

Preliminary Program

Day #1
27, Nov (Tue)

Registration 11:00-12:50

(Doors Open at 12:00)

Openig Remarks 12:50-13:00

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|-------|-------|--------------------|--------|------------------------------------|
| 12:50 | 12:55 | David J. Hak | U.S.A. | ISFR President |
| 12:55 | 13:00 | Yoshinobu Watanabe | Japan | ORS-ISFR 2018 Meeting Chair |

ORS-ISFR Clinical Study 13:00-13:45

Chair

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|-------|-------|-------|-------------------|-------------|--|
| CS-01 | 13:00 | 13:09 | Ikko Ohno | Japan | Treatment of chronic osteomyelitis using modern Papineau technique with negative pressure wound therapy |
| CS-02 | 13:09 | 13:18 | Shunsuke Takahara | Japan | Evaluation of radiographic fracture healing: An assessment of consistency using radiographic union score for tibia (RUST) & modified RUST in tibial shaft fractures. |
| CS-03 | 13:18 | 13:27 | Takeshi Sawaguchi | Japan | Radiographic evaluation of bone formation in the osteotomy gap after open-wedge high tibial osteotomy |
| CS-04 | 13:27 | 13:36 | Jörg Goldhahn | Switzerland | Orthopedic complication reporting revisited |
| CS-05 | 13:36 | 13:45 | David J. Hak | U.S.A. | Complications Following Operatively Treated Ankle Fractures In Diabetic Patients – Who Is At The Greatest Risk? |

Bone formation & Complications

Selvadurai Nayagam & Yoshinobu Watanabe

ORS-ISFR Basic Science 13:50-15:15

Chair

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|-------|-------|-------|------------------|---------|---|
| BS-01 | 13:50 | 14:02 | Kazuhiro Morioka | U.S.A. | Differential fracture response to traumatic brain injury suggests dominance of neuroinflammatory response in polytrauma |
| BS-02 | 14:02 | 14:14 | Shozo Kanezaki | Japan | CT data analysis of infra-acetabular corridor for screw placement in Japanese population |
| BS-03 | 14:14 | 14:26 | Mischa Muehling | Germany | FE-Prediction of tibia fracture interfragmentary motion using rigid body assumptions |
| BS-04 | 14:26 | 14:38 | Takahiro Oda | Japan | Rad may play a role in nonunion development |
| BS-05 | 14:38 | 14:50 | Yuka Sugiura | Japan | Anatomical assessment of iliac cavity |
| BS-06 | 14:50 | 15:02 | Toru Iga | Japan | Iliosacral screw corridors in Japanese subjects: A study using reconstruction CT scan |
| BS-25 | 15:02 | 15:14 | Go Sakai | Japan | HSP22 acts as a positive regulator in TNF- α -stimulated IL-6 synthesis in osteoblasts : association with mTOR |

Jörg Goldhahn & Nobuyuki Takenaka

Intermission 15:15-15:30

ORS-ISFR Clinical Study* 15:30-16:15

Chair

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|--------|-------|-------|------------------|-------|---|
| CS-06* | 15:30 | 15:39 | Naofumi Shiota | Japan | New classification & clinical results for basicervical fractures of the proximal femur |
| CS-07* | 15:39 | 15:48 | Hiroyuki Okada | Japan | Improvement of ADL After Surgical Intervention for Proximal Humeral Fracture: Retrospective Comparative Analysis between Intramedullary Nail Versus with Plate using a National Database in Japan |
| CS-08* | 15:48 | 15:57 | Hiroyuki Okada | Japan | Survival & ADL Improvement by Early Surgical Intervention of femoral neck fractures: Retrospective Analysis using a National Database in Japan |
| CS-09* | 15:57 | 16:06 | Takahiro Niikura | Japan | Vitamin D insufficiency & deficiency in elderly patients with fragility fracture of the hip |
| CS-10* | 16:06 | 16:15 | Natsumi Saka | Japan | Low adherence of osteoporosis guideline after distal radius fracture -Study using database of health insurance claims data- |

Fragility Fracture

Volker Bühren & Etsuo Shoda

Case Report Competition* 16:20-17:35

Chair

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|--------|-------|-------|------------------|-------|--|
| CR-01* | 16:20 | 16:32 | Koji Demiya | Japan | Chronic osteomyelitis of the left lower leg 6 years after the first operation: a case report |
| CR-02* | 16:32 | 16:44 | Saori Motegi | Japan | A case report of non-union after induced membrane technique surgery |
| CR-03* | 16:44 | 16:56 | Keisuke Oe | Japan | Minimally invasive plate osteosynthesis for the treatment of humeral shaft nonunion: A report of two cases |
| CR-04* | 16:56 | 17:08 | Keisuke Oe | Japan | Periprosthetic femoral fracture with characteristics of atypical femoral fracture -A case report- |
| CR-05* | 17:08 | 17:20 | Yosuke Nagai | Japan | Atypical femoral fractures around a prosthetic joint stem |
| CR-06* | 17:20 | 17:32 | Kenichi Sawauchi | Japan | Infectious open-knee joint fracture with soft tissue defect treated with antimicrobial megaprosthesis supported with iodine: A case report |

Hamish Simpson & Takashi Matsushita

ORS ISFR Board
Meeting
16:30-17:50

Welcome Party at kokoka (Restaurant) 18:00-20:00

Preliminary Program

Day #2
28, Nov (Wed)

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|---|-------------------------------------|---|
| Young Investigator Competition* 9:15-10:00 | | Clinical study |
| Chair | | Takashi Suzuki |
| YI-01* | 9:15 9:24 Saori Motegi | Japan Evaluation of OTA-OFCin open fractures of extremities |
| YI-02* | 9:24 9:33 Yusuke Mochizuki | Japan The Accuracy of Screw Placement for Pelvic & Acetabular Fractures Using with 3D-CT Navigation |
| YI-03* | 9:33 9:42 Kazuhiko Udagawa | Japan A novel technique for retrograde intramedullary nailing using arthroscopy for the periprosthetic fracture of the femur after total knee arthroplasty |
| YI-05* | 9:42 9:51 Takumi Kaku | Japan Clinical experience with total hip arthroplasty for displaced femoral neck fracture in the elderly |
| YI-06* | 9:51 10:00 Naoya Inagaki | Japan A comparison of the bone mineral density of the pelvis between young & elderly patients using CT scans |
| ORS-ISFR Basic Science* 10:05-10:45 | | Cells |
| Chair | | Jörg Goldhahn & Takahiro Niikura |
| BS-07* | 10:05 10:17 Michio Arakura | Japan Endochondral Bone Regeneration Using Chondrogenically Differentiated Human Induced Pluripotent Stem Cells |
| BS-09* | 10:17 10:29 Natsumi Saka | Japan Implant type tissue-engineered cartilage derived from human auricular chondrocyte may maintain cartilaginous property even under osteoinductive condition |
| BS-10* | 10:29 10:41 Peter Giannoudis | U.K. Regulation of Angiogenesis Discriminates Tissue Resident MSCs from Effective & Defective Osteogenic Environments |
| Intermission 10:45-11:10 | | |
| Industry Sponsored Lecture #1 11:10-11:40 | | Bioventus |
| Chair | | Takahiro Niikura |
| L-02 | 11:10 11:40 Andrew Harrison | Use of LIPUS in compromised healing – basic science and clinical data |
| Industry Sponsored Lecture #2 11:40-12:10 | | Stryker Japan |
| Chair | | Atsushi Sakurai |
| L-03 | 11:40 12:10 Fumio Fukuda | Low 30-days Mortality after Proximal Femoral Fracture in Japan |
| Lunch 12:10-13:00 | | |
| ORS-ISFR Basic Science* 13:00-13:40 | | Biomechanics |
| Chair | | Peter Augat & Hervé Petite |
| BS-11 | 13:00 13:12 Shabnam Samsami | Germany Numerical assessment of articular fracture lines on the stability of complex tibial plateau fractures |
| BS-12* | 13:12 13:24 Tetsu Tsubone | Japan Calcaneal fractures are not always the results of high energy trauma |
| BS-14 | 13:24 13:36 Monica C. Lin | U.S.A. Development of smart bone plate to monitor fracture repair |
| ORS-ISFR Clinical Study* 13:40-14:40 | | Complications |
| Chair | | Peter Giannoudis & Takeshi Sawaguchi |
| CS-11* | 13:40 13:49 Tomoaki Fukui | Japan Evaluation of clinical results of lower limb nonunion based on patient-reported outcome. |
| CS-12* | 13:49 13:58 Takahiro Niikura | Japan Clinical trial of autologous CD34-positive cell transplantation for fracture nonunion patients |
| CS-13* | 13:58 14:07 Hyung Keun Song | Korea An analysis of complications & clinical outcomes in the treatment of segmental tibial fractures according to the method of internal fixation |
| CS-14* | 14:07 14:16 Jae-Woo Cho | Korea Volumetric changes of grafted bone in induced membrane technique managing critical sized defects of long bones |
| CS-15* | 14:16 14:25 Tsuyoshi Murase | Japan Three-Dimensional Corrective Osteotomy for Malunited Fractures of the Upper Extremity using Patient-Matched Instruments: A Prospective, Multicenter, Open-Label, Single-Arm Trial |
| CS-17* | 14:25 14:34 Keisuke Ishii | Japan Are Postoperative Infection In Patients with Open Fractures Of Extremities Associated with OTA open fracture classification? A Multi-Center Prospective Cohort Study. |
| Intermission 14:40-15:00 | | |
| Invited Guest Lecture 15:00-15:30 | | Yoshinobu Watanabe |
| Chair | | Peter Giannoudis |
| L-01 | 15:00 15:30 Peter Giannoudis | U.K. The Diamond Concept of Fracture Healing |
| ORS-ISFR Basic Science* 15:30-16:20 | | Acceleration of Fracture Healing |
| Chair | | Chelsea Bahney & Masahiro Shirahama |
| BS-15* | 15:30 15:42 Yohei Kumabe | Japan The effect of transcutaneous CO2 application on distraction osteogenesis of rabbit tibia |
| BS-16* | 15:42 15:54 Kiminori Yukata | Japan Continuous infusion of PTH1-34 delayed fracture healing in mice |
| BS-17* | 15:54 16:06 Katrina Roxanne Bell | U.K. The effect of systemic simvastatin in fracture healing in an osteoporotic rat bone fracture model |
| BS-18* | 16:06 16:18 Francis Lee | U.S.A. Systemic hPTH(1-34) Rescues Deficient Long Bone Fracture Healing in Type 2 Diabetes |
| ORS-ISFR Clinical Study 16:20-17:15 | | New Concept |
| Chair | | Tsuyoshi Murase |
| CS-18 | 16:20 16:29 Kiyoto Kinugasa | Japan A new anterolateral approach for the treatment of pilon fractures –Kesagake approach—and its operative results |
| CS-19 | 16:29 16:38 Yukinobu Nishii | Japan The study of surgical treatment for stress fracture of the medial malleolus |
| CS-20 | 16:38 16:47 Sabine Goldhahn | Switzerland 2 year results after open-wedge high-tibial osteotomy with a plate – a prospective multicenter study |
| CS-21 | 16:47 16:56 Miho Kure | Japan Are there side-to-side variations in the lower extremities? |
| CS-22 | 16:56 17:05 Shingo Okazaki | Japan New intramedullary nail for trochanteric fractures : ASULOCK® |
| CS-23 | 17:05 17:14 Masahiro Kiyono | Japan Clinical outcomes of treatment with locking compression plates for distal femoral fractures in a retrospective cohort |

Preliminary Program

Day #3
29, Nov (Thu)

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| ORS-ISFR Clinical Study* 9:15-10:20 | | New Evaluation & Trials | |
| Chair | | Sabine Goldhahn & Tomoyuki Noda | |
| CS-24* | 9:15 9:24 Yoto Oh | Japan | Locational characteristics of atypical femoral fractures in Japan |
| CS-25* | 9:24 9:33 Keisuke Oe | Japan | Clinical experience of using Reamer-Irrigator-Aspirator system for Japanese patients |
| CS-26* | 9:33 9:42 Abhijit Bajracharya | U.K. | Antibiotic Administration for Open Long-Bone Fractures: A Need to Change Pre-Hospital Management Strategy to Meet Revised National Standards |
| CS-27* | 9:42 9:51 Ji Wan Kim | Korea | Clinical outcomes of intramedullary nailing with contralateral side nail in bowed atypical femur fractures |
| CS-28* | 9:51 10:00 Sang Yang Lee | Japan | Soluble fibrin monomer complex as a useful predictor of venous thromboembolism after fracture surgery |
| CS-29* | 10:00 10:09 Takahiro Niikura | Japan | Topical cutaneous application of carbon dioxide using a hydrogel is a novel treatment option to assist fracture repair -Results of a clinical trial- |
| CS-30* | 10:09 10:18 Tomoaki Fukui | Japan | Safety & bactericidal effect of 222nm ultraviolet C irradiation. |
| ORS-ISFR Basic Science* 10:20-10:45 | | Absorption & Regeneration | |
| Chair | | David J. Hak & Francis Lee | |
| BS-21* | 10:20 10:32 Francis Lee | U.S.A. | Insightful Pathophysiologic Mechanisms for Metastatic Cancer-Induced Bone Loss & New Therapeutic Consideration for Impending Pathological Fractures |
| BS-22* | 10:32 10:44 Chelsea S. Bahney | U.S.A. | New insight into normal fracture healing drives novel therapeutic approaches to bone regeneration. |

Intermission 10:45-11:10

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|--|-------------------------------|----------------------|--|
| Presidential Guest Lecture 11:10-11:40 | | David J. Hak | |
| Chair | | David J. Hak | |
| L-04 | 11:10 11:40 Daniel S. Horwitz | U.S.A. | Fragility Fractures – Techniques, Tips, and Tricks |
| Industry Sponsored Lecture #3 11:40-12:10 | | Zimmer Biomet | |
| Chair | | Hirota Kawano | |
| L-05 | 11:40 12:10 Tomoyuki Noda | Japan | Treatment of pathological fracture of proximal femur; surgical tips and pearls for traumatic surgeon |

Lunch 12:10-13:00

General Assembly 13:00-13:30

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| Industry Sponsored Lecture #4 13:30-14:00 | | NexMed International | |
| Chair | | David J. Hak | |
| L-06 | 13:30 14:00 Peter Augat | Germany | Biomechanical environment & fracture healing |

ISFR & FFN Combined Symposium 14:00-15:40

How to deal with fractures in the geriatric population
Chairs: David Marsh & Peter Augat

1. (Optional: Evolution of FFN from ISFR (5 min.)
Peter Augat
2. Trauma in geriatric patients - an interdisciplinary & interprofessional challenge (20 min.)
Volker Bühren (ISFR)
3. Orthogeriatric Co-management of elderly fracture patients (20 min.)
David Marsh (FFN)
4. Multidisciplinary co-management system in Japan -tentative- (20 min.)
Takeshi Sawaguchi (ISFR)
5. How do osteoporosis & osteoporotic drugs affect fracture healing (20 min.)
David J. Hak (FFN)
6. Discussion (15 min.)

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| Young Investigator Competition* 15:40-17:10 | | Basic Science | |
| Chair | | Amy Hoang Kim & Chantal Chenu | |
| YI-07* | 15:40 15:52 Marianne Hollensteiner | Austria | Synthetic vertebrae provide authentic haptics during vertebral augmentation training |
| YI-08* | 15:52 16:04 Sabrina Sandriesser | Germany | Effect of additional cerclage on post-operative weight-bearing after plate osteosynthesis of spiral fractures at the distal tibia |
| YI-09* | 16:04 16:16 Emily Kathryn Bliven | Germany | Stability of Proximal Femur Plates with Spring-Loaded Screws for the Fixation of Femoral Neck Fractures |
| YI-10 | 16:16 16:28 Murtadhah Mohammed Kurdi Jalal | U.K. | Atrophic non-union model: shifting from external to internal fixation |
| YI-11 | 16:28 16:40 Katrina Roxanne Bell | U.K. | A clinically relevant rat animal model for the study of metaphyseal osteoporotic fracture healing |
| YI-12 | 16:40 16:52 Ran Magnusdotir | U.K. | Phenotypic Analysis of fracture-induced Bone Pain in a mouse model of osteoporotic fractures |
| YI-13* | 16:52 17:04 Shao-Ting Jerry Tsang | U.K. | Effect of low intensity pulsed ultrasound therapy on Staphylococcus aureus biofilms |

Gala Dinner & Awards Ceremony 18:00-
The winners will be announced

Preliminary Program

Day #4
30, Nov (Fri)

ORS-ISFR Basic Science 9:15-10:05

Chair

Seiya Jingushi & Natsumi Saka

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|-------|------|-------|--------------|--------|---|
| BS-23 | 9:15 | 9:27 | Hervé PETITE | France | A comparative study of tissue-engineered constructs from Acropora & Porites coral in a large animal bone defect model |
| BS-24 | 9:27 | 9:39 | Hervé PETITE | France | Glucose Delivery System Based-Hydrogel Composite Scaffold for enhancing MSC survival |
| BS-26 | 9:39 | 9:51 | Yu Kuroiwa | Japan | Escherichia coli-derived BMP-2-incorporated β -TCP granules induces bone regeneration |
| BS-27 | 9:51 | 10:03 | Yu Kuroiwa | Japan | The effect of topical cutaneous CO2 application to bone healing in a rat femoral defect model |

ORS-ISFR Clinical Study 10:05-11:00

Chair

Yukinobu Nishii & Jea-Woo Cho

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|-------|-------|-------|-----------------|-------|---|
| CS-31 | 10:05 | 10:14 | Issei Shinohara | Japan | Terrible triad injury with Essex-Lopresti injury: a case report |
| CS-32 | 10:14 | 10:23 | Taro Shiba | Japan | Clinical Outcome of Tension Band Wiring for Patella Fractures |
| CS-33 | 10:23 | 10:32 | Jun Kawamata | Japan | Ostosynthesis for unstable femoral neck fracture with Twinhook system |
| CS-34 | 10:32 | 10:41 | Natsumi Saka | Japan | Patterns of radial notch fracture in elbow fracture dislocations with proximal ulna comminution |
| CS-35 | 10:41 | 10:50 | Tomoaki Fukui | Japan | Atypical femoral fractures in patients of metastatic bone tumor treated with zoledronic acid & denosumab. |
| CS-36 | 10:50 | 10:59 | Seiya Jingushi | Japan | Low-intensity pulsed ultrasound was frequently used for fresh fractures in elderly female patients according to the open data from the National Database of Health Insurance Claims of Japan. |

Intermission 11:00-11:20

ORS-ISFR Clinical Study 11:20-12:20

Chair

Fragility Fracture

Yoto Oh & Shota Harada

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|-------|-------|-------|------------------|-------|---|
| CS-37 | 11:20 | 11:29 | Yukinobu Nishii | Japan | The clinical results of the surgical treatment for the ankle fragility fracture |
| CS-38 | 11:29 | 11:38 | Takashi Inokuchi | Japan | The importance of reduction in X-ray lateral view for femoral trochanteric fractures using Hansson Twin Hook System |
| CS-39 | 11:38 | 11:47 | Etsuo Shoda | Japan | Occult femoral trochanteric fracture in elderly patients |
| CS-40 | 11:47 | 11:56 | Takashi Iwakura | Japan | Involvement of lifestyle-related diseases in the development of fragility fracture of the proximal femur |
| CS-41 | 11:56 | 12:05 | Takashi Iwakura | Japan | Clinical experience in the treatment of femoral neck fracture with Hansson Pinloc System |
| CS-42 | 12:05 | 12:14 | Takahiro Waki | Japan | Optimal intramedullary nailing for trochanteric fractures: Nailing without distal locking screw could be dangerous |

Late Breaking Abstract Session 12:20-13:05

Chair

Takashi Suzuki & Yoshinobu Watanabe

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|-------|-------|-------|-----------------------|--------|---|
| LB-01 | 12:20 | 12:29 | Seung-Bae Oh | Korea | Minimally invasive surgical treatment using an 'iliac pillar' screw for isolated iliac wing fractures in geriatric patients: a new challenge |
| LB-02 | 12:29 | 12:38 | Joon-pyo Juhn | Korea | Posterior locked lateral compression injury of the pelvis in geriatric patients: an infrequent and specific variant of the fragility fracture of pelvis |
| LB-03 | 12:38 | 12:47 | Joon-pyo Juhn | Korea | Is minimal invasive surgical treatment more beneficial than conservative treatment for nondisplaced unilateral sacral ala fracture combined with anterior pelvic disruption? |
| LB-04 | 12:47 | 12:56 | Sunniva Leer-Salvesen | Norway | Postoperative start of low-molecular-weight-heparin increases mortality compared to preoperative start in patients with femoral neck fractures. An observational study of 20,241 hemiprotheses reported to the Norwegian Hip Fracture Register. |
| LB-05 | 12:56 | 13:05 | Amy Ladd | U.S.A. | Developing a Core Outcome Set for the Research and Treatment of Thumb Carpometacarpal Osteoarthritis: A Delphi Study |

Closing Remark

ORS ISFR Board
Meeting
13:15-14:05