## Conference Program | Friday 7 April 2017

### 7.15 - 8.15am
**Medtronic Breakfast Session I**  | Grand Ballroom  
Breakfast from 7:00  | Management of adult spinal deformity: A case-based discussion  
*Dr Sigurd Berven, MD*

### 8.00 - 8.45am
**Arrival Tea & Coffee**  | Federation Ballroom

### 8.45am
**SSA 2017 Conference Opening**  
*Dr William Sears and Professor Brian Freeman*

### 9.00 - 10.00am
**Free Paper Session I**  | Trauma / Tumour  
See abstracts - pages 36 - 39  
Chair - *Dr Peter Woodland*  | Grand Ballroom

1.1  | Urgent closed reduction of the dislocated cervical spine: Optimising regional hospital management  
*Dr Richard Storey*

1.2  | Traumatic subaxial cervical facet subluxation and dislocation injury: Epidemiology, radiographic analysis and risk factors for spinal cord injury  
*Mr Ryan Quarrington*

1.3  | Spinal pelvic dissociation following trauma: The Royal Melbourne Hospital experience  
*Dr Daniel De Villiers*

1.4  | Use of laminar hooks in chance fracture posterior fusion: Can you save a motion segment?  
*Dr Peter Taylor*

1.5  | Early vertebroplasty in vertebral fractures; from immobile to independently mobile; A single-centre case series  
*Dr Fahad Bangash*

1.6  | Prognosis of patients with first presentation of spinal metastasis  
*Miss Liane Papantoniou*

### 10.00am
**Morning Tea**  | Federation Ballroom

### 10.30 - 11.10am
**President’s Session**  
Chair - *Dr William Sears*  | Grand Ballroom

10.30  | Disc structure and failure: Clinical relevance and the relevance of the clinician  
*Dr Peter Robertson*
### C O N F E R E N C E  P R O G R A M   |   F R I D A Y  7  A P R I L  2 0 1 7

**11.20 - 12.30pm FREE PAPER SESSION 2 | BIOMECHANICS**

See abstracts - pages 41 - 45

**Chair - Professor Hans-Joachim Wilke | Grand Ballroom**

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<tr>
<th>Time</th>
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**Chair - Professor Hans-Joachim Wilke | Grand Ballroom**

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**12.30pm L U N C H  | Federation Ballroom**

**1.30 - 3.00pm SYMPOSIUM 1 | See abstracts - pages 46 - 47**

**Chair - Professor Brian Freeman | Grand Ballroom**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>1.30</td>
<td>Loads acting on the spine determined by in-vivo experiments</td>
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<td>1.50</td>
<td>Efficacy of lordotic interbody fusion devices in restoring lumbar lordosis</td>
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<tr>
<td>2.20</td>
<td>Measurements of outcomes, quality and value in spine surgery</td>
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<td>2.50</td>
<td>PANEL DISCUSSION</td>
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**3.00pm A F T E R N O O N  T E A  | Federation Ballroom**
### FREE PAPER SESSION 3 | LUMBAR SPINE
See abstracts - pages 48 - 55

**Chairs** - Dr Matthew Scott-Young (3.1 - 3.6), Professor Brian Freeman (3.7 - 3.12) | Grand Ballroom

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper Title</th>
<th>Author/Institution</th>
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<tbody>
<tr>
<td>3.30</td>
<td>Characterization of bone marrow pathologies in Modic changes of the human lumbar spine</td>
<td>Dr Julia Kuliwaba</td>
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<tr>
<td>3.40</td>
<td>Classification of lumbar facet joint cysts using the NSURG Grading Score and correlation with recurrence and clinical outcomes</td>
<td>Mr Ryan Campbell</td>
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<tr>
<td>3.50</td>
<td>Preventing symptomatic reherniation and reoperation after lumbar discectomy: Superiority data from a multi-center, prospective, randomized superiority study</td>
<td>Dr Adisa Kuršumović</td>
</tr>
<tr>
<td>4.00</td>
<td>Morphometric magnetic resonance imaging study of the corridor for the oblique lumbar interbody fusion (OLIF) technique at L1-L5</td>
<td>Mr Julian Li</td>
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<tr>
<td>4.10</td>
<td>Impact of hyperlordotic cages on segmental lumbar lordosis in a minimally invasive surgical transforaminal lumbar interbody fusion</td>
<td>Dr Vijay Seevaratnam</td>
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<tr>
<td>4.20</td>
<td>Fusion assessment by MRI in comparison to CT in anterior lumbar interbody fusion: A prospective study</td>
<td>Dr David Kitchen</td>
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<tr>
<td>4.30</td>
<td>Antero-Lateral Lumbar Interbody Fusion (ALLIF) - modified ALIF in a lateral decubitus position works effectively in obese patients: technique and results</td>
<td>Mr Gregory Malham</td>
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<tr>
<td>4.40</td>
<td>Early experience with cortical bone trajectory screws</td>
<td>Dr Gordon Ding</td>
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<tr>
<td>4.50</td>
<td>Anterior lumbar interbody fusion using Silicon Nitride implant: 30 years radiological outcome of the first synthetic ALIF spacer implanted in humans</td>
<td>Dr Prashanth Rao</td>
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<tr>
<td>5.00</td>
<td>Outcomes of stand-alone anterior lumbar interbody fusion using integral fixation cages at the lumbosacral junction: A radiological study</td>
<td>Miss Gloria Giang</td>
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<td>5.10</td>
<td>Fitness to drive after lumbar discectomy: A pilot study using an advanced driving simulator</td>
<td>Dr Paul Licina</td>
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<tr>
<td>5.20</td>
<td>Comparison of a calcium phosphate bone substitute with recombinant human bone morphogenetic protein-2: A prospective study of fusion rates, clinical outcomes and complications with 24-month follow-up</td>
<td>Mr Gregory Malham</td>
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### WELCOME RECEPTION
Federation Ballroom
## STRYKER BREAKFAST SESSION 2 | Grand Ballroom

**Breakfast from 7.00**

Tritanium - a new material for interbody fusion: The science, evidence, value considerations and restoration of lordosis to avoid revision

*Dr Sigurd Berven, MD*

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## ARRIVAL TEA & COFFEE | Federation Ballroom

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## FREE PAPER SESSION 4 | BASIC SCIENCE See abstracts - pages 58 - 63

**Chair - A/Professor John Costi | Grand Ballroom**

8.30 **4.1** Evaluation of fusion with a porous titanium alloy coated peek interbody cage in an ovine model

*Dr Claire Jones*

8.40 **4.2** Detailed analysis of intervertebral disc structure using 9.4T MRI and polarised light microscopy facilitates understanding of disc biomechanics

*Dr Idrees Sher*

8.50 **4.3** Reconstructing vertebral anatomy using clinical MRI

*Dr J Paige Little*

9.00 **4.4** Generating multipotent stem cells from primary human adipocytes

*Ms Avani Yeola*

9.10 **4.5** Posterolateral disc prolapse in flexion initiated by lateral inner annular failure: An investigation of the herniation pathway

*Ms Vonne Van Heeswijk*

9.20 **4.6** A microstructural analysis of a more realistic disc herniation model incorporating compression, flexion and facet-constrained shear

*Dr Meredith Schollum*

9.30 **4.7** Spondylolysis renders the intervertebral disc more vulnerable to herniation

*Miss Nurul Sapiee*

9.40 **4.8** Are large anular defects in lumbar discectomy patients a predictor of increased risk for recurrent herniation, as well as early readmission?

*Dr Adisa Kuršumović*

9.50 **4.9** The effect of an annular puncture on the herniation pathway. An in vitro structural investigation

*Ms Vonne Van Heeswijk*

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### MORNING TEA | Federation Ballroom
### FREE PAPER SESSION 5  |  SPINAL DEFORMITY

See abstracts - pages 64 - 68

**Chair - Dr Peter Woodland  |  Grand Ballroom**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>10.30</td>
<td>5.1</td>
<td>Radiographic and functional outcomes for hook/hybrid vs. all-pedicle screw instrumentation: A retrospective study in 152 patients with adolescent idiopathic scoliosis</td>
<td>Martin Gehrchen MD PhD</td>
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<tr>
<td>10.40</td>
<td>5.2</td>
<td>Improvement of trunk muscle endurance in Adolescent Idiopathic Scoliosis (AIS) patients undergoing ScoliBrace and Scientific Exercise Approach to Scoliosis (SEAS) treatment.</td>
<td>Dr Juan Du Plessis</td>
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<tr>
<td>10.50</td>
<td>5.3</td>
<td>Accuracy of 3D surface scanners for clinical torso assessment</td>
<td>Dr Caroline Grant</td>
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<td>11.00</td>
<td>5.4</td>
<td>Analysis of pedicle morphology in Adolescent Idiopathic Scoliosis patients and non-scoliotic healthy controls using MRI scans</td>
<td>Dr Colin Davis</td>
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<tr>
<td>11.10</td>
<td>5.5</td>
<td>Progressive changes in pedicle morphometry and neurovascular anatomy: Adolescent Idiopathic Scoliosis patients vs non-scoliotic healthy controls</td>
<td>Dr Colin Davis</td>
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<tr>
<td>11.20</td>
<td>5.6</td>
<td>Change in cross-sectional area of the spinal cord and canal in healthy and scoliotic adolescents over a one year time period</td>
<td>Dr Caroline Grant</td>
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### SOCIETY SESSION

**Chair - Dr William Sears  |  Grand Ballroom**

Evidence and the responsible introduction of new technology

1. Introductory comments  Dr William Sears
2. Clinician’s view  Dr Peter McCombe
3. Industry view  Mr Tom Afzal
4. Health Economist’s view  A/Professor Sue O’Malley (Health Advisory Board)
5. Australian Health Department view  Dr Megan Keaney

12.30pm  LUNCH  |  Federation Ballroom
CONFERENCE PROGRAM | SATURDAY 8 APRIL 2017

1.30 - 3.00pm SYMPOSIUM 2  See abstracts - page 70

Chair - Dr Rob Kuru | Grand Ballroom

1.30 Biomechanics of the disc, biomechanics of disc herniation and the challenge to seal the annulus
Professor Hans-Joachim Wilke

2.15 DEBATE  The efficacy of spinal fusion for the treatment of low back pain
Dr Sigurd Berven | The case for
Dr Charles Branch | The case against
DISCUSSION

3.00pm AFTERNOON TEA | Federation Ballroom

3.30 - 4.30pm THE GETTING OF WISDOM  See abstracts - page 71

Chair - Mr Michael Johnson | Grand Ballroom

3.30 A traumatic pathway
A/Professor Susan Liew

3.50 Biomechanics and clinical relevance
A/Professor John Costi

4.10 Do you believe in discogenic pain? How does balance differ from congruity?
Dr Matthew Giblin

4.30 - 6.00pm SSA BUSINESS MEETING

7.00 - 11.00pm SSA CONFERENCE GALA DINNER

Glen Albyn Estate | 380 - 400 Channel Highway, Taroona

Buses will depart from the Hotel Grand Chancellor from 6.30pm.
Return transport will leave Glen Albyn at 10.30pm and 11.00pm.
### Free Paper Session 6 | Cervical Spine

**Chair:** Professor Brian Freeman  
**Location:** Grand Ballroom

<table>
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<tr>
<th>Time</th>
<th>Paper Title</th>
<th>Presenter</th>
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<tr>
<td>8.30</td>
<td>Subsequent surgery rates after treatment with cervical TDR or ACDF at one or two levels: Results from a randomized clinical trial at 7 years</td>
<td>Armen Khachatryan MD</td>
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<tr>
<td>8.40</td>
<td>Fusion for severe C1-2 lateral mass osteoarthritis</td>
<td>Mr Mitchell Fung</td>
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<td>8.50</td>
<td>Clinical outcomes of first generation multilevel cervical total disc replacement</td>
<td>Dr Matthew Scott-Young</td>
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<td>9.00</td>
<td>Threaded K-wire technique for C1 lateral mass screw</td>
<td>Dr Amanda Paterson</td>
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<tr>
<td>9.10</td>
<td>Radiological study of subsidence in anterior cervical cage and plate versus anchored stand alone cage in anterior cervical discectomy and fusion: A preliminary study</td>
<td>Dr Angela Li Ching Ng</td>
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<td>9.20</td>
<td>Management of type 2 odontoid fractures in Western Australia</td>
<td>Dr Kongposh Kaul</td>
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<td>9.30</td>
<td>Prospective FDA trial for a compressible cervical total disc replacement: Data from two participating centers</td>
<td>Dr Scott Blumenthal</td>
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<td>9.40</td>
<td>Lesions in whiplash patients who died of other causes</td>
<td>Professor James Taylor</td>
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<tr>
<td>9.50</td>
<td>Anterior longitudinal ligament reconstruction to reduce hypermobility of cervical and lumbar disc arthroplasty</td>
<td>Dr Ralph Mobbs</td>
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FREE PAPER SESSION 7 | NEW TECHNOLOGY / OUTCOMES

10.30 - 12.10pm

Chair - A/Professor Kevin Seex | Grand Ballroom

0.30 7.1 A retrospective analysis of 13 new spinal implants, operations or investigational modalities in 35 years of spinal surgery and how can we do this better
Dr Graeme Brazenor

0.40 7.2 Image guided percutaneous pedicle screws without K-wires or bone-anchored trackers
Mr Gregory Malham

0.50 7.3 Minimally invasive sacroiliac joint fusion using triangular titanium implants: Pooled analysis of prospective clinical trials
Bengt Sturesson MD, PhD

1.00 7.4 Incidence of pedicle screw breach with normal intra-operative fluoroscopy: A postoperative CT analysis of 513 consecutive pedicle screws
Dr Xue Ling Chong

1.10 7.5 Prospective patient outcome measurement for the individual surgeon
Dr Jerry Day

1.20 7.6 Influence of smoking on wound complications in adults undergoing elective posterior cervical fusion
Dr Monish Maharaj

1.30 7.7 Willingness to participate in a placebo-controlled trial of surgery for lumbar spinal stenosis: Results of an online survey
A/Professor Manuela Ferreira

1.40 7.8 Influence of obesity on complications, function outcome and subsidence rates of anterior lumbar interbody fusion (ALIF)
Mr Kevin Phan

1.50 7.9 Measuring outcomes and value in spinal surgery: Objective measurement using commercially available wearable technologies
Dr Ralph Mobbs

2.00 7.10 Preliminary results of quantitative functional X-Ray analysis of stand-alone interbody 3-D printed porous titanium cervical implants
Dr Jasper Wolfs

12.10 - 12.30pm | AWARDS & CONFERENCE CLOSE