

# COMMUNITY VOICE

Read the latest news from the world of AO Trauma

SUMMER 2019 ISSUE 01

## A PARADIGM SHIFT

from “Education  
(Instructionism)  
to Learning”

**Chitra Subramaniam, PhD**



### RESEARCH

#### PIONEERING

Developing innovations  
for the future

### EDUCATION

#### LEARNING

With and from  
each other

### FELLOWSHIP

#### DEVELOPMENT

29 programs supporting  
the next generation of  
orthopaedic trauma  
leaders

### COMMUNITY DEVELOPMENT

#### CD COMMITTEE

What is it and how  
can it help you?



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# Note from the Editor

Welcome to the inaugural issue of the  
AOTrauma North America Newsletter!



**A**OTrauma North America is a recognized leader in surgeon education and conducts numerous courses in all areas of musculoskeletal trauma for learners at every stage of career development. AOTrauma North America funds research that ultimately leads to improvement in patient care. For over three decades AOTrauma North America has created and nurtured a committed group of outstanding surgeons in an atmosphere of friendship, camaraderie, collegiality and a passion for education, research, and improvement in patient care.

This newsletter is designed to keep you informed about the activities and future direction of AOTrauma North America including education, research, fellowship offerings and community development.

Future newsletters will arrive every June and December and will include information about the organization, committee reports, feature articles and important dates and events.

**I hope you enjoy this inaugural issue. Please give us your feedback and let us know your ideas for feature articles.**

**Langdon A. Hartsock, MD**

Chair AOTrauma North America Community  
Development Committee

## Executive Director of AO North America

AO North America continues to evolve its education and learning in a changing and challenging healthcare environment. Your AONA support staff have articulated a Purpose for the future: "To advance surgeon's professional development through individualized opportunities and credible resources. We do this by cultivating a community that learns from and with each other".

Although we are comprised of four distinct clinical divisions, we share many common attributes and strategies. We realize the importance of working together as a unified AO Region. Our unified purpose is manifested publicly in our annual One AO meeting where surgeons from all Clinical Divisions gather to share and learn. The next One AO meeting will be held February 6-9, 2020, at the Sheraton Wild Horse Pass Resort in Phoenix. Please mark your calendars and check your mail for further info.

I am pleased to tell you that AONA is financially stable, that we are enjoying an excellent relationship with the AO Foundation and DePuy Synthes, our courses continue to fill, and we continue to attract talented young faculty. On behalf of James Stannard, MD, President of AO North America, we thank you for all you do and we look forward to continuing to support you.



**Stephen A. Schwartz**

Executive Director  
AO North America



# Governance Structure

## AOTrauma North America Board



**Roger Wilber, MD**  
Chair

**Gregory Della Rocca, MD, PhD, FACS**  
Chair Research Committee

**Langdon Hartsock, MD, FACS**  
Chair Community Development

**Michael Sirkin, MD**  
Chair Education Committee

**James Krieg, MD**  
Chair Fellowship Committee

### AOTrauma North America Education Committee

**Michael Sirkin, MD—Chair**

Paul Gladden, MD  
Hobie Summers, MD  
Brett Crist, MD  
Chad Coles, MD, FRCSC

### AOTrauma North America Community Development Committee

**Langdon Hartsock, MD, FACS—Chair**

Rahul Vaidya, MD, FRCSC  
Derek Donegan, MD, MBA  
Eben Carroll, MD

### AOTrauma North America Research Committee

**Gregory Della Rocca, MD, PhD, FACS—  
Chair**

Edward Rodriguez, MD, PhD  
John Scolaro, MD, MA  
Gerard Slobogean, MD, MPH, FRCSC  
Joshua Gary, MD  
Mara Schenker, MD

### AOTrauma North America Fellowship Committee

**James Krieg, MD—Chair**

Ted Manson, MD  
Timothy S. Achor, MD  
Conor Kleweno, MD  
Diane Nam, MSc, MD, FRCSC  
Christopher McAndrew, MD, MSC  
Christina Boulton, MD

### AOTrauma North America Hand Education Committee

**Amit Gupta, MD, FRCS—Chair**

Chaitanya Mudgal, MD, MS (ortho), MCh  
Kyle Bickel, MD  
Marco Rizzo, MD  
Charles Cassidy, MD  
Thomas R. Hunt III, MD, DSc  
Kevin J. Malone, MD  
Jeffrey Lawton, MD

# AO Trauma North America **Update**



## A letter from the Chair, Roger Wilber, MD

**A**O Trauma North America is proud to announce the launch of the AO Trauma Competency based Training and Assessment program. This valuable program will address the significant need for validated competency assessments in surgical training for both residents and practicing surgeons. It will enable the learner to perform surgical procedures at a level of proficiency defined by the AO as necessary for competence and allows the learner to self-assess and establish a baseline for knowledge and competence. Learning occurs as the participant interacts with content delivered through a mixture of modalities (live and online) and includes sophisticated simulation modules that promote technology enabled learning.

The program is built on the foundational principles of being evidence based and promotes adoption of best practice in learning today. The framework is based on the concept of 'Deliberate practice' as described by Anders Ericsson. Ultimately, the learner will embark on a journey that is highly interactive, affords both formative and summative assessments along the way, promotes feedback, coaching and reflection, creating an eco-system that facilitates accumulation of knowledge, skills and addresses clinical reasoning, problem solving, and decision making.

This innovative and exciting new program also addresses a huge gap in residency training with the lack of opportunities to practice surgical skills. The program provides performance assessment tools specifically for residents including feedback and coaching in training on a regular basis with the opportunity to look at their performance scores, reflect and self-assess their abilities. There are research studies to validate the process, the tools, the simulation platform and the curriculum will be an integral part of the program.

**Stay tuned for more information on the resident pilot program scheduled to launch in Spring 2020!**



*The program is built on the foundational principles of being evidence based and promotes adoption of best practice in learning today.*





## Education

**Michael Sirkin, MD**



**A**Otrauma North America Education Committee continues to look for new ways to improve our offerings by adapting to how our participants learn. The Basic and Advanced Principles Courses continue to fill to their maximum capacities, reflecting their outstanding quality. Despite this, the education committee continues to investigate new ways to make these programs even

better. Nearly every course has a modification that the education committee reviews for effectiveness and looks to incorporate into subsequent courses once quality improvement is confirmed. As an example, at last April's Advanced Principles course in La Jolla, Chairman Mark Lee modified his program to emphasize case-based instruction, enhanced audience participation and greater independence during lab exercises. This dynamic modification led to a more engaged group of participants who clearly benefitted from the more interactive format. AOTNA EC will review what went well and what might be done differently to help future course chairmen optimize improvements.

[Click here for the AOTrauma North America playlist on the AO North America YouTube channel](#)

Monthly AOTrauma Webinars continue as 'Webinar Wednesday' focusing on germane trauma topics such as evidence-based management of open fractures, pilon planning/approaches, and pertrochanteric femur fractures. These live online interactive courses receive high marks from participants from all over the globe and will be expanded in upcoming years with new topics as suggested by participants. The courses are free and can be viewed by the registrant at any time during or after the scheduled event.

In addition to educating our residents and fellows, the education committee continues to look for new ways to engage practicing surgeons. Building upon the successes of the New England Regional Fracture Summit at Stowe, the Tips and Tricks course will continue in Marco Island this fall. In 2020, two brand new courses will be offered, with one focusing on deformity correction/osteotomies and another concentrating upon the treatment of periprosthetic fractures.

Finally, in yet another effort to adapt to our learners, the education chair Michael Sirkin has led a project to create a video library of surgical exposures by master surgeons. This exciting new offering can be viewed at the AO North America YouTube channel. We encourage all our AOTrauma members to subscribe and to share it with others. Viewing the channel is free!

## Hand Specialty

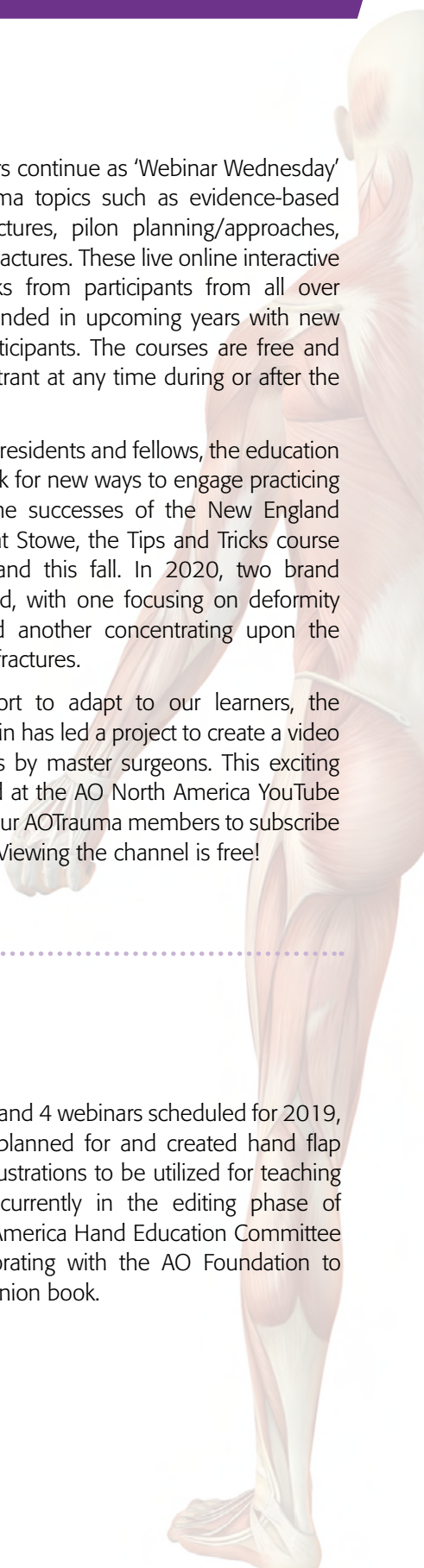
**Amit Gupta, MD**



**T**he Hand Education Committee underwent its first curriculum planning session for the 2018/2019 course schedule. From this planning session, the committee developed and introduced standardized case discussion playbooks into the course curriculums, thereby, ensuring all participants experience the same key learning points. In addition, course formats were

updated, lectures removed and supplied as pre-course material to allow more opportunities for small group discussion sessions. Practical exercises were updated to include the new variable angle hand set.

In addition to the 4 courses and 4 webinars scheduled for 2019, the committee budgeted, planned for and created hand flap videos and photographic illustrations to be utilized for teaching material. The videos are currently in the editing phase of production. The AO North America Hand Education Committee is also working on collaborating with the AO Foundation to develop a hand flap companion book.



# Research

Gregory Della Rocca, MD, PhD, FACS



Gregory Della Rocca, MD, PhD, FACS

The AOTNA research committee supports research in orthopaedic trauma, with a focus on early-career surgeons (including residents and fellows).

Although research in any orthopaedic trauma-related field is considered, particular attention is given to research projects associated with current AO Foundation Clinical Priority Program (CPP) topics (fracture fixation in osteopenic/osteoporotic bone—recently closed, musculoskeletal infection—ongoing, patient-centered outcomes—new). Multiple research award programs exist for clinical and translational trauma research.

Resident research grant awards are offered twice per year. In January 2018, the committee awarded four research grants, and in September 2018, five more were awarded. In addition, annual research grants are available for trauma fellows at AOTNA-funded fellowship sites. The AOTNA research committee awarded 15 fellowship research awards in 2018. Progress reports and updates are monitored by the committee and AONA staff, with eventual publication in the Journal of Orthopaedic Trauma (JOT, which has the right of first refusal for publication of results) anticipated for completed research projects.

The AOTNA research committee is also proud to support the Kathryn Cramer Career Development Award. This research award is designed to provide orthopedic traumatologists with financial support to aid in starting a research path early in their careers. This award honors the late Dr. Kathryn Cramer by fostering senior

orthopedic residents, orthopedic trauma fellows, and junior orthopedic trauma faculty who are interested in educational and research endeavors in orthopedics. The 2018 grant was awarded to Dr. Leah Gitajn for her project on Virtual Reality-based Physical Therapy.

Finally, the AOTNA research committee is pleased to announce a new research initiative. Starting in late 2019, the AOTNA Young Investigator Development Award will begin accepting applications. The program will be available to orthopaedic trauma fellows in AOTNA-supported fellowships. It is designed to provide training and financial support for fellows interested in establishing a research career post-training. Although timelines and exact funding mechanisms are under development (and subject to change), the current goal is to support fellow attendance at the OneAO meeting, the OTA meeting, AOTNA research committee meeting(s), provide funding to support statistical analysis of research datasets, and provide start-up research funds for the awardees' first year in academic practice. It is anticipated that a community of AOTrauma Young Investigator Development Award recipients will form over the years and will liaise with AOTNA well beyond the funding windows.

**Please keep an eye out for announcements regarding the program and applications soon!**



# 2018 Research Awards

## 2018 Resident Research Awards

### **Olubusola Brimmo, University of Missouri-Columbia**

The Use of Intranasal Calcitonin to Improve Pain and Activity in Elderly Pelvic Ring Injuries

### **Murray Wong, University of Calgary**

Analysis of Syndesmosis Motion using Dynamic CT after Rigid and Flexible Fixation

### **Malcolm DeBaun, Stanford University Program**

Bioactive Synthetic Membranes for Healing Critical Bone Defects

### **David Wright, University of California (Irvine)**

Supplemental Fixation of Supracondylar Distal Femur Fractures: a Biomechanical Comparison of Dual Plating and Combined Nail-plate Fixation Techniques

### **Michael Eby, University of Pennsylvania**

Improving Implant Fixation in Osteoporotic Bone with Direct Application of a Selective Estrogen Receptor Modulator

### **Peter Mittwede, University of Pittsburgh**

Timing and Characterization of Heterotopic Bone Formation in a Murine Model of Lower Extremity Blast Injury Combined with Head Trauma

### **Nilay Patel, University of California (Irvine)**

Optimal Fixation for Capitellar Shear Fractures in the Setting of Intra-articular Distal Humerus Fractures: A Biomechanical Study

### **Ashley Levack, Hospital for Special Surgery/Cornell Medical**

The Relative Contributions of the Endosteal and Periosteal Blood Supplies to the Tibial Diaphysis: a Quantitative MRI-based Analysis

### **Alexander Hahn, University of Maryland**

Is Intramedullary Screw Fixation Biomechanically Superior to Locking Plate Fixation or Tension Band Wiring in Transverse Olecranon Fractures? A Cadaveric Biomechanical Comparison Study

## 2018 Fellows Research Awards

### **Justin Drager, University of Missouri**

Can Iron Chelators Augment the Re-vascularization and Osseointegration of Large Osteochondral Allografts for Traumatic Articular Reconstruction in a Canine Model? A Pilot Study

### **Matthew Herring, University of California, San Francisco**

Evaluation of Early Weightbearing after Syndesmotic Fixation in Unstable Ankle Fractures

### **Lucas Marchand, R. Adams Cowley Shock Trauma Center at University of Maryland Medical Center**

Articular Impaction of Medial Sided Tibial Plateau Fractures

### **Ian McAlister, R. Adams Cowley Shock Trauma Center at University of Maryland Medical Center**

Femoral Shaft Rotation: Is the CT Reliability Really That Bad?

### **Joshua Namm, Washington University**

Effect of Implant Placement and Removal on Intra-articular Stresses in Tibial Plateau Fractures: A Cadaveric Study

### **Chima Nwankwo, Allegheny Health Network**

Augmented Fixation of High Angle Femoral Neck Fractures—Screw or Plate?

### **Matthew Riedel, R. Adams Cowley Shock Trauma Center at University of Maryland Medical Center**

Biomechanical Comparison of Working Length in Far Cortical Locking Versus Nonlocking Screw Constructs—An Analysis of Distal Femur Fracture Plating Techniques

### **Mohamad Kareem Shaath, University of Texas**

Evaluation of Patient Radiation Exposure During Low-Dose Radiation 3D Intraoperative Imaging During Pelvic and Acetabular Surgery

### **Steve Shannon, R. Adams Cowley Shock Trauma Center at University of Maryland Medical Center**

Transiliac-transsacral Screw Fixation of Vertically Unstable Pelvic Fractures: Do Fully Threaded Screws Impart Improved Stability?

### **Tyler Snoap, Wake Forest University**

Single or Dual Implants for Supracondylar Femur Fractures with Bone Loss: A Biomechanical Analysis of Implant Configurations

### **Alex Wessel, University of California, Davis**

Isolation and Characterization of Skeletal Stem Cells from Reamer-Irrigator-Aspirator procedures

## 2018 Kathryn Cramer Career Development Award

Leah Gitajn, Dartmouth Hitchcock Medical Center—Virtual Reality-based Physical Therapy

# Fellowship

James Krieg, MD



**James Krieg, MD**

The AOTNA Fellowship Committee supports trainees in orthopaedic trauma throughout the year. In January, 45 fellows from North American training programs attended the Surgical Approaches to Skeletal Injuries Course, a cadaver-based course specifically tailored to fellows. With a 2 to 1 participant to faculty ratio, this is an unparalleled learning experience.

The Fellowship Committee met at the OneAO meeting to review funding for Fellowship programs in North America for the 2019-2020 academic year. We are happy to support 29 programs, with direct financial support as well as support for each of the fellows in the programs throughout the year with the courses, online teaching, mentorship, and fellowship of the AO. We are excited to support this group of trainees as they become the next generation of orthopaedic trauma leaders.

The winners of the AOTNA sponsored named fellowships are Dr. Daryl Dillman for the Jack McDaniel Fellowship, Dr. M. Kareem Shaath for the John Border Fellowship, Dr. Aaron Roberts for the Henry Hanff Fellowship and Dr. John Delaney for the Martin Allgower Fellowship.

AOTNA was proud to support 14 surgeons from North America to do short term international fellowships in 2018, and 9 surgeons for 2019. This educational opportunity is available on a competitive basis to any orthopedic surgeon in North America.

## AOTrauma North America Spring 2019 Fellowship Award Sites

Allegheny Health Network  
Carolinas Medical Center  
Cedars-Sinai Medical Center  
Cooper Medical School of Rowan  
University/Cooper University Hospital  
Program  
Dalhousie University, Halifax  
Denver Health Medical Center  
Hospital for Special Surgery  
Harvard Orthopedic Trauma Fellowship/  
Massachusetts General Hospital/Brigham  
& Womens Hospital  
MetroHealth Medical Center/Case Western  
Reserve University  
R. Adams Cowley Shock Trauma Center  
at University of Maryland Medical Center  
Rutgers New Jersey Medical School  
Tampa General Hospital  
University of California, Davis  
University of British Columbia/Vancouver  
General Hospital  
University of Missouri, Columbia  
University of Tennessee at Chattanooga  
University of Texas at Houston  
University of Toronto/Sunnybrook Health  
Sciences Centre  
University of California, San Francisco  
University of Minnesota  
University of Oklahoma health Sciences  
Center  
University of Southern California  
University of Washington/Harborview  
Medical Center  
Vanderbilt University  
Wake Forest University  
Washington University  
Yale University



### VIDEO FROM THE PAST



Click to hear Martin Allgower, one of the founding fathers of the AO, speaking at an Orthopaedic Trauma Meeting in 1999



# Congratulations to the Graduating Fellows of 2018-2019!

At the end of July, we bid farewell to the AOTNA fellows of 2018-2019 graduating from our fellowships sites. On behalf of the AOTNA Fellowship Committee, we wish them much success, happiness in their next steps, and continued engagement with AOTrauma North America!

## **Allegheny Health Network**

Chima Nwankwo, MD  
Brett Pettett, MD

## **Carolinas Medical Center**

Abhishek Ganta, MD  
Cody Evans, MD  
Louis Lewandowski, MD

## **Cedars-Sinai Medical Center**

Mikhail Bekarev, MD

## **Cooper University Hospital Program**

Vince W. Lands, MD

## **Dalhousie University, Halifax**

Waael Aljilani, MD  
Pierrick Angers, MD

## **Denver Health Medical Center**

Michael H. Maher, MD

## **Hospital for Special Surgery**

Mengyang "Mike" Li, MD  
James Shaw, MD  
Pierre Zaharia, MD

## **Massachusetts General Hospital/Brigham & Womens Hospital**

Shawn Boomsma, DO  
Nishant Suneja, MD

## **MetroHealth Medical Center/Case Western Reserve University**

Nicholas Alfonso, MD

## **University of Maryland R. Adams Cowley Shock Trauma**

Lucas Marchand, MD  
Ian McAlister, MD  
Joshua Napora, MD  
Matthew Riedel, MD  
Steven Shannon, MD

## **Rutgers New Jersey Medical School**

John Neal, MD

## **Tampa General Hospital**

Gennadiy Busel, MD  
Omar Atassi, MD  
Guadalupe de la Fuente, MD

## **University of California,**

Davis Alexander Wessell, MD  
Daniel Bravin, MD

## **University of British Columbia/Vancouver General Hospital**

Ross Coomber, MD  
Andrew Powell, MD

## **University of Missouri-Columbia**

Justin Drager, MD  
Justin Woods, MD

## **University of Tennessee at Chattanooga**

Randal Drew Madison, MD

## **University of Texas at Houston**

Philip K. Lim, MD  
Elizabeth B. Gausden, MD  
Phillip M. Mitchell, MD  
Mohamad "Kareem" Shaath, MD

## **University of Toronto/Sunnybrook Health Science Centre**

Gavinn Niroopan, MD  
Abdallah Hussein, MD

## **University of California, San Francisco**

Erin Donohoe, MD  
Matthew Herring, MD

## **University of Minnesota**

Adam Breceda, MD  
Tony Pedri, MD

## **University of Oklahoma Health Sciences Center**

Jesse Putman, MD

## **University of Southern California**

Alexander Telis, MD

## **University of Washington/Harborview Medical Center**

Jerad Allen, MD  
Robert Jacobs, MD  
Kimberly Jacobsen, MD  
Jennifer Tangtiphaiboontana, MD  
Robert Wojahn, MD

## **Vanderbilt University**

Brock Foster, MD  
Tyler Morris, MD

## **Wake Forest University**

Tyler Snoap, MD

## **Washington University**

Joshua Namm, MD

## **Yale University**

Assaf Kadar, MD

# Community Development

Langdon Hartsock, MD, FACS



Langdon Hartsock, MD, FACS



AOTrauma North America Members Reception at OTA in Orlando, FL

## You may be asking what is the Community Development Committee and what does it do?

Very broadly, the CDC (Community Development Committee) fosters and develops the AO spirit of professional friendship and collegiality that is a hallmark of the AO organization since its founding 60 years ago. Numerous polls of AO members over the years have indicated that many of us are drawn to the AO and continue to be a part of it because of the friendships and shared experiences that happen at AO courses, in research projects, and various AO events such as webinars, faculty development programs, and committee work.

The job of the CDC is to foster, promote, and enhance the AO spirit across AOTrauma North America and also with the other clinical divisions and other world regions. The tasks of the CDC include recruiting new members, retaining new members and communicating with members.

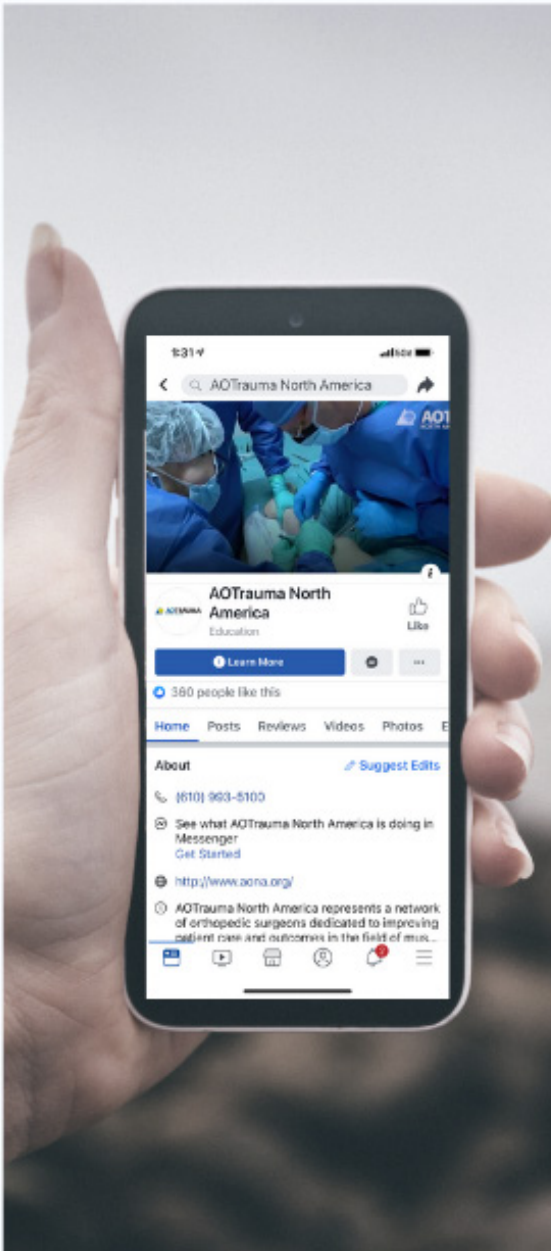
While AOTrauma North America is one of the smaller regions in terms of overall membership, the United States has the largest membership of any one country worldwide. Currently new members are recruited via AO courses and a one-year free membership is available to course participants in the Principles and Advanced courses. All AO faculty are required to be AOTrauma members. Membership is renewed annually for 100 Swiss francs and can be accomplished on line on the AO website at [www.aotrauma.org](http://www.aotrauma.org).

The CDC sponsors a reception for AOTrauma members at the annual OTA meeting. This is an opportune time for many of us

to connect with our colleagues in a relaxed social setting at a popular meeting. In conjunction with the fellowship committee the CDC jointly sponsors six trauma fellows to attend the master's courses in Davos. This is an increasingly popular program and we get numerous applications which are scored according to a standardized scoring system used by both committees. Six highly qualified trauma fellows attend the master's course, and this has routinely received very high reviews from the fellows. This program has now completed its third cycle and our hope is that these fellows will continue to be involved in AO activities and make AO part of their lifelong career path.

The CDC has initiated new communication tools to keep AOTrauma members involved and informed. The Social Media Task Force, currently led by Eben Carroll and Brad Yoo, is an enthusiastic and growing group of Facebook users who regularly communicate via the AOTrauma North America Facebook page. The task force is seeking additional members to participate, and new ideas are welcome. This newsletter is a new communication outlet and will be published twice per year with updates and interesting stories about AOTrauma activities. Lastly this coming year we will develop a new member orientation packet which will help new members feel welcome to the AO organization and make them aware of the resources that AO has to offer them.





DID YOU KNOW?

## AOTrauma North America has a new Facebook page?

Look for us on  
Facebook  
@AOTraumaNA



## Social Media Task Force

**Eben Carroll, MD & Brad J. Yoo, MD**

**D**id you know that AOTNA has launched a social media task force? This task force is extremely energized and busy at work expanding AOTNA's footprint across social media. The task force consists of 12 individuals who began this endeavor in August of 2018 with the help of the AONA Marketing Team. For those of you who regularly check our Facebook page (AOTrauma North America) you are likely to have noticed an increase in content. Please feel free to comment, like or add content.

**For those of you on Facebook who have not yet visited the AOTNA page, come check it out and like our page!!**

## Welcome to the Learning Corner!

If you are reading this section, you already are an engaged member of our trauma community and interested in this important topic! Welcome to the first of many articles we will be bringing to you to share all the efforts in learning that AOTrauma staff and faculty are involved in. These include evidence based best practices to promote the development of a trauma community that “learns with and from each other”, and advances quality surgical care.

**Our first article in the series:**



**Chitra Subramaniam, PhD**  
AONA's Chief Learning Officer

## A Paradigm Shift from “Education (Instructionism) to Learning”

The turn of the twentieth century saw formal schooling take shape in all industrialized countries. During this time there was not much awareness on how people learn. By the 1920s schools became large bureaucratic organizations that delivered instruction without much knowledge on the process of learning and the learners. As a result schools and organizations that delivered education were built on several assumptions made by teachers and authorities that scientifically did not have evidence.

The premise of all schooling was:

- Knowledge is a collection of facts and procedures to solve problems
- People were considered educated when they accumulated large amount of such facts and procedures
- Teachers knew what these facts and procedures were that needed to be taught
- Simple facts should be learned first before complex facts were introduced
- Teachers defined what was simple and complex and the sequence in which facts were presented
- Success was defined as recall of these facts and procedures







Papert (1993), called this phenomenon Instructionism. This was based on the need to prepare people for the industrial world and work environment. However, today all the fields of study are complex, multidimensional and influenced by technology, advances in the social and medical sciences, arts and humanities, competition, new purveyors and consumers that require us to prepare people differently for a new kind of society. Instructionism does not work effectively. Economists and those in organizational development (Bereiter and Drucker, 2002), describe that we live in a “knowledge economy” today. To survive in this economy, mere accumulation of facts is not enough. Facts need to be applied and adapted as needed depending on the context in which they function. People need a deep understanding of the concepts and frameworks, and the ability to create new ideas, new theories, new products and hence new knowledge. They also need to be able to integrate what they learn into what they already know, critically evaluate what is presented and validate its use. They need to be responsible for continuous learning and adapt to situations that they are presented with. Thus, in the 1970’s there was a significant interest in how people learned and Learning Science as a discipline first took shape. Focus shifted from the teacher to the learner. The process of learning and how people learn became the area of focus. By the 1990’s the following core principles on learning were released:

- Deeper conceptual understanding and application to the real world is critical
- Focus needs to be on the learner
- A learning environment that supports learning and deeper understanding, application and evaluation is a must
- We need to build on the learner’s prior knowledge
- Reflection is necessary for learning

The learning sciences is an interdisciplinary field that pulls from the behavioral and social sciences, anthropology, education and computer science. Today we talk about the cognitive sciences, the learning processes and the need for teachers to adapt their delivery methods to facilitate such learning. The AO’s adult learning principles that we have adopted as core tenants reflect the fundamental principles derived from the learning sciences. Learner centered instruction, active learning, scaffolding and other terms have become the norm in effective teaching today. If you want to give it a healthcare spin, here is something to think about. There are similarities in how we identify needs, develop a plan and deliver it. **Food for thought!**

Learning	Patient Care
Needs Assessment	Patient demographics, presentation, symptoms
Gaps, levels of motivation, learning needs	Diagnosis
Design of goals and objectives, content, instructional elements	Treatment plan
Learning gains, outcomes	Patient satisfaction, outcomes
Post event follow up	Post-operative care
Feedback and coaching and continuous learning	Continuous monitoring and follow up

Until our next article!

# SPECIAL UPDATES

## AO/OTA Research **Collaboration**

**Greg Della Rocca, MD, PhD, FACS**



**Dr. Aaron Johnson**  
Principal Investigator

The AOTNA Research Committee is pleased to share news about its joint research collaboration project with the Orthopaedic Trauma Association (OTA). This AOTNA/OTA Joint Research Grant Award provides funding of \$100,000 in support of 2-year research projects, and the 2019-2020 cycle solicited research award applications in the directed topics of patient-centered outcomes and/or musculoskeletal infection. The organizations' research committees met in September 2018 to review many high-level applications and selected this year's winners: Dr. Aaron Johnson (Principal Investigator) and Dr. Robert V. O'Toole (Co-Principal Investigator) for their study entitled Biofilm detection for early diagnosis after treatment of open fractures: A nested cohort within the PREP-IT Trials. This award is funded equally by AOTNA and OTA, spanning a two-year budget cycle. This co-branded research collaboration has been highly successful, and talks are underway to consider making this an annual award.

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## 2018 Davos Fellows **Experience**

### A joint Community Development & Fellowships Committee Initiative

**Langdon Hartsock, MD, FACS & James Krieg, MD**

Arbeitsgemeinschaft is literally translated as working group. For most of us, however, the AO represents much more than simply a working or study group. The AO represents fellowship. For most AO surgeons the fellowship is lifelong and is international. Most surgeons are introduced to the international reach of the AO in Davos. The annual courses have always brought together the international community of AO surgeons in a highlight event.

In an effort to extend the community of fellowship that is the AO to the next generations of surgeons, AOTNA is proud to sponsor "The Davos Experience." This unique opportunity supports 6 fellows in training from North American training programs to travel as a group to Davos for the Masters Course. The fellows are accompanied by a senior member of AOTNA. Together they are treated to a VIP tour of the AO Center in Davos.

This past year the group included:

- Marshall Berkes, University of Texas at Houston
- Andrew Chen, Carolinas Medical Center
- Christopher Domes, R Adams Cowley Shock Trauma Center
- Christopher Hayes, University of California, Davis
- M. Kareem Shaath, University of Texas at Houston
- Kurt Yusi, Vanderbilt University

These fellows were chosen from a competitive field of applicants based on their proven record of achievement in orthopaedic trauma, as well as their commitment to being a leader in the field. Each of the fellows recognized in their post course evaluation an appreciation of the international reach of the AO. Until one attends the Davos Courses, that international reach is hard to fully appreciate. In addition to the diverse opinions and views expressed, each valued the relationships they made, with each other and with their colleagues from around the world.





Perhaps the highlight of the trip was the time they spent with Dr. Joe Schatzker and Dr. Marvin Tile, both of whom met informally with the group and regaled them with stories about the founders of the AO and the early days of the organization.

The AOTNA Davos Experience is meant to be an opportunity for tomorrow's leaders to gain an appreciation for the international fellowship that is unique to the AO, and a connection to the history upon which it is built. This group surely succeeded in both. We look forward to their continued leadership in the AO.

# 2019 AOTrauma North America Fellows Davos Experience

**Incredible Opportunity!**  
Offered by the AOTrauma North America  
Community Development and Fellowship Committees

Watch for an email this month on  
the open call for applications

# Education Schedule

## Live Activities & Webinars

Dates	Course	Location	Course Chairs
August 22–25	Basic Principles of Fracture Management	Dallas, TX	Tom Higgins, MD David Forsch, MD
September 5–8	Basic Principles of Fracture Management	Glendale, AZ	David Rothberg, MD Stephen Sims, MD—Director
September 5–8	Advanced Principles of Fracture Management	Glendale, AZ	Timothy Achor, MD
October 31–November 3	Tips N Tricks	Marco Island, FL	Terry Axelrod, MD, MSc, FRCS David Hubbard, MD
October 31–November 3	Basic Principles of Fracture Management	Minneapolis, MN	John Munz, MD Hans Kreder, MD, MPH, FRCS—Director
October 31–November 3	Advanced Principles of Fracture Management	Minneapolis, MN	Jaimo Ahn, MD, PhD
November 21–24	Basic Principles of Fracture Management	Kansas City, MO	Brian Buck, DO James Kellam, BSc, MD, FACS, FRCS, FRCSI

### Webinars—8pm EST

<b>Fellows</b>	<b>September 11</b>	Pelvis: Decision Making in Definitive Pelvic Ring Management	Jason Nascone, MD, & Robert O'Toole, MD
<b>Fellows</b>	<b>November 13</b>	Acetabulum: Anterior Approach and Reduction (Iliolinguinal AIP)	H. Claude Sagi, MD, & Mark Reilly, MD
<b>Community-based Orthopaedic Surgeons</b>	<b>July 31</b>	Management of Post-Surgical Infections: Yes, It Does Happen	Michael Sirkin, MD, Paul Gladden, MD, & Brett Crist, MD
<b>Community-based Orthopaedic Surgeons</b>	<b>August 14</b>	Hemodynamically Unstable Patients with Traumatic Pelvic Ring Injuries	Milton L. "Chip" Routt, Jr., MD, & Andy Burgess, MD
<b>Community-based Orthopaedic Surgeons</b>	<b>August 28</b>	Tibia Fractures: What is the Best Approach to Nailing?	Christopher Finkemeier, MD, MBA, Mark Lee, MD, & Brett Crist, MD
<b>Community-based Orthopaedic Surgeons</b>	<b>September 18</b>	Flexor Tendon Repairs	Amit Gupta, MD, FRCS, Kevin Malone, MD & Marco Rizzo, MD
<b>Community-based Orthopaedic Surgeons</b>	<b>November 20</b>	Complex Distal Radius	Chaitanya Mudgal, MD, MS(ortho), MCh, AmitGupta, MD, FRCS, Charles Cassidy, MD, & Jay Bridgeman, MD, DDS
<b>Community-based Orthopaedic Surgeons</b>	<b>December 18</b>	Proximal Humerus Fractures: Who Should I Fix and How?	Michael Gardner, MD, Timothy Achor, MD, & Hobie Summers, MD



# Faculty

## Remembering a True Icon



Jeffrey Welling Mast, MD

1940-2019

We would be remiss if we didn't say a few words on the passing of a true icon, **Jeff Mast, MD**

As we reflect on important people we encounter in our lives, one individual usually stands out above others, for having a dramatic effect on the direction of our professional careers. To many of us in the AO Foundation, that individual was Jeffrey Welling Mast, MD. It is a great honor to write this tribute for our long-term mentor, critic, teacher, and very close friend.

Born in 1940, in Easton, New York. Jeff was the son of a renowned artist/educator, Gerald Mast. Jeff's legendary preoperative planning and operative skills reflected this artistic background. An outstanding athlete, expert skier and a walk-on to the University of Colorado football team. As head of the Peace Corps in the Southeast Asia area, and later Director of Healthcare in Tibet, Jeff was asked to accompany the wife of a local Kathmandu hotel owner on an air evacuation to seek specialized medical care in Bern, Switzerland. While there, Jeff was introduced to Maurice Muller, and became fascinated with his surgical skills, influencing him to enter into orthopedic surgery and specialize in fracture fixation, nonunion, bio-regenerative hip salvage, and osteotomy of hip and knee deformities.

After training at the University of Southern California Los Angeles County Hospital, and practice locations, Jeffery spent two years in Bern which led to a career-long friendship with Reinhold Ganz. This friendship helped develop a safe method of performing periacetabular osteotomy and bioregenerative surgical treatment of hip disease, to improve patients with congenital hip dysplasia and Perthes disease. Mast and Ganz became the top two hip preservation and reconstructive surgeons in the world. Jeff also had a close friendship with another orthopaedic icon, the esteemed acetabular surgeon Emile Letournel. He would travel extensively with Emile and his "Bande of Letournel" teaching their craft worldwide.

In 1989, together with Drs. Ganz and Jakob, Jeff wrote the book "Planning and Reduction Techniques in Fracture Surgery". This book singularly changed orthopaedic trauma surgery.

The book's deviation from rigid AO doctrine was initially sharply criticized by previous AO generations. These authors, using incredibly detailed imaging, promoted the concepts of preoperative planning, using the plate implant as a reduction instrument, developing the idea of minimally invasive surgery, restoration of extremity length and axis implants were used to perform indirect reduction and bridging of comminuted fractures, emphasizing soft tissue preservation. Today, this book is essential reading for the orthopedic trauma surgeon.

Jeff's uncanny ability to draw the skeleton, the perfect osteotomy angle of correction, the appropriate implant size and dimension, (usually a blade plate), and then be able to overlay his preoperative plan on the postoperative radiograph to be perfect to his final surgical result was mesmerizing.

The consummate educator, Jeff was frequently observed to be the last person to leave the classroom—he was the teacher's teacher. In his later years, he would travel any distance to help his disciples with difficult surgical cases and preoperative planning. These visits were unique to Jeff, and an invaluable surgical and social experience for all of us lucky enough to have "The Master" in our operating rooms. We are indebted to this man for his erudite, visionary teaching, his pursuit of the perfect operative result, and his unending courage to take on difficult cases. His impact on the advancement of orthopaedic trauma and reconstructive surgery cannot be measured.

The AO Foundation and AO North America's has lost its "Knight in Shining Armor", and it is the end of an era of absolute excellence. Every implant, screw, plate or nail had to be in the correct position and axis with the right amount of compression to obtain the approval of "The Master". It is our wish that his memory is never forgotten, and that his preoperative planning skills continue to be taught at every AO Course, and preserved for future generations. We all stand on Jeffrey Mast's shoulders when we treat every orthopaedic trauma and reconstructive patient.

Eric E. Johnson, MD, Keith A. Mayo, MD  
Joel M. Matta, MD, Brett Bolhofner, MD



## **Michael Baumgaertner, MD** elected as new AOTIB chair-elect!

Michael Baumgaertner is professor and chief of orthopedic trauma at the Department of Orthopaedics and Rehabilitation at the Yale University School of Medicine in New Haven, Connecticut.

Throughout his career, he has been very actively involved in AO Foundation and AOTrauma activities. He served as elected AO trustee from 2005–2009 and has been an ex-officio AO trustee since 2011. Michael Baumgaertner was member of the AOTIB from 2011–2014 in his role as AOTrauma North America chair. From 2011–2015, he was AO North America (AONA) president. Since 2015, he has chaired the AONA Board of Directors as well as the AO Education Institute Advisory Committee. In 2017, Michael Baumgaertner was appointed as AO Surgery Reference executive editor.

AOTrauma is delighted to welcome Michael Baumgaertner in this important and prestigious position. The AOTIB and the AOTrauma team wish him a great start as AOTIB chair-elect and a very successful term as AOTIB chair, starting in 2020.

AOTrauma Nomination Committee members Kodi Kojima (Brazil), Wael Taha (Saudi Arabia), and Muhammad Wajid (Pakistan) thank all AOTrauma members who participated in the election.

## **Mohit Bhandari, MD** presented with the insignia of a Member of the Order of Canada

Dr. Bhandari is academic chair and professor of orthopedic surgery, and associate chair of research of the Department of Surgery at McMaster. In addition he holds a Canada Research Chair in Evidence-Based Orthopedics.

Dr Bhandari is internationally recognized as a leader in the promotion of evidence-based surgery and orthopedic research. He has the distinction of being one of the top ten most quoted orthopedic fracture surgeons in the world.

Dr. Bhandari also has the distinction of being a Member of the Order of Canada. Members are recognized for their outstanding contribution and achievement at both local and national level to Canada and humanity at large.





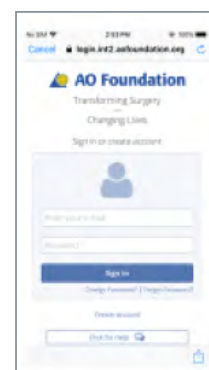
# Important Technology Update

Don Webb, IT Director

## AONA/AO Single Sign-on

We are quickly approaching the day you'll be able to access all AONA and AO information technology systems with a single sign-on. After signing in on either the AONA website, Event APP or the AO Foundation website you'll also be able to update your contact information and have it synchronized back to the other sites. You'll be seeing a date specific announcement of the roll-out in June.

After completing work on identities we'll move next to event history. This will give you a global picture of past and future events and allow for seamless registration on AONA for events within the AO Learning Management System. This work is scheduled to complete early in 2020.



**Save the Date**  
**Members Reception**  
**Friday, September 27th**  
**6:30pm – 8:30pm**

**Pinnacle Club by Grand Hyatt**  
**555 17th Street**  
**38th Floor**  
**Denver, CO**

A promotional graphic for a members reception. The background is a cityscape at sunset. The text is centered and reads: 'Save the Date Members Reception Friday, September 27th 6:30pm – 8:30pm Pinnacle Club by Grand Hyatt 555 17th Street 38th Floor Denver, CO'. The AOTRAUMA NORTH AMERICA logo is in the top right corner.



## Learn from the best

December 01–11, 2019 | Davos, Switzerland

[www.aodavoscourses.org](http://www.aodavoscourses.org) | Registration opens June 13!

### Basic Principles

AOTrauma Course—Basic Principles of Fracture Management

AOTrauma Course—Basic Principles of Fracture Management for Swiss Surgeons

### Advanced Principles

AOTrauma Course—Advanced Principles of Fracture Management

AOTrauma Course—Advanced Principles of Fracture Management for Swiss Surgeons

### Masters

AOTrauma Masters Course—Current Concepts—Upper Extremity I  
(Scapula/Clavicle/Humerus/Elbow)

AOTrauma Masters Course—Current Concepts—Upper Extremity II  
(Elbow/Distal Radius/Hand)

AOTrauma Masters Course—Current Concepts—Lower Extremity I  
(Proximal Femur/Tibial Pilon/Tibial Plateau)

AOTrauma Masters Course—Current Concepts—Lower Extremity II  
(Distal Femur and Patella/Complex Femoral and Tibial Shaft/Malleoli)

AOTrauma Masters Course—Current Concepts—Tips from the Masters  
(Difficult Cases through the Eyes of Master Surgeons)

### Specialty

AOTrauma Course—Pelvic and Acetabular Fracture Management

AOTrauma/AORecon Course—Comprehensive Periprosthetic Fracture Management of the Hip and Knee (Fracture Fixation and Revision Arthroplasty)



# We are proud to be AOTrauma Members!

Our international membership base shares in a common mission to provide education and networking opportunities for the global membership community.

Members have access to a broad range of valuable benefits and services that assist in daily clinical practice and improve patient care.

## MEMBERSHIP



Share the benefits of  
AOTrauma membership  
with your colleagues!

Click here to apply:  
[www.aotrauma.org](http://www.aotrauma.org)



Save the Date

# one AO 2020

CMF Spine Trauma Vet

February 6 – 9, 2020  
Sheraton Wild Horse Pass  
Phoenix, AZ

Tentative Schedule:  
Thursday, Opening Reception  
Sunday Closing 10am



Introducing AOTrauma North America's  
**Young Investigator  
Development Award**

Launching Fall 2019

A new initiative fostering research interests  
for trauma fellows into early practice.



## Who Do I Contact?

### Your AOTrauma NA Support Staff



**Steve Schwartz**  
Executive Director AONA  
schwartz.steve@aona.org



**Chitra Subramaniam**  
Chief Learning Officer  
subramaniam.chitra@aona.org



**Andrea McClimon**  
Regional Director Trauma  
mcclimon.andrea@aona.org



**Kelly McCormick**  
Programs Manager  
Research/Fellowship  
mccormick.kelly@aona.org



**Lucy O'Hara**  
Education Development Manager  
ohara.lucy@aona.org



**Dorene Winters**  
Education Development  
winters.dorene@aona.org



**Sally Peters-Gaffney**  
Faculty Education  
peters-gaffney.sally@aona.org



**Janet Sullivan**  
Customer Service  
sullivan.janet@aona.org



**Steve Oliver**  
Marketing Director  
oliver.steve@aona.org



**Don Webb**  
IT Director  
webb.don@aona.org

## Your Voice is Important We want to hear from you?

What would you like to see in this newsletter?  
Would you like to submit an article?

We hope you enjoyed this inaugural newsletter updating you on key happenings in North America. You are the key to the success of AOTrauma NA and we value your feedback. Please let us know what you thought of this inaugural newsletter and let us know what you would like to see in upcoming issues. Please provide comments to: [mcclimon.andrea@aona.org](mailto:mcclimon.andrea@aona.org)

## What's Coming Up In the Next Issue

### December 2019 Focus Articles

ONE AO February 6-9, 2020 Sheraton  
Wild Horse Pass—Phoenix, AZ

New Research Award for Young  
Investigators