January 18 (Mon)

12:30-13:00  **Opening Ceremony**
Dean and Professor Keiichi SASAKI  
*Graduate School of Dentistry, Tohoku University, Japan*
President and Professor Susumu SATOMI  
*Tohoku University, Japan*
Professor Mitsuo NIINOMI  
*Institute for Materials Research, Tohoku University, Japan*
Dean and Professor Shinichi IZUMI  
*Graduate School of Biomedical Engineering, Tohoku University, Japan*

13:00-15:00  **Symposium I: Biomaterials in interface science**
Chairpersons : Professor Takashi GOTO  
*Institute for Materials Research, Tohoku University, Japan*
Professor Takayuki NARUSHIMA  
*Department of Materials Processing, Tohoku University, Japan*

S1-1  **Low-modulus titanium alloys suitable for rods in spinal fixation devices**
Professor Mitsuo NIINOMI  
*Institute for Materials Research, Tohoku University, Japan*

S1-2  **Mechanical and biological response of biomedical Co-Cr-Mo alloy produced by additive manufacturing using electron beam melting (EBM)**
Professor Akihiko CHIBA  
*Institute for Materials Research, Tohoku University, Japan*

S1-3  **Fatigue properties of NiTi wires used in biomedical applications**
Professor Takayuki NARUSHIMA  
*Department of Materials Processing, Tohoku University, Japan*

S1-4  **Dealloying Toxic Ni from SUS316L Surface**
Professor Hidemi KATO  
*Institute for Materials Research, Tohoku University, Japan*

S1-5  **Bio-ceramic Coating by Laser Chemical Vapor Deposition**
Professor Takashi GOTO  
*Institute for Materials Research, Tohoku University, Japan*
Chairpersons: Professor Keiichi SASAKI  
Graduate School of Dentistry, Tohoku University, Japan  
Associate Professor Guang HONG  
Graduate School of Dentistry, Tohoku University, Japan

S2-1 Where is the fairway of our voyage?  
Dean and Professor Keiichi SASAKI  
Tohoku University Graduate School of Dentistry, Sendai, Japan

S2-2 Development of Robot-assisted Surgery (RAS) System for CMF  
Dean and Professor Chuanbin GUO  
Peking University School and Hospital of Stomatology, Beijing, China

S2-3  
Dean and Professor Jae-Il LEE  
Seoul National University School of Dentistry, Korea

S2-4 How to facilitate the movement of qualified dental professionals to provide dental services across ASEAN member states?  
Dean and Professor Suchit POOLTHONG  
Chulalongkorn University Faculty of Dentistry, Thailand

S2-5 Exemplifying Applied Innovation in Oral Science: Can tongue progenitors repair broken heart? – Kinship between oral and cardiac development and stem cell biology  
Dean and Professor Christopher PECK  
University of Sydney Faculty of Dentistry, Australia

S2-6 Pursuing Excellence and Humanism  
Professor Seokwoo S. LEE  
Department of Dental Education School of Dentistry,  
Chonnam National University School of Dentistry, Korea

S2-7 Biomaterials in caries prevention and treatment  
Associate Professor Lei CHENG  
Sichuan University West China School of Stomatology, Chengdu, China

17:15-18:00 Poster viewing

18:00-19:30 Banquet
January 19 (Tue)

9:15-10:15  **Special Lecture:**
Cross-talk between Bone Cells and the Regulation of Bone Remodeling
Professor Roland BARON
*Harvard Medical School and Harvard School of Dental Medicine, Boston, MA, USA*

10:15-12:15  **Symposium III: Regenerative oral science**
Chairpersons : Professor Osamu SUZUKI
*Graduate School of Dentistry, Tohoku University, Japan*
Professor Satoshi FUKUMOTO
*Graduate School of Dentistry, Tohoku University, Japan*

S3-1  **Efficacy of calcium phosphate-based scaffold materials on mineralized and non-mineralized tissue regeneration**
Professor Osamu SUZUKI
*Graduate School of Dentistry, Tohoku University, Japan*

S3-2  **Gap junctional communication regulates salivary gland branching morphogenesis**
Professor Satoshi FUKUMOTO
*Division of Pediatric Dentistry Graduate School of Dentistry, Tohoku University, Japan*

S3-3  **iPS Cell-Based Strategies in Bone Tissue Engineering**
Professor Hiroshi EGUSA
*Division of Molecular and Regenerative Prosthodontics Tohoku University Graduate School of Dentistry, Sendai, Japan*

S3-4  **Emerging Regenerative Approaches for Periodontal Regeneration**
* - the future perspective of cytokine therapy and stem cell therapy - *
Professor Shinya MURAKAMI
*Graduate School of Dentistry, Osaka University, Japan*

S3-5  **Molecular mechanisms regulating tooth number**
Professor Atsushi OHAZAMA
*Division of Oral Anatomy, Department of Oral Biological Science, Niigata University Graduate School of Medical and Dental Sciences, Japan*

13:00-14:30  **Poster Discussion & Competition**
14:45-16:45  **Symposium IV: Medical device innovation for diagnosis and treatment of biosis-abiosis interface**

Chairpersons: Professor Yoshifumi SAIJO  
 *Graduate School of Biomedical Engineering, Tohoku University, Japan*  
 Professor Ryoichi NAGATOMI  
 *Graduate School of Biomedical Engineering, Tohoku University, Japan*

S4-1 **Smart Instrument Design for Challenging Minimally Invasive Applications**  
 Professor Jenny DANKELMAN  
 *Department of BioMechanical Engineering, Delft University of Technology, Netherlands*

S4-2 **Open Technologies and Workflows in Digital Dentistry**  
 Professor Fong-Chin SU  
 *Medical Device Innovation Center and Department of Biomedical Engineering, National Cheng Kung University, Taiwan*

S4-3 **Detection of early caries by laser-induced breakdown spectroscopy**  
 Professor Yuji MATSUURA  
 *Graduate School of Biomedical Engineering, Tohoku University*

S4-4 **New Technology for Bio-Medical Interface Creation utilizing Powder Jet Deposition**  
 Professor Tsunemoto KURIYAGAWA  
 *Graduate School of Bio-Medical Engineering, Tohoku University, Japan*

S4-5 **Acoustic diagnosis device for dentistry**  
 Assistant Professor Kouki HATORI  
 *Graduate School of Dentistry, Tohoku University, Japan*

16:45-17:15  **Closing Ceremony**

Poster Award Presenting Ceremony  
Vice-Dean and Professor Nobuhiro TAKAHASHI  
*Graduate School of Dentistry, Tohoku University, Japan*