### **INDEX TO CONCURRENT SESSIONS**

C 1 – C 24

#### Afternoon Concurrent Sessions – 5:00pm to 7:05pm

Tuesday, April 26 | Wednesday, April 27 | Friday, April 28

There will be 24 Concurrent Sessions at this year's TSC2016. Concurrent talks are 20 minutes each, with 5 minutes for questions. There are five speakers persession, covering focused areas of the same theme. (LCD projectors and laptops available.)

#### TUESDAY

C1: Knowledge, Argument, Explanatory Gap and Conceivability

- Torin Alter, Mary and the Concept Mastery Strategy [1]
- Craig DeLancey, Probing or Priming? an Xphi Re-Evaluation of the Knowledge Argument [7]
- Benedicte Veillet, The Explanatory Gap and Epistemic Feelings [88]
- William S. Robinson, Dualism Without Conceivability Arguments [33]
- Hasen Khudairi, Grounding, Conceivability and the Mind-Body Problem [53]
- Pradeep Mutalik, Embodied Abstraction A Road Map from "Structure and Function" to Consciousness, Exposing the Hard Problem as a Brilliant but Seductive Misconception [82]

### C2: Panpsychism, Idealism and Metaphysics 1

- Andrew Lee, The Deep Structure of Experience [39]
- **Georg Franck**, Presence: The Mode of Existence Shared by Phenomenal Consciousness with the Temporal Present **[38]**
- Anand Rangarajan, Panpsychism and Compositionality: A Solution to the Hard Problem [43]
- Giuliano Sterrantino, The Contingency or Necessity of Mind [46]
- Soren Brier, Consciousness and C. S. Peirce's Answer to the Riddle of the Sphinx [50]
- Adam Melinn, Panmnemism and the Value of Experiential Information [40]

### C3: Agency and Mental Causation

- > Donelson Dulany, Consciousness in Theory of Mental Activity [73]
- Horace Fairlamb, The High Cost of Mental Causation [75]
- **Paavo Pylkkanen**, Does Quantum Ontology Enable the Causal Efficacy of Consciousness? [77]
- Chris Fields, Modeling Cognition in the "Conscious Agent" Formalism [204]
- Javier Sanchez-Canizares, Is Compatibilism Compatible with the Existence of EPR-like Quantum Correlations? [116]
- Carlos Montemayor, Memory and Consciousness [145]

The Science of Consciousness **TSC**2016 | Loews Ventana Canyon | Tucson, Arizona

## C4: Neural Correlate of Consciousness (NCC) 1

- Bernard Baars, Freeman Neurodynamics and the Sentient Cortex [173]
- Robert Van Gulick, Hogs and the 'Three Roads to Consciousness" A Pluralist and Integrative Approach to Understanding Consciousness [215]
- Dwight Holbrook, Where Is Language? [97]
- Yi-Yuan Tang, Brain Regions Involved in Self-transcendence Following Meditation [182]
- Amna Al Faki, MD, Cardiac Neurons [180]
- ► John Russell Hebert, Restructuring Consciousness Theory to Include the Observer Putting the Horse Before the Cart [161]

#### C5: Quantum Approaches

- Mani L. Bhaumik, PhD, Objective Reality of Global Coherence in Brain [232]
- Jack A. Tuszynski, The Quantization Paradigm in Physics and Biology [241]
- > Joshua Mitteldorf, Quantum Physics is Holistic at its Core So is Life [236]
- Charles Card, How Core Cognition Might Implement Quantum Cognition
  [286]
- Simon Burton, Quantum Contextuality and the Physics of Meaning [285]
- Nikolaus Von Stillfried, Is Consciousness to Matter as Wave is to Particle? When Looking for Analogies to the Hard Problem, Bohmian and Bohrian Interpretations of Quantum Theory Lead to Different Results. [89]

### C6: Time and Consciousness

- Ronald Gruber, MD, Consciousness Needs the Flow of Time and Therefore Perceptual Completion [220]
- Matti Vuorre, Voluntary Actions Cause a Temporal Rate-shift in Visual Awareness: Evidence From Visual Illusions [222]
- **Daniel Sheehan**, A Quantum Programme for the Study of Precognition [246]
- Marcin Nowakowski, Quantum Entanglement in Time A Necessary Condition for Consciousness? [296]
- Michael Lipkind, MD, Paradoxes of Free Will Analyzed by Means of the Field Principle [112]
- Robert J. Sawyer, Science Fiction and Consciousness [397]

### C7: PSI and Non-Locality

 Brendan Lehman, Experimental Production of Excess Correlation of Right Temporal Theta-gamma Activity Between Subjects Pairs Sharing Circumcerebral Rotating Magnetic Fields at Distances Exceeding 6000km [170]

- Julia Mossbridge, What Can Psi Interactions Teach Us About Consciousness? [338]
- Gary Schwartz, Can Claimant Evidential Mediums Identify Collaborating Hypothesized Discarnates? A Multi-blinded Experiment Comparing Mediumship Versus Telepathy Control [340]
- ▶ Mandy A. Scott, Distant Healing with Shaman Healer Ilona Palucki: A Case Study Demonstration of Excess Correlation in Right Temporal Lobe Activity Between Healer and Receiver at Distances Exceeding 6000km [163]
- Marilyn Schlitz, Experimenter Effect and Replication in Science [191]
- **Stanley Klein**, Using Psi to Distinguish Among Alternative Theories of Quantum Mechanics [337]

### C8: Meditation and Technology

- Tracy Brandmeyer, Investigating the Efficacy of Frontal Midline Theta Neurofeedback: A Comprehensive Approach Via Eeg, Fmri, Mri & Dti [186]
- Sona Ahuja, Change in Visuo-spatial and Verbal Working Memory Capacity at Different Phases of Meditation [312]
- Marjorie Woollacott, Meditation Training and Executive Attention: Identifying Amplitudes and Sources of Event Related Brain Potentials During a Demanding Switch Task [326]
- Jeffrey A. Martin, Four Month Meditation and Positive Psychology Intervention Shows Highly Significant Results on Well-Being, Positive and Negative Emotion, Depression, Stress, Narcissism and Non-Symbolic Experience [318]
- **Patrick Palucki**, MyHeadquarters: A Novel Neurofeedback Paradigm Through Live EEG in Virtual Reality [171]
- **Giulio Ruffini**, The LUMINOUS Project (2016-2019): Studying, Measuring and Altering Consciousness Through Information Theory in the Electrical Brain [172]

### **C9:** Phenomenal Consciousness

- Anatoly Nichvoloda, Bayesian Information-Theoretic Surprise (Bits) Theory of Attended Access and Phenomenal Consciousness in Bayesian Hierarchical Predictive Processing Framework [23]
- **Martina Fuerst**, Actual and Hypothetical Phenomenal Contrast Scenarios A Route To Cognitive Phenomenology? **[61]**
- David Pitt, Phenomenal Sorites and Unconscious Qualia [54]
- Nicholas Georgalis, What Are Phenomenal States? [62]
- Ying-Tung Lin, No-conceptualization Paradigms of Perceptual Consciousness [118]
- Joseph Sanguinetti, Are Phenomenological Reports Useful in Noninvasive Brain Stimulation Experiments? Case Studies with Transcranial Ultrasound. [283]

The Science of Consciousness TSC2016 | Loews Ventana Canyon | Tucson, Arizona

### C10: Panpsychism, Idealism and Metaphysics 2

- Keith Turausky, The Unreduced Subject: An Exploration of Haecceital "For-Me-Ness" [57]
- Crystal L'Hote, From Correlation to Causation: The Pluralist Way [17]
- Harald Atmanspacher, Symmetry Breakdown in a Holistic Reality [35]
- Michael Silberstein, In Defense of Neutral Monism [45]
- Linda Dayem, Revisioning Consciousness with Whitehead and the Orch OR Theory [239]
- **Tobias Schlicht**, Spontaneity, Consciousness and Intrinsic Brain Activity. A Critical Look at the Kantian Brain Hypothesis **[124]**

## C11: Agency and Free Will

- Claudia Passos, Do Newborn Babies Have Experiences of Agency? [113]
- Alex Hankey, Development of a Theory of Action by Free Will in the Complexity Based Approach to Experience [110]
- Hans Liljenstrom, To Adapt or Innovate What Determines Your Decision?
  [177]
- Mihailis Diamantis, Picking Out Actions [107]
- Penelope Rowlatt, The Consequence Argument [115]
- Seymen Atasoy, Consciousness Studies and Social Problems: The Case of Islamist Extremism [386]

### C12: The Extended Mind

- Karina Vold, The Extended Mind Without Functionalism: The what and the where of mental states [58]
- > David Silverman, Extending Extended Consciousness [95]
- James Kerwin, The Science of Consciousness in Karel Capek's "R.U.R."
  [396]
- Hsin-ping Wu, Is Externalism Defeated by the Case of Autistic Artists? [96]
- Krzysztof Swiatek, Narrow Content and Self-Knowledge [117]
- Wang Chaoguang, The Value System Characteristics of Chinese Online Game Players [388]

### C13: Neural Correlate of Consciousness (NCC) 2

- Andrew Duggins, Efficient Representation of the Objectively Infinite Within a Finite Subjective Space [138]
- **Benjamin Kozuch**, Reports of the Death of Dual Visual Systems Theory Have Been Greatly Exaggerated **[139]**
- **Kieron Mottley**, Do Distortion Images Affect Visual Self-Recognition in 24-,30- and 36-month-olds? [199]

- Jayne Gackenbach, Contemplative Practice Versus Video Game Play Associations Between Attention, Dreams, Mindfulness And Self-presence [351]
- Burton Voorhees, Consciousness Explains Human Altruism and Cooperation [105]
- James Blackmon, Beyond Split Brains: Hemispherectomies and the Wada Test [60]

# C14: Vibrations, Scale and Topology

- Rollin McCraty, Global Interconnectivity: Heart Rhythm Synchronization Between Humanity and Earth's Energetic Systems [264]
- Timbre Wolf, Brain Dance [374]
- **CM Markan**, Frequency Fractal Harmonic Resonance: Understanding Conscious Experience **[263]**
- Joon-Young Moon, Network Topology and Directional Connectivity Patterns in Mouse, Monkey and Humans: Implications for the Evolution of Consciousness [162]
- Klee Irwin, The Quasicrystalline Nature of Consciousness and the Universe [261]
- William Brown, Unified Physics and The Information Network of Awareness [51]

# C15: Cellular and Intra-Cellular Processes

- Raag Saluja, Electron and Proton Transfer in Tubulin [157]
- Alian Aquino, Does The Meyer-Overton Correlation Explain Anesthesia and Consciousness? [155]
- Norman Cook, Excitable Cells Make Sentience Possible, Their Synchronization Produces Consciousness [127]
- ▶ Jon Dean, Synthesis and Secretion of Endogenous N,N,-Dimethyltryptamine (DMT) in Rodent Brain [146]
- Erik Viirre, Extramission: The Eye Emits Photons: Are There Controlled Signals from the Retina? [141]
- **David Pearce**, Schrodinger's Neurons. An Experimentally Testable Explanation of Conscious Mind. (physicalism.com) **[42]**

## C16: Meditation 2

- Shobha Bhasin, Correlational Study on Yoga Practitioners Based on Triguna and Strength Deployment Inventory Tests [330]
- Sukhdev Roy, Embodied Consciousness as a Bound State in an Open Multiple Quantum-well System [310]

The Science of Consciousness TSC2016 | Loews Ventana Canyon | Tucson, Arizona

- Richard D. Baker, Meditation Practice in the West and the Science of Buddhism [314]
- Gemma Perry, Chanting Improves Mood and Social Cohesion [321]
- Brian Rees, Samadhi for Soldier Resilience and Posttraumatic Stress [322]
- Brianna Morseth, The Varieties of Selfless Experience: Theological, Neurological and Ecological Phenomenologies of Ego Death [309]

### C17: Metacognition and Agency

- Elisabeth Norman, Metacognition and Mindfulness: The Role of Fringe Consciousness [214]
- Laurene Vuillaume, Experimental Manipulation of Bodily Self-Consciousness Influences Metacognition [216]
- Stephen Whitmarsh, Validating Metacognition of Attention Using Magnetoencephalography [217]
- Martijn E. Wokke, Distinct Neural Mechanisms Underlying First-Order Task Performance and Metacognition [218]
- Mikael Ringstad Hedne, The Relationship Between Metacognitive Feelings and Insight Vs. Non-Insight Solutions to Magic Tricks [210]
- Justin Riddle, The Homunculus Solution of Nested Consciousness: A Theory of Neural Oscillation [114]

# C18: Panpsychism, Idealism and Metaphysics 3

- Logan Trujillo, Modeling The Brain Via Conscious Realism: A Preliminary Investigation [56]
- Morgan Giddings, The Hardware of the Brain as a Focusing Lens for Intrinsic (Universal) Consciousness [78]
- Chetan Prakash, Conscious Agents and the Invention of Space: Two Theorems [85]
- Mihretu Guta, The Metaphysics of Substance and Selfhood/Personhood: A Non-Theory Laden Approach [101]
- Hedda Hassel Morch, Mental Combination and Integration [41]
- John Horgan, The Quest to Solve Consciousness: A Skeptic's View [79]

## C19: Unity and Self

- Bernard W. Kobes, Partially Unified Subjects and Masrour's Theory of Conscious Unity [16]
- Zoran Josipovic, Unity of Consciousness [130]
- Richard Lenon, Self Without Identity [103]
- Josh Stoll, On the Presence of Others and the Seconding of Self [104]
- **Eric LaRock**, The Unity of Experience [131]
- Piotr Boltuc, Rather Simple Non-Reductive Consciousness [49]

#### C20: Ketamine and Anesthetics

- Lindsey Crown, Ketamine Injection Acutely and Rapidly Decreases Tonic Dopamine Levels in the Rat Dorsal Striatum [149]
- Viviane Hambrecht-Wiedbusch, Administration of Ketamine During Isoflurane Anesthesia Increases Cortical Acetylcholine and Accelerates Recovery of Consciousness [150]
- **Dinesh Pal**, Cholinergic Stimulation of Prefrontal Cortex Reverses Traits of Sevoflurane Anesthesia [152]
- **Pushpa Sahni**, Tubulin Conformation and Anaesthetic Interaction An Experimental Study [153]
- ► **Tarik Bel-Bahar**, EEG Brain Dynamics and Altered States of Consciousness During Sub-anesthetic and Anesthetic Ketamine Dose Administration in Healthy Adults **[126]**
- Brian Silverstein, Theta-gamma Coupling During Propofol-, Sevofluraneand Ketamine-induced Unconsciousness in Rats [154]

### C21: Sleep and Dreaming

- **Stephen LaBerge**, Lucid Dreaming as a Methodology for Studying Consciousness and Metaconsciousness During Rem Sleep **[166]**
- Simon Peimer, Inverted Consciousness in Sleep and the "Hard Problem" [167]
- ▶ Jean-Paul Wiegand, Age-Related Changes in Theta-Delta Ratio Measures of Slow-Wave Sleep [168]
- Andrew Brylowski, MD, Lucid Dreaming as a Complementary Strategy for Nightmares in Posttraumatic Stress of Combat Veterans [334]
- **Benjamin Baird**, Is Dream Lucidity Associated With Increased Cortical Gamma Activity? [333]
- Miloslava Kozmova, Emotions Experienced During Non-Lucid Problem-Solving Dreams Activate Secondary Consciousness [195]

### C22: Machine Consciousness

- John Strozier, Subjectivity, Objectivity Via a Reflection Principle [27]
- **Stephen Deiss**, Romancing the Oxymoron: The 'Hardware Problem' of Machine Consciousness **[64]**
- James Tagg, 10 Things an Artificial Intelligence Can't Do. Noncomputability, Its Limits on 'Artificial Intelligence' and What a 'Real Intelligence' Machine Might Look Like [71]
- Paul Verschure, The Distributed Adaptive Control Theory of Consciousness: A Robot Based Model of Unitary Sequential Consciousness Processing and Parallel Action Generation. [72]
- Xiangqun Chen, Can Quantum AI Produce Consciousness? [287]
- Ken Mogi, Computational Aspects of the Overflow Model of Consciousness [229]

The Science of Consciousness **TSC**2016 | Loews Ventana Canyon | Tucson, Arizona

## C23: Quantum Biology

- Siegfried Bleher, Persistence of Quantum Coherence at Macroscopic Scales in Nonlinear Systems [257]
- Nancy Woolf, "Swing Dancing" Our Way to Understanding Quantum Entanglement in Neurons [158]
- **P Kurian**, Exercise-Induced Changes in Microtubule Stabilization in Alzheimer's Disease Mediated by Ultraweak Emission of Ultraviolet Photons? [262]
- Akihiro Nishiyama, Nonequilibrium Quantum Field Theory of Brain: Entropy Production Towards Equilibration [240]
- Giuseppe Vitiello, The Brain is Not a Stupid Star [242]
- Elias Okon, CSL Meets Consciousness: A Consciousness Based Solution to the Measurement Problem [238]

### C24: Arts and Entertainment

- Nick Day, Hidden in Plain Sight: How Storytelling and the Arts Leave a Trail of Clues to the Deeper Nature of Consciousness [365]
- Ivana Franke, Effects of Phenomenally 'real' and Cognitively 'unreal' Stimuli in Contemporary Art on Visual Consciousness [366]
- William Oberst, Representational Painting, First-Person Reporting and Consciousness [369]
- Richard Gill, Experiences as Arrangements [91]
- Olga Colbert, Ignatius' Brain: Food and Sex in John Kennedy Toole's A Confederacy of Dunces [360]
- Annie Guthrie, A Poet's Investment in Qualms: Investigation of Qualia / The relationship of language to being / lyric inquiry and consciousness [361]

