



Visiting Professor Series 2018-2019



October 11, 2018

Dr. Rush Fischer

Chief of Spine Section, Christiana Care Health Services, Newark, DE
(written by Sachin Gupta)



The University of Pennsylvania Department of Orthopaedics was honored to welcome Dr. J. Rush Fisher, the Chief of Spine at Christiana Care Health Services. Dr. Fisher earned his bachelor's degree at Dartmouth College before attending the University of Pennsylvania School of Medicine. Following medical

school, he then completed orthopaedic residency at Hospital of the University of Pennsylvania followed by the prestigious Henry Bohlman fellowship in reconstructive spinal surgery at Case Western Reserve University School of Medicine. He then taught as professor of orthopaedic surgery at the University of Kentucky School of Medicine. In 2002, Dr. Fisher co-founded the Christiana Spine Center in Newark, Delaware, where he has served as the chief of spine since 2007. He is a member of the American Academy of Orthopaedic Surgeons, American Medical Association, Medical Society of Delaware, North American Spine Society, and the Orthopaedic Trauma Association.

The morning began with an educational lecture regarding the twenty-year evolution of spinal care, highlighting the ever-changing nature of the spine world, and how techniques have improved drastically over the last several decades. Dr. Fisher also provided a thorough history regarding the past, present, and future of the Christiana Healthcare System. He discussed some of the daily tasks and meetings that he conducts, as head of the spine division, to ensure that everything runs smoothly on the spine service.

In addition, Dr. Fisher shared several informative spinal trauma cases prompting discussion from the faculty and residents alike. These cases illustrated the complexity of spinal trauma and deformity that he manages on a daily basis. Some of these cases helped detail the advances in spinal fixation

techniques over time including development of sacropelvic fixation, use of wires followed by advancement to pedicle screws, and even the use of bisphosphonates.

To finish the morning's session, Dr. Fisher led a case-by-case discussion regarding complications, indications, and intricate surgical planning for procedures ranging from ACDF to multilevel thoracolumbar fusions for spinal deformity. With his experience and knowledge, he was able to provide insight into the principles of diagnosis and treatment of some very complex spine deformity cases. His visit was both an honor and a privilege for the department, and we look forward to continued collaboration in the future.

October 18, 2018

Dr. Andrew Spitzer

Co-Director Joint Replacement Program, Cedars-Sinai Orthopaedic Center, Los Angeles, CA
(written by Ryan D. DeAngelis)

Dr. Spitzer's career began on the West Coast, where he attended medical school at the University of California Los Angeles School of Medicine. He then went on to train in orthopaedic surgery at the Hospital of the University of Pennsylvania. Following his time spent here, he completed the esteemed joint arthroplasty fellowship at Brigham and Women's Hospital in Boston. Dr. Spitzer now serves as the Co-Director of the Joint Replacement Program at Cedars-Sinai Orthopaedic Center in Los Angeles, California.

Outside of the operating room, Dr. Spitzer pursues his research interests in hip and knee surgery implant design, blood management in total joint arthroplasty, thrombosis prevention, and the non-operative management of osteoarthritis in both the hip and knee. Dr. Spitzer also serves as a reviewer for some of the highest-impact orthopaedic research journals, including *The Journal of Bone and Joint Surgery*, *Journal of the American Academy of Orthopaedic Surgeons*, *Clinical Orthopaedics and Related Research*, *Journal of Knee Surgery*, and *Orthopedics*.

Dr. Spitzer's expertise in joint arthroplasty has garnered international recognition, which was further solidified after he became one of the select few of American orthopaedic surgeons to be named an honorary member of the Israel Orthopaedic Association. Since first becoming involved with the organization in 2003, Dr. Spitzer has made over a dozen trips to Israel. Given his long-term commitment to educating residents, fellows, and attending orthopaedic surgeons in both the operating room and classroom, the Israel Orthopaedic Association was honored to present him with this award in Tel Aviv.

Before beginning the morning's lectures, Dr. Spitzer briefly reflected on his own time spent sitting in the Agnew-Grice Auditorium and paid tribute to the wealth of knowledge he attained during his time as a Penn Orthopaedics resident. To begin his first lecture, Dr. Spitzer reviewed key demographic information regarding osteoarthritis of the knee and total knee arthroplasty, as well as patient satisfaction rates with total knee arthroplasty. He then discussed why total knees fail and highlighted the actual goals of a total knee arthroplasty. Dr. Spitzer continued by comparing and highlighting the data surrounding measured resection and gap balancing. Lastly, Dr. Spitzer reviewed his own approach to total knee arthroplasty using a mechanical axis gap balancing technique.

Dr. Spitzer's second lecture turned the audience's attention away from the operating room and focused on delaying a total knee arthroplasty. Here, Dr. Spitzer demonstrated how viscosupplementation is effective across the entire spectrum of osteoarthritis of the knee. This intervention serves to improve synovial fluid rheology, reduce inflammation, and may even help preserve cartilage. These injections ultimately decrease pain and in turn, delay the need for total knee arthroplasty. Dr. Spitzer closed his talk by highlighting how injection therapy bridges the gap between non-invasive measures and total knee arthroplasty.

Both lectures generated interactive, thought-provoking discussion amongst faculty and residents alike. The group then had the opportunity to work alongside Dr. Spitzer directly in a Sawbones total knee arthroplasty workshop where Dr. Spitzer demonstrated the techniques he discussed in his first lecture. The residents truly valued this experience, as it is extremely uncommon to have the opportunity to work so closely with an expert from another institution.

From Dr. Spitzer's insightful lectures, ensuing thoughtful discussion, and hands-on Sawbones lab, the morning was full of opportunity to further increase the department's knowledge in joint arthroplasty.

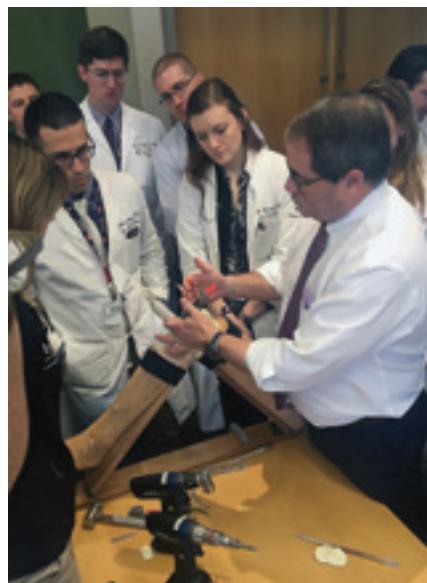
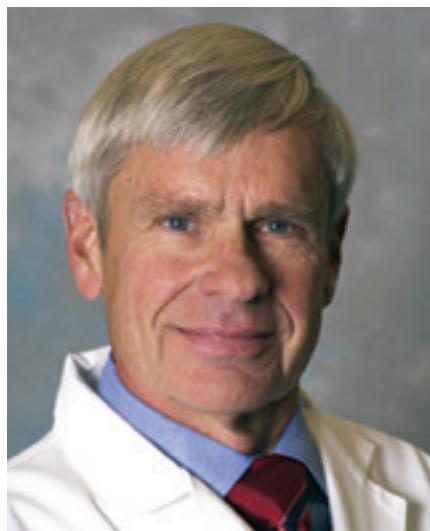


Figure 1. Dr. Spitzer and residents discussing total knee arthroplasty techniques in Sawbones lab

November 1, 2018: 19th Annual Dr. Ernest J. Gentchos Lectureship

Dr. Frederick Matsen III

Professor of Orthopaedic Surgery, University of Washington School of Medicine, Seattle WA and
Douglas T. Harryman II Endowed Chair in Shoulder and Elbow Research
(written by Liane Miller)



Dr. Matsen earned his M.D. at Baylor University School of Medicine, followed by an internship at John Hopkins hospital and two year clinical associate position at the National Institutes of Health. He then completed his residency training in Orthopaedic Surgery at the University of Washington Medical Center in Seattle. He is a tenured full professor in the Department of Orthopaedics and Sports Medicine and the holder of the Douglas T. Harryman II Endowed Chair in Shoulder and Elbow Research at the University of Washington Medical Center.

Dr. Matsen is an internationally recognized expert in reconstructive shoulder surgery and pioneered the 'ream and run' procedure for patients desiring a high level of physical activity and wishing to avoid the potential risks of a plastic socket and bone cement in traditional shoulder arthroplasty.

His clinical interests include reconstructive shoulder surgery, major rotator cuff deficiencies, and complex revision shoulder surgery. Most importantly, he strives to provide individualized treatment to the specific needs of his patients in an evidence-based practice. Not surprisingly, he has received recognitions in teaching and research from the University of Washington, as well as the American Orthopedic Association, the Association of Bone and Joint Surgeons, and the American Shoulder and Elbow Surgeons. With over 200+ peer reviewed publications to date, he is a true leader and innovator in his field.

During his lecture at Penn, Dr. Matsen provided a patient-focused discussion on his approach to patient care, highlighting the difference between what physicians do 'to' the patient versus what should be done 'for' the patient. He then examined a number of his own cases, and discussed how Orthopaedic Surgeons can learn from 'failures' in order to provide better, more appropriate care in the future.

Dr. Matsen's patient-centered focus and intellectual curiosity are a perfect complement to highlight the legacy of the annual Ernest J. Gentchos Lectureship. This lectureship is a proud tradition at Penn Orthopaedics, established in 2001 to honor the enormous contributions of our own Dr. Ernest Gentchos. As faculty at Penn, Dr. Gentchos advocated that superior patient care relies on studying one's patient, keeping an open mind, and challenging every idea. In addition to his countless academic achievements and clinical contributions, Dr. Gentchos carried his humanitarian passions outside the realm of medicine through his establishment of several endowed scholarships. On a yearly basis, Dr. Gentchos sponsors several medical school, college, and high school students, and maintains that the greatest gift you can give anyone is that of education. Always thirsting for knowledge, it is never out of the ordinary to see Dr. Gentchos reading a journal article or opening a textbook off of the shelf. His mantra of "What did you learn today?" serves as a reminder that we are forever students in the field of orthopaedics. The University of Pennsylvania Department of Orthopedics was truly fortunate to host Dr. Matsen for this lectureship.

November 29, 2018: Inaugural San Baw, MD Honorary Lecture in Orthopaedic Innovation Dr. Bartek Szostakowski

Royal National Orthopaedic Hospital, UK
(written by Lauren Boden)

The University of Pennsylvania Department of Orthopedic Surgery was honored to welcome Dr. Bartłomiej Szostakowski for its inaugural Dr. San Baw GM'58 Honorary Lecture in Orthopedic Innovation. Dr. Szostakowski works at the

Department of Sarcoma, Soft Tissue and Bone Tumors at the Maria Skłodowska Curie Memorial Cancer Centre and Institute of Oncology in Warsaw, Poland. He is a graduate of the Medical University of Gdańsk, Poland and completed a residency in trauma and orthopedics at the Infant Jesus Teaching Hospital in Warsaw. He was able



Figure 1. Dr. San Baw...

to train in the UK with some of the most prestigious surgeons at the Royal National Orthopedic Hospital in Stanmore, where he holds post of the honorary research fellow.

This lectureship was established in memory of Dr. San Baw, a Penn Alumnus of the graduate school of medicine from Burma who helped pioneer the use of ivory hip prostheses for femoral neck nonunion and also developed a new technique for treating infantile pseudoarthrosis of the tibia. This lectureship was made possible by the generous contributions of Dr. San Baw's son, Professor Myint Zan. The University of Pennsylvania Department of Orthopedics was delighted to welcome Professor Myint Zan back to Philadelphia to participate in the inaugural lectureship.



Figure 2. Dr. Bartłomiej Szostakowski

In his lecture, titled "Dr. San Baw: A Son's Tribute", Professor Myint Zan gave a passionate account of Dr. San Baw's life story, from humble beginnings in Burma through his career as an orthopedic surgeon. With a spark in his eyes, Professor Myint Zan recounted his late father's journey to the United States and his subsequent contributions to orthopedics made

possible by a strong work ethic and a creative mind. Although he may not have received as much press as other innovators and many of the original records of his contributions have been lost, his memory and eye for innovation will live on with this lectureship.

Dr. Bartłomiej Szostakowski became connected with Professor Myint Zan after a temporary interest in Dr. San Baw's career led to an email conversation. This conversation about medical history soon blossomed into a re-discovery of Dr. San Baw's orthopedic contributions. Because of their connection



Figure 3. Dr. Bartłomiej Szostakowski and Professor Myint Zan with Dr. Levin

and shared interest in sharing the story of Dr. San Baw, we had the pleasure of hosting Dr. Bartłomiej Szostakowski for the inaugural lecture, entitled "Dr. San Baw

The Forgotten Innovator in Orthopedic Biologic Reconstruction." Dr. Szostakowski emphasized the importance of using history to guide research. Reflecting on Dr. San Baw's work with ivory and the relatively low infection rates of his hip prostheses, he proposed potential modern implications for artificial recreation of ivory in the lab to improve current issues in orthopedic adult reconstruction.

The University of Pennsylvania Department of Orthopedics was truly fortunate to have Dr. Bartłomiej Szostakowski as the inaugural Dr. San Baw Honorary Lecture in Orthopedic Innovation, with a special introduction by Dr. San Baw's son, Professor Myint Zan.

December 13th, 2018

William Garrett, MD, PhD

Professor of Orthopaedic Surgery, Assistant Professor of Cell Biology, Duke University School of Medicine, Durham, NC
(written by David Falk)



A true clinician scientist hailing from Duke University Medical Center, Dr. Garrett is a leader in the field of sports medicine and an expert in ACL reconstruction. His impressive journey began with an undergraduate degree in chemistry from the University of North Carolina in Chapel Hill. He went on to participate in the NIH Medical

Scientist Training Program (MSTP) program and obtained a PhD in Cell Biology and Anatomy as well as MD from Duke University. He then completed his Orthopaedic Surgery Residency at Duke in 1982, where he remained on faculty.

Dr. Garrett has since gone on to obtain numerous awards and honors, most notably AOA North American Traveling fellow, ABC traveling fellow, and the Kappa Delta Award. He is a past president of the American Orthopaedic Society for Sports Medicine, and has also been recognized with multiple teaching awards from the Duke Department of Orthopaedic Surgery.

Today, Dr. Garrett divides his time between his busy surgical practice and his work in the Michael W. Krzyzewski Human Performance Laboratory, affectionately known as the K-Lab. Through research focusing on knee and muscular injuries,

Dr. Garrett has made significant contributions to the field of sports medicine in both the basic science and clinical realms.



Figure 1. From left to right Dr. Levin, Dr. Garrett, and Dr. Zgonis

Dr. Garrett delivered two highly educational lectures on ACL injuries and modes of reconstruction. He later discussed ACL reconstruction techniques, using his own research to demonstrate the benefits associated with anatomic placement of the ACL graft. Dr. Garrett humbly examined how his own surgical approaches have evolved over the years, and after reviewing his own technique to produce an anatomic graft he opened the floor for a thought-provoking question and answer session. Dr. Garrett's expertise and sense of humor were on full display as he fielded questions from residents and faculty. Dr. Milt Zgonis, who trained under Dr. Garrett while completing his sports medicine fellowship at Duke, shared additional anecdotes from their time in OR, further personalizing the highly educational experience.

His visit shed light on the unique career path of a clinician scientist and further strengthened the relationship between Duke and Penn Orthopaedics.

January 17, 2019 R. Bruce Heppenstall Lectureship

Dr. Seven Olson

Chief, Division of Trauma, Oncology, Pediatrics and Hip Preservation Professor, Department of Orthopaedic Surgery Duke University, Durham, NC
(written by Matthew Stein)

Dr. Olson is the current Chief in the Division of Trauma, Oncology, Pediatrics, and Hip preservation, and is a Professor in the Duke Department of Orthopaedic Surgery. He received his MD and residency training in Orthopaedic Surgery at University of Missouri-Columbia School of Medicine. His training continued with fellowships in Orthopaedic Trauma at University of California Davis Medical Center, and in Hip Reconstruction in France, Switzerland and Germany with Dr. Joel Matta, and Pelvic and Acetabulum Reconstruction at Good Samaritan Hospital in California. Dr. Olson began his practice at University of California Davis. He moved to Duke University in 2000 bringing both orthopaedic trauma and hip preservation

practices. Currently Dr. Olson is Director of the Orthopaedic Surgery Clinical Research Unit, and Division Chief for a group of 4 clinical sections including Oncology, Pediatrics, Trauma, and Hip Preservation. His clinical practice spans Orthopaedic Trauma, Hip Preservation, and Hip Reconstruction.



Figure 1. Dr. Olsen showing pelvic osteotomy cuts on a Sawbones pelvis model to the residents

While at Duke, in collaboration with the orthopaedic biomedical engineering lab, Dr. Olson helped develop the first in-vivo model of post-traumatic arthritis following articular fracture. This success led ultimately to receiving the Kappa Delta Award in 2015 for the role of inflammation in post-traumatic arthritis development. He is a prolific author with over 70 publications, and has served as President of the Orthopaedic Trauma Association. Dr. Olson has also won resident teaching awards at both University of California-Davis and Duke University.

His lecture was preceded by a special video welcome by Dr. Heppenstall himself, who was honored to have someone as distinguished as Dr. Olson here to speak at his lectureship.

Dr. Olson's first lecture focused on a traumatologists' perspective on hip preservation. We discussed his experience fixing acetabulum and pelvic fractures and how that experience has guided his views on hip preservation in both traumatic and atraumatic cases of hip pathology. His second lecture gave us an update on the current standards of hip fracture care, allowing a more in-depth view of the research he helped pioneer showing the role of inflammation in the development of post-traumatic arthritis.

Thereafter, Dr. Olson took the residents to the Human Tissue Lab to demonstrate his anterior and iliofemoral approaches to the hip and pelvis. His extensive knowledge of anatomy was immediately apparent and his exceptional dissection skills allowed a wonderful view of both the pelvic and hip anatomy. His expertise in education was evident and can only come from a life dedicated to teaching others.

January 24th, 2019

Luis Bahamonde, MD

Professor, Orthopaedic Surgery Program Director of Orthopaedics and Traumatology, University of Chile
(written by Brian Perez)

Dr. Bahamonde is currently the head of the Program of Orthopaedics and Traumatology at the University of Chile. He received his medical degree from the University of Chile where he also completed his residency in Orthopaedic Surgery in 1990. Dr. Bahamonde went on to complete a fellowship in Orthopaedic Oncology at the Instituto Ortopedico Rizzoli in Bologna, Italy. After completion of his training, he returned to his home country to work at the University of Chile.

Dr. Bahamonde delivered three captivating presentations during his visit. He began the day with a talk on distal press-fit fixation as an alternative treatment option over massive endoprosthetic reconstruction in Tumor and revision surgery, where the awe-inspiring cases he presented stimulated lively discussions amongst the faculty. In addition, Dr. Bahamonde's second talk on the management of femoral nonunions, was an interactive session with the residents in attendance that only foreshadowed the invaluable educational opportunity that was to take place in the Human Tissue Lab. Dr. Bahamonde, with the assistance of Dr. Mehta, presented a variety of his cases from Chile, which sparked discussions about treatment options and techniques in a question answer format between Dr. Bahamonde, Dr. Mehta, and the Orthopaedic Residents.



Figure 1. Dr. Bahamonde showcasing 3D printed models of patients with acetabular bone loss

Lastly, the residents were able to spend time with Dr. Bahamonde in the Human Tissue Lab. During this session, Dr. Bahamonde gave a talk on the free "periostized" fibular graft and the "Ice Cream Cone Prosthesis" for large pelvic defects. Following the insightful presentations, Dr. Bahamonde began the hands on portion of the day and brought in a 3D printed model of a pelvis for one of his upcoming cases. This allowed the residents to see first hand how he prepares for large complex cases. As the session progressed, Dr. Bahamonde walked multiple residents through the sawbones approach for

the “Ice Cream Cone Prosthesis”. Following the sawbones, we enjoyed a captivating prosection of the iliofemoral approach to the acetabulum that is not commonly seen in our program further adding educational value.



Figure 2. Residents practicing placement of the Ice Cream Cone Prosthesis

Dr. Bahamonde generously presented much of his work and results from complex surgical reconstructions of lower extremity pathology in Chile. During his time, here we were able to discuss future collaborative plans and are eager to organize a special rotation for Penn Orthopaedic Surgery residents to work side by side with him in Chile. This could be the start of an exceptional international collaboration between Penn Ortho and the Orthopaedic Surgery and Orthopaedic Oncology Departments in the University of Chile.

February 21st, 2019: Ralston Lecture

Dr. Lewis Zirkle, MD

President and Founder of SIGN Fracture Care International
(written by Joseph Koressel)



remainder of his orthopaedic training.

He continued his work overseas and found that many providers abroad simply do not have the equipment necessary to provide suitable patient care. During his lecture, Dr. Zirkle recounted a return visit to Vietnam where he found a man that had been in traction for 3 years following a distal femur fracture. Dr. Zirkle realized that these communities needed access to appropriate implants so they can treat their wounded.

Dr. Zirkle is the founder and president of SIGN Fracture Care, which was officially incorporated as a nonprofit in 1999. The goal of SIGN is to design, educate, and provide appropriate implants to providers to treat trauma victims in developing countries. He discussed in depth the design of the SIGN nail, an innovative implant system for treating fracture patients in under-sourced hospitals. This system is comprised of the traditional intramedullary nail which are held in place with interlocking screws, however, it is uniquely designed for use in facilities that do not have fluoroscopic or power equipment

During his visit to the University of Pennsylvania, Dr. Zirkle discussed the history and future of SIGN in orthopaedics, and the need for appropriate implants given traumatic injuries are rising in developing countries. Additionally, Dr. Zirkle and his team demonstrated how to use the SIGN nail system, and instructed the Penn orthopaedic residents in SIGN nail application in a sawbones lab.

March 21st, 2019: Stein Lecture

Amy Ladd, MD

Assistant Dean for Student Advising, Stanford University School of Medicine, Chief of Chase Hand & Upper Limb Center, Chief of the Children's Hand Clinic, Lucile Salter Packard Children's Hospital, Palo Alto, CA

Dr. Ladd graduated from Dartmouth College with an BA in History before receiving her MD from SUNY Upstate Medical University. She completed an Orthopaedic Surgery Residency at the University of Rochester, and then moved on to complete the Harvard Combined Hand Surgery Fellowship.

She was a fellow at L'Institut de la Main in Paris, France prior to joining the Stanford University faculty in 1990. Dr. Amy Ladd is the Elsbach-Richards Professor of Surgery, Assistant Dean for Medical Advising at Stanford University, the orthopaedic vice-chair of Academic Affairs, and hand fellowship director. Dr. Ladd is the immediate past-Chair of the AAOS Board of Specialties and past President of the Ruth Jackson Society.

Dr. Ladd's hand surgery practice includes both adults and children. Her research focuses on deciphering human motion of injury, disease, and deformity. In addition to research, she holds eight innovation patents and trademarks that encompass treatments for wrist fractures, thumb arthritis, and promotes musculoskeletal health awareness. Dr. Ladd's advocacy to promote pipeline education and mentorship complements community and national orthopaedic initiatives. She is an passionate supporter for promoting women and other underrepresented minorities in orthopaedics, as well as examining gender and cultural differences and similarities across medicine, and better understanding our unconscious biases.

In a similar vein, Dr. Ladd's lecture at Penn started as an interactive session discussing the impact of bias in science, Orthopaedic Surgery and society in general. Prior to her lecture, Dr. Ladd sent out a few recent articles for review that broached this topic to spur discussion, and she encouraged us all to take the Implicit Association tests (<https://implicit.harvard.edu/implicit/takeatest.html>), in order to get a sense of our own implicit, uncounscious biases.

Dr. Ladd concluded her time here with us by leading a dissection session in the Human Tissue Lab with the residents and fellows. Her extensive knowledge of anatomy was immediately apparent as she demonstrated a number of surgical approaches, making sure to point out anatomical landmarks and dangers to be aware of. After reviewing the various approaches, we then proceeded to further dissect out tendons, ligaments, arteries and nerves in order to better understand the surrounding anatomy.



Figure 1. Dr. Ladd and residents reviewing upper extremity anatomy in the Human Tissue Lab

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