - 11:20	Peripheral Nerve Anatomy and Lesions in the Ankle and Foot <i>Jean Luc Drape, MD</i>
11:20 - 11:30	MR Neurography of Extra-Spinal Sciatica John Carrino, MD, MPH
11:30 - 11:45	Imaging Nerve Entrapment Syndromes of the Elbow and Forearm <i>Catherine Petchprapa</i> , <i>MD</i>
11:45 - 12:00	Peripheral Nerve Lesions Around the Shoulder, How to Make the Imaging Diagnosis? <i>Catherine Petchprapa, MD</i>
12:00 - 13:30	LUNCH
13:30 - 15:00	Cartilage/Bone (SAM)
	Moderators: Garry Gold, MD, Jung-Ah Choi, MD
13:30 - 13:45	Normal Cartilage Structure Richard Kijowski, MD
13:45 - 13:55	Fast Imaging - 5 Minute Knee MRI Soterios Gyftopoulos, MD
13:55 - 14:05	Isotrophic 3D T2 Mapping Patrick Omoumi, MD, PhD
14:05 - 14:15	Identifying Hidden Zones of the Far Posterior Cartilage of the Femoral Condyles <i>John Crues, MD, MS</i>
14:15 - 14:30	Cartilage Repair - Microfracture <i>Thomas Link, MD, PhD</i>
14:30 - 14:45	Cartilage Repair - ACI <i>Carl Winalski, MD</i>
14:45 - 15:00	Lesions at the Osteochondral Junction Christine Chung, MD

MUSCULOSKELETAL

Mihra Taljanovic, MD, PhD

TUESDAY, SEPTEMBER 25, 2018

FOR COMPLETE ULTRASOUND AGENDA internationalskeletalsociety.com

COMBINED GROUP

ULTRASOUND LECTURES AND DEMONSTRATIONS WILL INCLUDE:

- ► Normal Muscle, Nerve and Fat
- ► Brachial Plexus
- ► Upper Extremity Nerves
- ► Lower Extremity Nerves

INDIVIDUAL GROUPS

ULTRASOUND DEMONSTRATIONS WILL INCLUDE:

- ► Muscle Injury
- ► Muscle Masses
- ► Muscle Inflammation
- ► Guided Treatment of Muscle Injury
- ► Peripheral Nerve Abnormalities and Entrapments
- ► Guided Treatment of Peripheral Nerve Abnormalities
- ► Fat Abnormalities (e.g. lipoma, fat necrosis, cellulitis)

COURSE DIRECTORS

Dr. Julie C. Fanburg-Smith Orthopedic and Soft Tissue Pathology
Dr. Mark D. Murphey Musculoskeletal Radiology
Dr. Franklin H. Sim Orthopedic Oncologic Surgery

FOR COMPLETE PROGRAM DETAILS:

internationalskeletalsociety.com

ONE-DAY PATHOLOGY ORTHOPEDIC COURSE

WHAT IS NEW IN BONE?

Radiology, Pathology and Surgical Treatment: An Updated Sunday Interdisciplinary Bone Course Including German-Speaking Presenters

Sunday, September 23, 2018
Time: 08:30 - 15:30 | Location: Charlottenburg

REGISTRATION/INFORMATION DESK HOURS

EXHIBIT HALL HOURS

LOCATION: POTSDAM FOYER

Tuesday, September 25, 2018 07:00 - 17:00 Wednesday, September 26, 2018 07:00 - 17:00 Thursday, September 27, 2018 07:00 - 17:00 Friday, September 28, 2018 07:00 - 17:00

LOCATION: POTSDAM II

Wednesday, September 26, 2018 07:00 - 16:00 Thursday, September 27, 2018 07:00 - 16:00 Friday, September 28, 2018 07:00 - 16:00

EVENING EVENTS

WELCOME RECEPTION

WEDNESDAY, SEPTEMBER 26, 2018

TIME: 18:30 - 20:30 LOCATION: POTSDAM II ATTIRE: Business Casual COST: Two tickets included in registration fee. Additional guest tickets are \$50 each.

This year's Welcome Reception will be held in Potsdam II inside of the InterContinental Berlin. Visit with exhibitors and colleagues while sampling an array of delicious foods.

*Times and locations are subject to change

HOTEL, TRAVEL & TRANSPORTATION & REGISTRATION INFORMATION



HOTEL INFORMATION

InterContinental Berlin Budapester Strasse 2 Berlin, 10787, Germany

Main: +49 30 26020 | Fax: +49 30 2602 2600

https://www.ihg.com/intercontinental/hotels/us/en/berlin/berha/

hoteldetail?cm_mmc=GoogleMaps-_-IC-_-DE-_-BERHA

RESERVATIONS: +49 30 26020 or

https://book.passkey.com/gt/216143399?gtid=6cfad005751a0ed4aa16813f994ff8d2

ROOM RATE

ISS has negotiated a discounted rate of 209 Euros per night at the InterContinental Berlin.

HOTEL DEADLINE

The cut-off-date for online bookings is August 9, 2018. ISS encourages you to make your reservation early, as the hotel and discount block may sellout before this date. After this date, guests can continue to reserve rooms via phone or email. Reservations will be accepted based on availability.

RESERVATIONS

Attendees are responsible for making their reservations by calling the hotel at +49 30 26020. *Please reference the ISS 2018 Meeting to receive the discounted rate*. Reservations can also be made online at https://book.passkey.com/gt/216143399?gtid=6cfad005751a0ed4aa16813f994ff8d2

HOTEL DEPOSIT AND CANCELLATION POLICY

Rooms may be cancelled by individual guests without a charge until 14 days prior to arrival. For reservations of more than 5 rooms per night within the block, the InterContinental reserves the right to adjust the cancellation terms.

PARKING

Car parking is available

- · Self-Parking Fee: 26 EUR
- · Valet parking is available
- · Valet Parking Fee: 26 EUR
- Underground parking 26.00 EUR daily fee 126 spaces.
 Valet parking is also available.

DIRECTIONS FROM THE AIRPORT

TEGEL AIRPORT (TXL): Take Bus X9 to "Zoologischer Garten". Change to Bus 200, Directions from Airport "Michelangelostrasse" to "Budapester Strasse". The bus stops in front of the hotel. Or take a 10 minute walk / 500m from "Zoologischer Garten" to the hotel.

SCHOENEFELD (SXF): Take the RE7 or RB14 train to "Zoologischer Garten". Change to Bus 200, direction "Michelangelostrasse" to "Budapester Strasse". The bus stops in front of the hotel. Or take a 10 minute walk / 500m from "Zoologischer Garten" to the hotel. Ticket zone is ABC.

REGISTRATION INFORMATION

Registration Fee Includes:

- Entrance to Refresher Course
- · Breakfasts
- Two tickets to the Welcome Reception
- · Program Materials

ULTRASOUND COURSE

Registration for the Ultrasound Course on Tuesday, September 25, 2018, is limited and will be allocated on a first-come, first-served basis to the first 100 participants upon payment of the registration fee. Please be sure to register on the meeting registration form if you wish to attend.

EARLY REGISTRATION DEADLINE

Meeting registration forms must be received by the ISS Executive Office by 08/4/2018 to receive the discounted early registration rate. All forms received after this deadline will be assessed the regular registration fee.

REGISTRATION CANCELLATION AND REFUND POLICY

Registration refund requests must be submitted in writing to the ISS Executive Office no later than **08/4/2018**. All refund requests will be subject to a \$100 processing fee. No refunds will be made after **08/4/2018**

SPECIAL NEEDS

For accommodations on the basis of disability or special dietary needs, please call +1 847-752-5355.

CONTACT THE ISS EXECUTIVE OFFICE BY:

Phone: +1 847-752-5355 | Fax: +1 847-960-3861 Email: info@internationalskeletalsociety.com Website: www.internationalskeletalsociety.com

REGISTER ONLINE internationalskeletalsociety.com

The deadline for discounted early registration is 08/4/2018. After 08/4/2018, regular registration fees will apply to online and onsite registration. Registration Fees are subject to change. Rates are all USD. To lock in these rates, **REGISTER NOW!**

onsite registration. Registration Fees are subject to chan			n these rates, REGIST	EK NOW!
PLEASE SELECT THE CATEGORY THAT BEST DESC ☐ Industry Employee ☐ Other Medical Prof ☐ Fellow ☐ Pathologist ☐ Full Time Administrator ☐ Physician ☐ Non Physician Provider ☐ Radiologist	essional 🔲	Researcher Resident Rheumatolo Student/Trai		
INDUSTRY REGISTRATION - Industry Employee whose con		supporting ISS	OR Industry Medical Sci	ience Liaison . 🗅 \$820
(Proof of MSL Title may be required before confirmation of Industry Employee whose company is NOT already support	,			□ \$1 250
Your submission will need to be approved prior to confirma To find out if your company is currently supporting ISS, plead or by email at donna@veritasmeetings.com	tion of your regi	stration. Approv	val may be based on cur	rent Industry support.
	F2 (CUECK AL	L THAT ADDI	V)	
☐ ISS Website ☐ Ac	eletal Radiology Ivertisement in cebook Advertis	/ Journal Professional Jo sement	□ Calendar - I urnal □ Registration □ Flyer-Postc	Monthly Listing n Brochure Mailer ard at another meeting al Slides at another meeting
PLEASE PRINT CLEARLY				
Title: □ Dr. □ Prof. □ Mr. □ Mrs. □ Ms. □	Other:			
First Name (Forename/Given Name):				
Last Name (Surname/Family Name):				
Academic Degree(s):				
Badge First Name:				
Address:			□ Ho	ome 🗖 Office
City:	State/Pro	ovince:	Postal Zip Cod	e:
Country:				
Phone:	Fax:			
Email:				
MEETING REGISTRATION*				
REGISTRATION CATEGORIES		08/4/2018)	REGULAR FEES (after 08/4/2018)	TOTAL COST
☐ ISS Member (in good standing for 2018) and DGI	MSR Member	PLEASE REG	ISTER ONLINE	
☐ Non-Member Practicing Physician	\$820		\$920	=\$
☐ Non-Physician Provider (Nurse, PA, Technologis	t) \$620		\$720	=\$
☐ Resident Expected Graduation Year	\$620		\$720	=\$
☐ Fellow Expected Graduation Year	\$620		\$720	=\$
Student Expected Graduation Year	\$620		\$720	=\$
ULTRASOUND COURSE REGISTRATION ☐ Ultrasound Course – September 25, 2018 (Early D (Pre-registration is required for this course. There				=\$ ou to register early.)

PATHOLOGY/ORTHOPEDIC		
☐ One-Day Pathology Orthopedic Course	\$100	=\$
☐ Optional opportunity to observe the ISS Members Meeting if registering for the Pathology/Orthopedic Course (optional opportunity for non members)	\$50	=\$
SELF-ASSESSMENT MODULES REGISTRATION (PLEASE NOTE: *Self-Assessment Module fees are NOT included	\$25 with registration)	=\$
*Two tickets to the Welcome Reception are included with your reception are only purchase additional tickets if you are planning to bring	istration.	
Welcome Reception - Wednesday September 26, 2018 # of tic	kets = at \$50 per ticket	=\$
Total Registration Fee		=\$
Total Special Events Tickets		=\$
CDAND TOTAL		1
GRAND TOTAL		=\$
PAYMENT INFORMATION The ISS requires full payment for registration fees and optional act Check* (payable to the ISS) Visa MasterCard Americ *All fees must be paid in US dollars. Checks must be drawn in US dollars. The Checks must be drawn in	an Express Discover ollars, on a US bank, and made payable	
PAYMENT INFORMATION The ISS requires full payment for registration fees and optional act Check* (payable to the ISS) Visa MasterCard America *All fees must be paid in US dollars. Checks must be drawn in US dollars.	an Express Discover ollars, on a US bank, and made payable	
PAYMENT INFORMATION The ISS requires full payment for registration fees and optional act □ Check* (payable to the ISS) □ Visa □ MasterCard □ Americ *All fees must be paid in US dollars. Checks must be drawn in US dollars. International Skeletal Society (ISS) (Tax ID #23-7366930). Be sure to	an Express Discover ollars, on a US bank, and made payable o print your name on the check.	e to the
PAYMENT INFORMATION The ISS requires full payment for registration fees and optional act □ Check* (payable to the ISS) □ Visa □ MasterCard □ Americ *All fees must be paid in US dollars. Checks must be drawn in US d International Skeletal Society (ISS) (Tax ID #23-7366930). Be sure t Credit Card #:	an Express Discover ollars, on a US bank, and made payable o print your name on the check.	e to the
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PHONE REGISTRATIONS CANNOT BE ACCEPTED.

Acceptable registration methods include

- By Fax: +1 847-960-3861
- By Mail: International Skeletal Society
 1061 East Main Street, Suite 300
 East Dundee, IL 60118
- Online: www.internationalskeletalsociety.com

If paying by check, please forward payment to:

International Skeletal Society Attn: Registration 1061 East Main Street, Suite 300 East Dundee, IL 60118 *Wire Transfers

Please email info@internationalskeletalsociety.com for detailed wire transfer information

REGISTRATION CANCELLATION & REFUND POLICY

Registration refund requests must be submitted in writing to the ISS Executive Office by 08/4/2018. All refund requests will be subject to a \$100 processing fee. No refunds will be made after 08/4/2018.

SAVE THE DATE

46th ANNUAL MEETING

MUSCULOSKELETAL IMAGING COURSE

SEPTEMBER 11-13, 2019

