Complex Surgery In A Minimally Invasive Era

40th Annual Scientific Meeting

Scientific Program

Somerset Inn ★ Troy, MI

June 17-18, 2016
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**Course Sponsor**
International College of Surgeons - United States Section
An ACCME Accredited Provider

**Overall Course Objectives**
The Annual Scientific Meeting is designed to offer information regarding the latest surgical advancements and technology to address gaps in knowledge that may exist for practicing surgeons in all surgical specialties, residents in training, and allied health professionals. The desired outcome of this program is increased knowledge, better competency in cutting edge treatment modalities, and enhanced treatment decision making. It is the expressed goal of the course to provide enough material that upon completion of the activity the participant can make educated decisions to incorporate the latest surgical techniques and technologies as well as discern when these procedures are warranted to provide optimum patient care.

Topics presented during the Annual Scientific Meeting have been designed to address and improve the attendee’s knowledge and skills in the following competencies: patient care or patient-centered care, medical knowledge, practice-based learning & improvement, quality improvement and professionalism.

**Disclosure Policy**
It is the policy of both the American Academy of Neurological and Orthopaedic Surgeons and the ICS-US that any individual who is involved in planning or presenting in a program designated for AMA Physician’s Recognition Award Category 1 Credit™ must disclose all relevant financial relationships with a commercial interest prior to being included in the final program. This information is disclosed to the audience prior to the activity. The ICS-US has procedures in place to address a conflict of interest should one arise. Our complete Policy on Commercial Support and Independence is available on FICS Online or by request from Headquarters. Additionally, faculty members are asked to disclose when any discussion of unapproved use of a pharmaceutical or medical device occurs.

**Accreditation**
The International College of Surgeons-United States Section is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor Continuing Medical Education for physicians.

**Credit Designation**
The International College of Surgeons-United States Section designates this live activity for a maximum of 16 AMA PRA Category 1 Credits. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
Welcome from the
Governor of Michigan

December 2015

Dear Friends:

It is an honor, as governor of the state of Michigan to welcome you to tonight’s conference for The American Academy of Neurological and Orthopaedic Surgeons.

Additionally, it gives me great pleasure to recognize the work this organization is doing to advance surgical excellence and knowledge within the medical community. By attending this conference you are committing yourself to advancing your skills so that you may be able to better serve your patients. Thank you for your dedication and commitment to helping Michiganders remain healthy through your continued commitment to your profession.

Thank you again for your continued commitment and dedication to the people of Michigan. Please accept my best wishes for an enjoyable and memorable gathering.

Sincerely,

Rick Snyder
Governor
June 17, 2016

As Mayor of the City of Troy, on behalf of the City Council and our residents, it is my pleasure to welcome the American Academy of Neurological and Orthopaedic Surgeons to our community for your 40th Annual Scientific Meeting at the Troy Somerset Inn from June 17-18, 2016. The theme of the conference is “Complex Surgery in a Minimally Invasive Era.”

The mission of the American Academy of Neurological and Orthopaedic Surgeons is to provide continuing medical education of the highest quality to its members and serve as a forum for the sharing of surgical knowledge and expertise. Many prominent surgeons and their guests will be attending this conference to study the newest and most promising developments in the world of surgery.

We are very pleased to welcome the CME Chair Dr. Laura Zamorano and Interim Chair Dr. W. Craig Clark as well as esteemed faculty from our region’s high quality health care institutions such as the Beaumont Health System, University of Michigan, Wayne State University, and the St. John Providence Health System. This conference will provide an excellent learning experience for all participants gathering together in the City of Troy.

Troy is an involved community planning for the future. The quality of life the City offers is a result of hard work, planning, sacrifice, and leadership. Your group is also to be applauded for the excellent quality of health care you bring to the residents of Troy, and communities throughout Michigan and beyond.

On behalf of the City of Troy, I am honored to welcome your guests to the City of Troy and offer best wishes for a successful 2016 American Academy of Neurological and Orthopaedic Surgeons Conference.

Sincerely,

Mayor Dane Slater
City of Troy
Dear Colleagues:

It is my pleasure to welcome you to the 40th Annual Scientific Meeting of the American Academy of Neurological and Orthopaedic Surgeons. We are gathered here for this yearly event in Troy, Michigan at the Somerset Inn where a highly informative educational program will be presented.

Our Scientific Organizing Committee Chair, Dr. Lucia Zamorano, has secured a number of highly regarded speakers from the Troy area who will update you on a variety of Neurological, Orthopaedic and Spine related topics. I encourage you to review the following pages carefully to learn all about the various invited speakers and their presentations. Please join me in extending a sincere thank you to Dr. Zamorano for her tremendous efforts.

As always, there are many submitted abstracts that will round out our general session on Saturday. Included will be two scholarship presentations from bright young surgeons that will demonstrate that the future of our profession is in good hands.

I wish to acknowledge our Keynote Speaker, Dr. Muwaffak Abdulhak, who will present information on the Michigan Spine Surgery Improvement Collaborative. On behalf of all the members of the Academy I extend my sincere gratitude to Dr. Abdulhak for sharing with us his important experience with this venture.

Please remember that as our educational partner, we have worked closely with the ICS-US Section to develop additional programming that will be of interest to all surgical specialties. On Friday and Saturday afternoon we will join ICS for several sessions including Practice Management, Ethics, Trauma and Global Surgery. I encourage every member of the Academy to participate in as many sessions as possible to earn the maximum number of CME credits.

I hope you have a wonderful experience here in Troy for our annual meeting!

Sincerely,

W. Craig Clark
Interim Chair, American Academy of Neurological & Orthopaedic Surgeons
American Academy of Neurological and Orthopaedic Surgeons

Board of Directors

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CME Committee Chari

Orthopaedic Surgeon

Big Rapids, MI
Dr. Abdulhak is a neurosurgeon at Henry Ford Hospital and co-director of the Michigan Spine Surgery Improvement Collaborative. He has a wide array of clinical interests including cerebral aneurysm, cervical osteoarthritis, cervical spondylosis, complex spine surgery, intracranial hematoma, microdisectomy, minimally invasive spine surgery and spinal cord injury. His work has been published in numerous peer-reviewed journals, including Neurosurgery. He earned his medical degree at Weiss Memorial Hospital and has completed additional training in neurosurgery at London Health Science Center in Canada and spine surgery at Medical College of Wisconsin in Milwaukee.

The Michigan Spine Surgery Improvement Collaborative (MSSIC) seeks to measure and improve the care and outcomes of patients who undergo spine surgery. MSSIC focuses on spine surgery including indications for surgery such as stenosis, disk herniation and degenerative diseases for which pain relief and restoration of function are primary treatment goals. MSSIC focuses its activities on a limited set of quality domains and then expand its focus. The initial areas of focus may include prevention of surgical complications, frequency and management of failed back chronic pain syndrome, fusion vs. non-fusion procedures and tracking patients post-surgery. The project uses a patient registry to maintain and analyze data on patient characteristics, treatment processes and outcomes of care.
NEUROLOGICAL & ORTHOPAEDIC
Surgery Presentations
AANOS 40th Annual Scientific Meeting

Friday Salon A
June 17, 2016 8:00- Noon

Moderators: Lucia Zamorano MD, with W. Craig Clark, MD and Sudhir Rao, MD

The management and best treatment options for Neurological and Orthopaedic disease are constantly changing. Participants in these concurrent sessions will learn about a variety of Neurological, Orthopaedic and Spine related management and treatment options. Upon conclusion of the sessions the learner will have a better understanding of how to address diseases and conditions like degenerative disc disease, stroke, osteoarthritis and various types of carcinoma. In addition, the learner will be able to better determine whether treatment options presented are appropriate and when they should be used or recommended.

Minimally Invasive Surgical Techniques for the Management of Spinal Metastases
W. Craig Clark, MD, PhD, FICS, Interim Chair American Academy of Neurological and Orthopedic Surgeons, Attending Neurosurgeon Greenwood-Leflore Hospital, Greenwood, MS

Anterior Approaches to the Spine
Fernando G. Diaz, MD, FICS, Neurosurgeon, Michigan Head & Spine Institute, Professor and Chairman Department of Neurological Surgery at Oakland University School of Medicine and William Beaumont Hospitals, Southfield, MI

Human Stem Cell Based Intervertebral Disc Regeneration
Mick Perez-Cruet, MD, Msc, Neurosurgeon, Michigan Head & Spine Institute, Chief Minimally Invasive Spine Surgery, Beaumont Hospitals, Vice -Chairman, Director and Professor of Minimally Invasive Spine Surgery and Spine Program at Oakland University William Beaumont School of Medicine, Bloomfield, MI

Use of Expandable Cages in PLIF and Endoscopic ILIF
Lucia Zamorano, MD, FICS, Clinical Professor of Neurological Surgery, Oakland University William Beaumont School of Medicine, Birmingham, MI

Update on Spine Coding: Nuances of Minimally Invasive Spine Coding
Robert Johnson, MD, Neurosurgeon, Michigan Head & Spine Institute, Chief, Neurological Surgery, Sinai-Grace Hospital, Associate Clinical Professor, Department of Neurological Surgery, Wayne State University, Detroit, MI

Updates in the Current Management of Stroke
Richard Fessler, MD, Chairman Department of Surgery, St. John Hospital & Medical Centers, Medical Director, Ascension of Michigan Telemedicine Oversight Committee, Detroit, MI

Treatment of Large Acoustic Neuromas
Michael LaRouere, MD, President, Michigan Ear Institute, Director of Neurosciences, Providence Hospital and Medical Center, Clinical Associate Professor, Wayne State University, Clinical Professor, Michigan State University, Clinical Professor, Oakland University, William Beaumont School of Medicine, Farmington Hills, MI

Current and Future Innovations for Brain Tumors
Steven Kalkanis, MD, Chair, Department of Neurosurgery, Henry Ford Health System Medical, Director, Henry Ford Cancer Center, Detroit, MI

AANOS Keynote Speaker:
The Michigan Spine Surgery Improvement Collaborative
Muwaffak Abdulhak, MD, FRCS(C), Co-Director, Henry Ford Health System Department of Neurosurgery, Detroit, MI

HONORS LUNCHEON
(ICS NEw FELLOW RECOGNITION)

Friday Salon D
June 17, 2016 Noon - 1:30 PM

THE DR. ARNO ROSCHER ENDOWED LECTURE

Friday Sussex
June 17, 2016 1:30- 2:15 PM

Moderators: Michael Jacobs, MD and Arno Roscher, MD

In this special lecture recent advances in stem cell and regeneration medicine will be discussed with a focus on the prospects for effective regenerative therapies for heart failure and myocardial infarction. Participants will increase their awareness and improve their knowledge of advances in regenerative therapies for heart failure and myocardial infarction.

Regenerating the Broken Heart: Hope or Hype?
Jonathan A. Epstein, MD, Executive Vice Dean and Chief Scientific Officer, William Wikoff Smith Professor of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA
The profession of surgery requires more knowledge than just how to function in the operating room and perform the surgical procedure at hand. If you are in private practice and even if you are not, the business aspect of surgery is always changing. All doctors and especially surgeons are faced with issues such as contracts, employee matters, and complicated tax concerns; the result, an ever increasing amount of stress. Participants in this session, focused on non-surgical topics that can have an impact on patient care if not addressed correctly, will learn about how to effectively address assorted business management and tax related topics as well as how to deal with stress to prevent burnout and stress-driven diseases.

The Business of Surgery

Sibu P. Saha, MD, MBA, FICS, Past President, United States Section of the International College of Surgeons, Professor of Surgery and Chief, Division of Cardiothoracic Surgery at the University of Kentucky, Lexington, KY

The Disturbingly High Cost of Your Career in Surgery: The Business of Medicine in 2016 from the Perspective of a Tax Attorney, Business Owner, and Doctor Advocate

Victoria J. Powell, JD, LLC, Partner, Powell Heymann LLC, Phoenix, AZ

ICS Surgical Forum

Specialty Presentations

Delayed Gastric Emptying: Pylorus-Preserving Versus Non-Pylorus-Preserving Pancreaticoduodenectomy - Systemic Review and Meta-Analysis

Awinderpreet Singh, MD, Fellow Hepato Biliary Program, Providence Hospital, Troy, MI

Clinical Transplantation and Tolerance: Are We There Yet?

Reza F. Saidi, MD, FICS, Assistant Professor of Surgery, Division of Organ Transplantation, Department of Surgery, University of Massachusetts Medical School, Providence, RI

Yttrium-90 Radioembolization for Non-Resectable Primary and Metastatic Liver Cancer

Hassan Anbari, MD. Radiology Resident at Providence Hospital, Southfield, MI

CT Guided Placement of high Activity, Low Dose Rate (HALDR) Brachytherapy Seeds

Hassan Anbari, MD. Radiology Resident at Providence Hospital, Southfield, MI

Unusual Non-Lung Primary Malignancies Presenting in the Lung Parenchyma

Tracy Sambo, MD, MS, FICS (Jr.), Surgical Resident, Presence St. Joseph Hospital, Chicago, IL

Ten Years Experience in Radical Endovenous Laser Therapy of The Surgeon, The Heart and The General Motors Engineering

Adib H. Sabbagh, MD, FICS, Thoracic Surgeon, Past President, United States Section of the International College of Surgeons, Tucson, AZ

Chest Tube Cultures - A Historic Review

Raymond A. Dieter, Jr., MD, FICS, General and Thoracic Surgeon, Past President International College of Surgeons (World 2003 and US Section 1997), Glen Ellyn, IL

Neurological & Orthopaedic Surgery Presentations

AANOS 40th Annual Scientific Meeting

See description for previous session on page 9

Does Cervical Fusion with 0 Profile Cage System (LDR) Decrease Rate of Adjacent Level Disease?

Lucia Zamorano, MD, FICS, Clinical Professor of Neurological Surgery, Oakland University William Beaumont School of Medicine, Birmingham, MI

Novel MIS Approaches to the Lumbar Spine

Gerald Schell, MD, Neurosurgeon, Schell Spinal, Saginaw, MI

Robotic Spinal Surgery in the Ambulatory Setting

Louis Radden, DO, Orthopaedic Surgeon, Spine Specialists of Michigan, Bingham Farms, MI
Stent-Retriever Endovascular Treatment of Ischemic Stroke
W. Craig Clark, MD, PhD, FICS. Interim Chair American Academy of Neurological and Orthopedic Surgeons, Attending Neurosurgeon Greenwood-Leflore Hospital, Greenwood, MS

What Is New In Gliomas Surgery?
Shawn Hervey-Jumper, MD, Assistant Professor, Neurological Surgery at the University of Michigan, Ann Arbor, MI

Minimally Invasive Outpatient Treatment of Degenerative Spine Pathology
Miguel Lis-Planells, MD, Neurosurgeon, The Bonati Spine Institute, Land O’Lakes, FL

Using A Spinal Fixator to Treat Fractures of the Thoracolumbar
S. M. Rezaian, MD, PhD, FICS. Emeritus Professor of Orthopaedic Surgery, Tehran University, Director California Orthopaedic Medical Clinic, Beverly Hills, CA

Posterior Interosseous Nerve Palsy: Case Report and Review of Radial Nerve Palsy
Sudhir B. Rao, MD. Orthopaedic Surgeon, Big Rapids Orthopaedics PC and Premier Hand Center, Big Rapids, MI

The Latest Clinical Surgical Total Knee Replacement Advancements in Painful Osteoarthritis of the Knee
Robert S. Mathews, MD, PhD, FICS. Medical Director, First Team Institute, LLC, Millersville, PA

Enterobacter Cloacae Sepsis with Multiple Brain Abscesses
Francis Gregory Samonte, MD. Assistant Professor, Neurophysiology, De Lasalle University (Philippines), San Diego, CA

AANOS Scholarship Grand Prize Winner Morbidity and Mortality in Adults Undergoing Resection of Supratentorial Meningioma
Ahmed J. Awad, MD. AANOS Scholarship Winner, Post-Doctoral Research Associate, Icahn School of Medicine, Mount Sinai Health System, New York, NY

AANOS Scholarship Honorable Mention Primary CNS Lymphoma: Analysis of Treatment by Gamma-Knife Radiotherapy and Chemotherapy in a Prospective, Observational Study
Andres M. Alvarez-Pinzon, MD, MSc, Clinical Research Fellow, Neurological Surgery Department, Miami Neuroscience Center, Larkin Community Hospital, Plantation, FL

LUNCH PRESENTATION — THE DR. ANDRE CROTTI LECTURE

Saturday
June 18, 2016
Salon B&C
12:15- 1:30 PM

Moderator: Michael Jacobs, MD

Containing basic and somewhat advanced physiologic principles, this special presentation will address common and not so common complications and side effects of Bariatric surgery and will attempt to explain them from our current understanding of GI physiology. The audience will learn that based on gastric and small bowel motility and absorption, most side effects are treatable and most complications are preventable either by careful technique or preoperative recognition of appropriate risk factors.

Reflections on Three and One Half Decades of Necrotizing Pancreatitis
Michael G. Sarr, MD. ICS Honorary Fellow, Andrew Crotti Award Recipient, Professor Emeritus, Mayo Clinic, Rochester, MN

SPECIALTY PRESENTATIONS
TRAUMA AND ACUTE CARE SURGERY

Saturday
June 18, 2016
Salon A
1:30-3:30 PM

Moderators: Steven Brooks, MD and Mark Perlmutter

This session offers a review of various aspects of trauma related surgical issues including: Rupture Due to Blunt Trauma, Damage Control Surgery and Iatrogenic Brachial Plexus Injury. In addition, a historical retrospective will be provided by a renowned leader in the field. Participants in this course will increase their knowledge of the topics presented to provide improved patient care and also learn about important developments that have changed the specialty over the years.

Left Atrial Appendage Rupture Due to Blunt Trauma
Hassan Ahmed, MD, FICS (Jr.). Surgery Resident, Texas Tech University Health Sciences Center, Lubbock, TX

Acute Visceral Vascular Emergencies
Karl-Heinz Dietl, MD, FICS. Professor of Surgery, Klinikum Wieden, Germany

Iatrogenic Brachial Plexus Injury Secondary to Inappropriate Positioning Among Adults
Rana Latif, MD. Associate Professor, Department of Anesthesiology & Perioperative Medicine Anesthesiology and Neuroscience Critical Care University of Louisville, Louisville, KY

Milestones in Trauma Surgery
Charles E. Lucas, MD, Professor of Surgery, Wayne State University, Detroit, MI
Vaccination of health care professionals has recently grabbed the attention of public health officials and much of the public. However, many health care workers resist vaccination. Nationwide, fewer than half receive vaccines each year for the more common seasonal flu. To achieve high vaccination rates, a more aggressive approach is needed than simply informing health care workers and hoping they will receive vaccines on their own. Attendees will hear from an infectious disease expert about the pros and cons surrounding this highly debated topic and will be given an opportunity to discuss their views and provide personal examples of their experience in this interactive session. Upon completion of this session learners will have a better understanding of the issues surrounding this controversial topic.

Vaccinations for Healthcare Professionals
Vilma Drelichman, MD, Section Chief of Infectious Diseases, Department of Internal Medicine, Providence Hospital Southfield, MI

ICS World President's Lecture: Global Surgery and the WHO/Adapted Surgical Safety Checklist (SSC)
Professor. Yik-Hong Ho, MD, FICS, World President, International College of Surgeons, Professor and Head of Surgery, College of Medicine & Dentistry, James Cook University, Townsville, Australia

Surgical Mission Surprises - Honduras 2015
Domingo T. Alvear, MD, FICS, Founder, World Surgical Foundation, Pediatric Surgeon, Pinnacle Health System, Harrisburg, PA

Report on CEIF Project to Nigeria
Maqsood M. Elahi, MD, FICS, Founder, Cardiac Eye International Foundation, Irving, TX

Report on the WHO GIEESC Program
Demetrius E.M. Litwin, MD, FICS, Professor, University of Massachusetts Medical School, Chair, Department of Surgery, UMass Memorial Healthcare, Worcester, MA
In Memoriam

Edwin Lowd, MD
ORTHOPAEDIC SURGERY
SANTA ANA, CA

Welcome

The Chairman of the Board, Officers and Members of the American Academy of Neurological and Orthopaedic Surgeons would like to welcome the following new members who have joined the Academy in the last 12 months.

Jean Benae, MD
Neurological Surgery
McKinney, TX

Jayant Jagannathan, MD
Neurological Surgery
Madison Heights, MI

Shabbar Hussain, MD
Orthopaedic Surgery
Chambersburg, PA

John Ogden, MD
Neurological Surgery
Westerville, OH

Christopher Pham, DO
Neurological Surgery
Naples, FL

With our Thanks

The following individuals made significant financial contributions to the Academy in the past 12 months.

Anca Bereanu, MD
Dr. Kazem Fathie Scholarship Fund

Mark N. Perlmutter, MD
Dr. William Mathews Speaker Fund

David Weiss, DO
Dr. Kazem Fathie Scholarship Fund

This Scientific Meeting would not be possible without the generous support from the following:

DePuy Synthes
Globus Medical

LDR Spine
My Spine Team

SI-BONE
Souther Spine

Zimmer Biomet Spine
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### Thursday June 16, 2016

**Registration**
7:00 AM - 6:00 PM
Prefunction

**ICS Officer Breakfast**
7:30 AM - 9:00 AM
Sussex North Foyer

**ICS Business Meetings:**
- **Endowment Executive Committee**
- **Including Standing Committees**
  - **Board of Regents**
  - 8:30 AM - Noon
  - Sussex North

**ICS Officer & Alliance Luncheon**
Noon - 1:00 PM
West End

**ICS Executive Council & House of Delegates Meeting**
1:00 - 3:00 PM
Sussex South

**ICS Opening Ceremony & President’s Plenary Session**
- **Bristol**
  - 3:30 - 3:45 PM

**Keynote Lecture**
- **Bristol**
  - 3:45 - 4:15 PM

**Explore S.E. Michigan Lecture**
- **Windsor**
  - 4:00 - 5:00 PM

**Scholarship Competition**
- **Bristol**
  - 4:15 - 5:15 PM

**Alliance BOD & General Membership Meeting**
- **Windsor**
  - 5:00 - 6:00 PM

**Resident Education**
- **Bristol**
  - 5:15 - 6:30 PM

**Welcome Reception**
- **Somerset Patio**
  - 7:00 - 8:00 PM

### Friday June 17, 2016

**Registration**
7:00 AM - 6:00 PM
Prefunction

**Breakfast**
7:00 AM - 8:30 AM
Bristol

**ICS Surgical Forum Plenary Session**
- **8:00 AM - Noon**
  - **Sussex**

**All Day Coffee Break**
- **8:30 AM - 6:00 PM**
  - **Bristol**

**Honors Luncheon (New Fellow Recognition)**
- **Noon - 1:30 PM**
  - **Salon D**

**Pewabic Pottery Tour & Workshop**
- **1:30 - 5:00 PM**
  - **Gather at Registration**

**The Dr. Arno Roscher Endowed Lecture**
- **1:30 - 2:15 PM**
  - **Sussex**

**Practice Management**
- **2:15 - 3:30 PM**
  - **Sussex**

**ICS Surgical Forum Specialty Presentations**
- **3:45 - 6:00 PM**
  - **Sussex**

**AANOS Board Meeting**
- **4:00 - 6:00 PM**
  - **Salon B**

### Saturday June 18, 2016

**Registration**
7:00 AM - 6:00 PM
Prefunction

**Breakfast**
7:00 AM - 8:30 AM
Bristol

**Neurological & Orthopaedic Surgery Presentations**
- **AANOS 40th Annual Scientific Meeting (Part I)**
  - **8:00 - Noon**
  - **Salon A**

**All Day Coffee Break**
- **8:30 AM - 6:00 PM**
  - **Bristol**

**Honors Luncheon (New Fellow Recognition)**
- **Noon - 1:30 PM**
  - **Salon D**

**HPB Symposium Plenary Session**
- **8:00 AM - 12:15 PM**
  - **Salon B&C**

**Lunch Presentation**
- **The Dr. Andre Crotti Lecture**
  - **12:15 - 1:30 PM**
  - **Salon B&C**

**HPB Symposium Supplementary Session**
- **1:30 - 3:30 PM**
  - **Salon B&C**

**Specialty Presentations**
- **Trauma and Acute Care Surgery**
  - **1:30 - 3:30 PM**
  - **Salon A**

**Annual Ethics Forum**
- **3:30 - 4:30 PM**
  - **Salon B&C**

**Global Surgery**
- **4:30 - 6:00 PM**
  - **Salon B&C**

**Closing Dinner**
- **7:00 - 10:00 PM**
  - **Sussex**