

Certificate Course in Cardiac Rhythm Management for Clinicians & Allied Professionals



Course Objectives:

1. Comprehensive teaching of basic concepts essential to electrophysiology and cardiac rhythm device management
2. Clinical practice topics that applied the basic concepts to everyday practice and patient management
3. The program will help clinicians prepare for examinations in electrophysiology and device management

Course Co-directors: Christine Chiu-Man (Canada) Chu-Pak Lau (Hong Kong) Kathy LF Lee (Hong Kong)

Thursday, 24 February 2011

08:00 - 09:30 Room N201A

Introduction to Cellular Electrophysiology

Chairpersons: **Christine Chiu-Man** (Canada), **Chun-Ja Yoo** (Korea)

- Why is the Action Potential Important in EP?
Gil Gross (Canada)
- Arrhythmia Mechanisms: From Cell to Bedside
Ralph Verdino (USA)
- Antiarrhythmic Drug Effects and Interactions
Win-Kuang Shen (USA)
- Putting It Together: Panel Quiz
Gil Gross (Canada), Ralph Verdino (USA), Win-Kuang Shen (USA)

10:00 - 11:30 Room N201A

EP Studies: EGM Interpretation, Stimulation Protocols, and Troubleshooting

Chairperson: **Kathy Lee** (Hong Kong)

- Fundamentals of EGM Interpretation and Rhythm Analysis
Joel Archbald (UK)
- Basic Stimulation Protocols and Electrophysiologic Evaluation
Christine Chiu-Man (Canada)
- Systematic Approach to Troubleshooting Problems in the EP Lab and Practice Cases
Craig Swygman (USA)
- Putting It Together: Panel Quiz
Joel Archbald (UK), Christine Chiu-Man (Canada), Craig Swygman (USA)

11:30 - 13:00 Room N201A

Basics of Cardiac Pacing

Chairperson: **Susan Song** (Canada)

- Electrical Concepts in Pacing
Lynne Foreman (USA)
- Basics of Pacemaker Timing Cycles
Suleman Kamberi (Australia)
- Hemodynamics of Cardiac Pacing
Carsten Israel (Germany)
- Putting It Together: Panel Quiz
Lynne Foreman (USA), Suleman Kamberi (Australia)*, Carsten Israel (Germany)

14:00 - 15:30 Room N201A

Basics of Cardiac Defibrillation & Resynchronization

Chairperson: **Marleen Irwin** (Canada)

- Defibrillation Concepts and Determinants of Shock Success
Saeed Hosseini (Canada)
- Principles of ICD Sensing and Detection of VF / VT
Akihiko Nogami (Japan)
- How Does Cardiac Resynchronization Therapy Work in Heart Failure Management?
David Hayes (USA)
- Putting It Together: Panel Quiz
Saeed Hosseini (Canada), Akihiko Nogami (Japan), David Hayes (USA)

16:00 - 17:30

Room N201A

ECG Interpretation

Chairpersons: To be announced

- Stepwise Approach to Arrhythmia Recognition
June Huh (Korea)
- ECG Features in ARVC, Long QT, J wave and Brugada Syndromes
Torhu Ohe (Japan)
- Systematic Approach to Pacemaker ECG Troubleshooting
Ruth Kam (Singapore)*
- Putting It Together: Panel Quiz
June Huh (Korea), Torhu Ohe (Japan), Ruth Kam (Singapore)*

Friday, 25 February 2011

08:00 - 09:30

Room N201A

SVT Tutorial

Chairperson: **Joel Archbald** (UK)*

- AV Nodal and Pathway Mediated SVT: Substrate, Mechanism and Diagnostic Criteria
Chun-Ja Yoo (Korea)
- Atrial Tachycardia: Substrate, Mechanism and Diagnostic Criteria
Jennifer Cummings (USA)
- Pacing Techniques in SVT Differentiation in the EP Lab
Hans Henrik Odland (Norway)
- Workshop: Troubleshooting Difficult Cases of SVT
W.T. Lei (Taipei)*

10:00 - 11:30

Room N201A

VT Tutorial

Chairperson: **Marta Felix Valente** (Portugal)

- VT: Substrate, Mechanism and ECG-Anatomic Correlation
Traci Buescher (USA)
- Principles of Entrainment
Hans Henrik Odland (Norway)
- Mapping / Ablation Strategies in VT: When to Use What
Stanley Tung (Canada)
- Cases Workshop: Difficult VT
Tami Metz (USA)

11:30 - 13:00

Room N201A

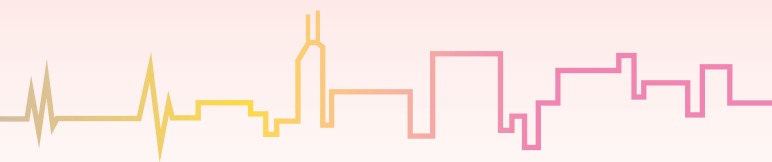
Cardiac Imaging in EP

Chairpersons: **Craig Swygman** (USA), **Yuling Cao** (China)

- Essentials of Fluoroscopy, CT, Cardiac MRI and ICE Techniques in EP
Jerold Shinbane (USA)
- Bridging the Gap from 2D Fluoroscopy to 3D Imaging: Orientation & Interpretation Tips
Joel Kirsh (Canada)
- Image Integration 3D Mapping Systems: Guide to Make a "Perfect" Map
Chang-Hee Lee (Korea)*
- Workshop: Application in Complex Ablation Cases
Chang-Sheng Ma (China)

*To be confirmed

Allied Professional Sessions



14:00 - 15:30 Room N201A

Advanced Pacemaker Programming

Chairperson: To be announced

- Automatic Capture and Sensing Algorithms: Are they all the same?
Ji-Hae Yun (Korea)
- Special Features to Reduce Ventricular Pacing: Pitfalls and Pearls
Susan Song (USA)
- Considerations in Rate Drop Response, Mode Switch and Sensor Programming
Hiruhiko Abe (Japan)
- Workshop: Case Studies of Complex Pacemaker Troubleshooting
David Hayes (USA)

16:00 - 17:30 Room N201A

Advanced ICD

Chairperson: Ji-Hae Yun (Korea)*

- VT/VF: Advances in programming ICDs to reduce shocks
Melanie Gura (USA)
- ICD Diagnostics
John Ip (USA)*
- ICD Follow-Up Complications and Management
Suphachai Chaithiraphan (Thailand)*
- Workshop: Case-Based Approach to ICD Troubleshooting
Carsten Israel (Germany)

Saturday, 26 February 2011

08:30 - 10:00 Room N201A

Advanced Cardiac Resynchronization Therapy

Chairperson: To be announced

- CRT Implantation Techniques: Tips and Tricks to Improve Successful Implant
Michael Cao (USA)
- CRT Programming and Optimization Methods
Atul Verma (Canada)
- CRT Follow-Up Complications and Management
Eli Ovsyshcher (Israel)
- Workshop: Case-Based Approach to CRT Troubleshooting
Marleen Irwin (Canada)

10:30 - 12:00 Room N201A

Clinical Cases: Management of Difficult Arrhythmia Patients in the ICU

Chairperson: June Huh (Korea)

- Neonate and Pediatric Cases
Khalid Dagriri (Saudi Arabia)
- Adult Congenital Heart Disease Cases
Joseph Chan (Hong Kong)
- Device Cases: Double Trouble?
Akihiko Nogami (Japan)
- End of Life Care Cases: Sharing Ethical Challenges in the Asian Pacific Region
To be announced

*To be confirmed

14:00 - 15:30 Room N201A

Evidence Based Management: From Trials to Practice

Chairperson: To be announced

- AF
Ming Tang (China)
- Pacemaker and CRT trials: Towards optimal pacing sites
Marleen Irwin (Canada)
- ICD
Melanie Gura (USA)
- Infection Prevention: Risk Factors, Outcomes, Management Options
Charles Love (USA)
- Anticoagulation Issues and Management Options: Best Practices?
Eddie Eclipse (UAE)

16:00 - 17:30 Room N201A

Atrial Fibrillation

Chairperson: Marta Felix Valente (Portugal)

- Update on Mechanisms of AF and Atrial Electrical Remodeling
William Lewis (USA)
- Novel Approaches to AF Ablation: Improving Outcomes and Reducing Recurrences?
Dongsheng Gao (Canada)
- Preventing Procedural Complications and Improving Safety of AF Ablation
Barbara Thomas (USA)
- Biophysics of Ablation Lesions
Daniel Simantov (Israel)

Sunday, 27 February 2011

For CRM Course registrants only (Registrants need to indicate their attendance in advance)

08:30 - 17:30 (one hour per session) Room N202/N203

Basics of 3D Mapping Systems Practice Workshop

Workstations of 3D mapping systems to permit hands on step by step guided practice.

Facilitator will review:

- Principles of operation
- Patient setup
- System navigation and procedure of creating geometry & activation / propagation map
- Review basics of 3D map interpretation.
- Systematic approach to troubleshoot problems

Clinicians help to address clinical relevance and share clinical experience e.g. with troubleshooting.

08:30 - 17:30 (one hour per session) Room N211/N212

Basics of Device Programming Practice Workshop

Each major manufacturer to provide programmer stations to permit hands on step by step guided practice and address audience questions.

Clinicians will address clinical relevance and share clinical experience. E.g. with troubleshooting

- Basics of programmer interface, navigation.
- Review systematic approach to device follow up: interrogation, retrieval of diagnostic data, basics of interpretation, marker annotations.
- Review methods to perform stimulation and sensing thresholds testing.
- Review arrhythmia recognition and diagnosis during follow up assessment, eg. PMT.
- Systematic approach to troubleshoot problems.

Clinicians help to address clinical relevance and share clinical experience e.g. with troubleshooting.