

**Release: May 18, 2017**



**The Science of Consciousness  
June 5-10, 2017  
La Jolla, California**

*“To have a glimpse of what consciousness is would be the scientific achievement before which all others would pale.”*

*William James*

'The Science of Consciousness' ('TSC') is an interdisciplinary conference on all aspects of the nature of conscious experience, awareness, feelings and existence. How does the brain produce consciousness? Is consciousness intrinsic to the universe, or an epiphenomenal illusion? How can consciousness causally affect brain processes? What are the best empirical theories? Do we have free will? How did life and consciousness originate and evolve? What are the origins of moral and aesthetic values? How can we improve mental, physical and cognitive function? Can consciousness persist after bodily death, e.g. through 'uploading' to machines, or via mental processes tied to the natural world?

Informal, intensive and interdisciplinary in a fun environment, the 24th annual TSC conference will consist of Plenary Sessions, Pre-Plenary Workshops, Evening Concurrent Talk and Poster sessions, Technology and Art Exhibits, Social Events and Entertainment.

For registration, hotel and other information see:

<http://www.consciousness.arizona.edu>

## Plenary Program

Tuesday June 6, 2017

PL1 2:00 to 4:10 pm

*Can Machines Be Conscious?*

**Sir Roger Penrose, Oxford**, 'How can Consciousness Arise Within the Laws of Physics?'

**Joscha Bach**, Harvard, 'Consciousness as a Memory of Coordinating Attention: The Conductor Model of Consciousness'

**Hartmut Neven**, Google, Quantum AI, 'Possible Roles of Quantum Effects and Subjective Experience in Artificial Intelligence'

Wednesday June 7, 2017

PL2 8:30 to 10:40 am

*Language and Consciousness*

**Noam Chomsky**, MIT, 'Language and Unconscious Mental Acts'

**Thomas Bever**, U Arizona, 'Three Aspects of (Un)conscious Processing in Language and its Normal Use'

**Michael J Spivey**, UC Merced, 'Language, Consciousness and Embodied Cognition'

PL3 11:10 am to 12:30 pm

*Biophysics 1 - Memory, Spin and Anesthesia*

**Matthew Fisher**, UC Santa Barbara, 'Are We Quantum Computers, or Merely Clever Robots?'

**Travis Craddock**, Nova Southeastern U, 'A Unitary Mechanism of Anesthesia?: Altering Collective Oscillations in Microtubules'

PL4 2:00 to 4:10 pm

*Non-Invasive Brain Stimulation*

**Marom Bikson**, CCNY/CUNY, 'Non-Invasive Brain Stimulation Devices to Change Thought and Behavior'

**John Allen**, Arizona, 'Transcranial Ultrasound, Mood, and Resting State Network Connectivity'

**Marvin Berman**, VieLight, 'Integrating Noninvasive Photobiomodulation and Neuromodulation'

**Michael Rohan**, Harvard, 'The Effects of Low Field Magnetic Stimulation on Mood and Brain Function'

Thursday June 8, 2017

PL5 8:30 to 10:40am

*Physics, Cosmology and Consciousness*

**Ivette Fuentes**, U Nottingham, 'Gravity in the Quantum Lab'

**Brian Keating**, UCSD, 'Conscious Cosmos'

**James Tagg**, Cengage, Penrose Institute, 'Are Human Beings Computers?'

PL6 11:10 am to 12:30 pm

*Music and the Brain*

**Elaine Chew**, Queen Mary University London, 'Mind over Music Perception'

**Scott Makeig**, UCSD, 'Mind Over Consciousness?'

PL7 2:00 to 3:30 pm

*Neuroscience and Consciousness 1*

**Stephen Grossberg**, Boston U, 'The Varieties of Brain Resonances and the Conscious Experiences They Support'

**Georg Northoff**, U Ottawa, 'Temporo-Spatial Theory of Consciousness'

Friday, June 9, 2017

PL8 8:30 to 10:40am

*Neuroscience and Consciousness 2 - Anomalies*

**Daniel P. Sheehan**, U San Diego, 'It's About Time: Experiments in Consciousness and Retrocausation'

**Peter Fenwick**, UC London, 'A Meditation Teacher Who Can 'Transmit' Subjective Light/Energy'

**Lakhmir S. Chawla**, George Washington U, 'End-of-Life Brain Activity'

PL9 11:10 am to 12:30 pm

*Biophysics 2 - Memristors in the Brain?*

**Leon Chua**, UCSF, 'Brains are Made of Memristors'

**Jack A. Tuszynski**, U Alberta, 'Microtubules as Subcellular Memristors'

PL10 2:00 to 4:10 pm

*Neuroscience and Consciousness 3*

**Gentry Patrick**, UCSD, 'Destruction as a Means of Remodeling: The Many Roles of Ubiquitin at the Synapse'

**VS Ramachandran**, UCSD, 'Embodied Brains and Disembodied Minds'

**Charles F. Stevens**, Salk Institute, UCSD, 'The Evolutionary Brain Mechanisms That Underlie Consciousness'

Saturday, June 10, 2017 – Vicino Ballroom

PL11 9:00 to 11:10 am

*Vibrations, Resonance and Consciousness*

**Anirban Bandyopadhyay**, NIMS, Tsukuba, 'Vibrational Frequencies of Biomaterials are the Key to Integration of Information'

**Jiapei Dai**, South Central University, China, 'Biophotonic Activities and Transmission in Relation to Consciousness'

**Erik Viirre**, UCSD, 'Auditory Vibrations and Frequencies: Sounds in Your Head'

PL12 11:40 am to 1:00 pm

*Eastern Philosophy*

**Xu Yingjin**, Fudan University, China, 'Contemporary Theories of Consciousness and Nishida's notion of 'Basho''

**Deepak Chopra**, Chopra Foundation, 'Mind, Body, and Universe as Human Constructs'

PL13 2:30 to 4:40 pm

*Origin and Evolution of Life and Consciousness*

**Bruce Damer**, UC Santa Cruz, 'The Origin of Life and Consciousness'

**Alysson R. Muotri**, UCSD, 'Cerebral Organoids for Neurodevelopmental and Evolutionary Studies'

**Stuart Hameroff**, U Arizona, 'The 'Quantum Pleasure Principle' - Did Life Evolve to Feel Good?'

## **PRE-PLenary WORKSHOPS**

(Included in conference registration)

### **MONDAY MORNING WORKSHOPS**

June 5, 2017 – 9:00 am to 1:00 pm

**1. DEI East-West Forum 1**

(Dayalbagh Educational Institute, Agra, India)

**2. Artificial Intelligence and Machine Consciousness**

(Tagg, Bach, Neven, Penrose, Rimmel, Verschure)

**3. Tenniscentric** (Valladares)

**4. Yoga and Meditation** (Birch)

### **MONDAY AFTERNOON WORKSHOPS**

June 5, 2017 – 2:00 pm to 6:00 pm

**1. DEI East-West Forum part 2**

**2. Brain Stimulation/Consciousness Technology**

(Bikson, Sanguinetti, Berman, Rohan, Martin)

**3. Resonance, Life and Consciousness**

(Schooler, Hunt, Bandyopadhyay, Craddock, Grossberg, Chew)

**4. Consciousness and the Arts**

(Day, Seifert, Kostiner, Electra, QUALIATIK)

**5. Redefining Well-Being: Consciousness, Healing and the Evolution of Medicine** (Jain, Guarneri, King, Evanow, Muehsam, Vieten)

### **MONDAY EVENING PUBLIC LECTURE**

6:30 pm to 8:00 pm

**Sir Roger Penrose**

***Fashion, Faith and Fantasy and the Big Questions in Modern Physics***

INSTITUTE OF THE AMERICAS

10111 N. Torrey Pines Rd. • La Jolla, CA 92037 USA

<https://www.iamericas.org/en>

30 minute walk, 8 minute ride, simulcast to Hyatt Regency La Jolla

### **TUESDAY MORNING WORKSHOPS**

June 6, 2017 9:00 am to 1:00 pm

**1. Language and Consciousness**

(T. Bever, Chomsky, Spivey, O.Bever)

**2. Deepak Chopra - 'The enlightened brain'**

### **3. David Bohm Centennial**

(Pylkkanen, Musser, Walleczek)

### **4. Quantum Brain Biology**

(Craddock, Tuszynski, Hameroff, Bandyopadhyay)

## **CONCURRENT TALK PROGRAM**

Tuesday, June 6, 2017

5:00 to 7:55 pm

*C1: Dualism and Panpsychism*

**Schriner, Gradowski, Llamas, Remler, Kuznetsov, Kent, Kernion, Pylkkanen**

*C2: Memory and Consciousness*

**Nakano, Hsin-ping Wu, Gottlieb, Heile, Anokhin, Fazekas, Loisi, Xiao-Lan Song**

*C3: Artificial Intelligence/Virtual Reality 1*

**Verschere, Lin, Bezzubova, Gackenbach, Leping Zha, Duan, Yang Liu, Elamrani**

*C4: Consciousness and Molecular Biology*

**Woolf, Saluja, Sahni, Schiffer, Baker, Poola, Jiang**

*C5: Consciousness and Models of Reality 1*

**Markan, Yan He, Keppler, Bolaros, Gruber, Beichler, Andrews**

*C6: Altered States of Consciousness*

**Lopez-Silva, Dolcini, Villanueva, Gerken, Polito, JK Arora**

*C7: Quantum Ontologies 1*

**Globus, Rosseinsky, Rangarajan, Gaertner, Satsangi, Thomas, Prakash**

*C8: Consciousness and Social Interactions*

**Olson, Mayhofer, Carrassi, Di Pizzo, Gautam, Harrison, Lloyd**

Wednesday, June 7, 2017 5:00 to 7:55 pm

*C9: Free Will and Intentionality*

**Besedin, Munoz-Jimenez, Guery, Westcombe, MacNeill, Cea, Elliott**

*C10: Complexity and Brain Organization*

**Miyahara, Isler, Tetsuo, Bar Lev, Lahav, Maninder, Virmani**

*C11: Language and Autism*

**Mizumoto, O Bever, Pensotti, Mertsalov, Bhatnagar, Rai, Powell**

*C12: Consciousness and Evolution*

**Fredriksson, Whiteley, Morrison, Bakker, Beran, Hamilton, Tirumalai**

*C13: Meditation and Consciousness*

**Ahuja, Katyal, Saran, Goldstein, Birch, Mishra, Willman**

*C14: Consciousness and Quantum Measurement*

**McQueen, Kathpalia, Bhaumik, Roy, Camargo-Perez, Brophy, Gunji**

*C15: Consciousness and Models of Reality 2*

**Korotkov, Haoying Liu, Awret, Alessandrini, Agarwal, Goradia, Allsop**

*C16: Vibrations, Resonance and Consciousness*

**Roberts, Burgarella, Schooler, Hunt, Pyari, Katkova, Safin, Krishnananda**

Friday, June 9, 2017

5:00 to 7:55 pm

*C17: Explanatory Gap and Intentionality*

**Ebbers, Jansen, Choate, Black, Xinyu Wei, Ruggeri, Jianfeng Li, Ting-An Lin**

*C18: Neuroscience Topics*

**Dinis-Pereira, Yu Feng, Clark, Persuh, Sanguinetti, Lei Zhang, Toropova, Bettinger**

*C19: Consciousness and Unconscious Processes*

**Deschepper, Ginzburg, Six, Stevenson, Gutman, Norman, Hedne**

*C20: Mind Body*

**McKusick, Jain, Mruthinti, Evanow, Vieten, Yijun Liu, Ying-Tung Lin**

*C21: Artificial Intelligence and Models of Reality*

**Panov, Beck, Shirtz, Charan, Singh, Ju Lee, K Arora**

*C22: Consciousness and Models of Reality 3*

**Khabeev, Narayanan, Jain, Cortel, Kim, Valladares, Srivistava**

*C23: Consciousness and the Arts*

**Day, Menshikova, Colbert, Oberst, Kostiner, Malhotra, Idnani**

*C24: Quantum Ontologies 2*

**Hankey, Narayan, Rulin Xiu, Knox, Kohl, Blum, Green**

## **POSTER SESSION 1**

Wednesday, June 7, 7:00 to 10:00 pm

Agarwal, Agarwal, Agarwal, Alakh, Azevedo, Bhasin, Bhasin, Bhat, Bhatnagar,

Bommireddipalli, Buglo, Chellapilla, Datta, Gorjup,

Gupta, Gupta, Gupta, Jois, Kapoor, Kent, Khan, Khatkale, Khurana, Kumar,

Markan, Mathur, Mathur, Misra, Mittal, Pahl, Parmar, Paul, Poudel, Prokash,

Pyari, Ramchandran, Rana, D. Saini, A. Saini, Sandhu, Saravana, Satsangee, Satsangi,

Satsangi, Satsangi, Saxena, Sharma, Mathur, Shivhare,

Singh, Sinha, Srivastava, Srivastava, Srivastava, Sundaram, Swami, Swaroop, Tiwari, Trivedi, Zadey

## **POSTER SESSION 2**

Friday, June 9, 7:00 to 10:00 pm

Aviv, Barbosa, Barsotti, Bozorgi, Brito, Chen, Chiarella, Coelho, Cohly,

Costa, Costa, Daneshfard, Davis, Dzhaber, Gálíková, Graca, Guta, Hong, Kashyap,

Kozyreva, Lee, Mathur, Melkikh, Pankovski, Patil, Peerally, Plotke, Safina,

Sarfarazi, Six, Sood, Swami, Usvapelto, Ventureyra, Vucolova, Wang, Williams,

Wong, Zegarac, Zhang, Zhu

## **ART-TECH-HEALTH EXHIBITS**

Wednesday and Friday 7:00-10:00 pm

**Paul Thomas**, New Visual Languages and the Speculative Nature of the Quantum Universe

**Margaret Dolinsky**, Creativity and its Mediation for Navigating between Reality and Virtual Reality

**Jiyun Park**, W[hole]ness - Scaling Consciousness/Cosmologies Through Geometry

**Pam Payne**, The Telenoetic Medium - Presentation of The Author's Video Artwork, A Mnemonic Device to Facilitate Meditative, Noetic States of Consciousness

**Jens Pilegaard**, Musings on Captured Moments

**Naama Kostiner**, Create Your Own Flow

**Jeanne Marie Sanguinetti** - Pac Man Line, Academy of Art, San Francisco, CA

**Mimi Loup Brown**, Artist, Pasadena, CA

**Cyndi Sanguinetti**, Artist, Pasadena, CA

## **SCIENCE AND TECHNOLOGY EXHIBITS**

Wednesday and Friday 7:00-10:00 pm

### **Vielight Inc.**

Infrared Photomodulation and Neurofeedback for Alzheimer's disease

**Marvin Berman**

### **Soterix Medical**

Transcranial Electrical Stimulation

**Abhishek Datta**

### **Roger Penrose Institute**

Creativity Inspiration/Creativity Competition

**James Tagg, Erik Viirre**

### **McLean Hospital, Harvard Medical School**

Low Field Magnetic Stimulation

**Michael Rohan**

### **Arthur C. Clarke Center at UCSD**

Assembly

**Sheldon Brown**

### **University of Arizona Center for Consciousness Studies**

Transcranial ultrasound ('TUS') program

**Chris Chan, Betsy Bigbee, Stuart Hameroff, Jay Sanguinetti**

### **National Institute of Material Science, Tsukuba, Japan**

Visualizing microtubule information processing

**Anirban Bandyopadhyay**

### **University of Alberta**

Unfolding misfolded proteins to treat neurodegenerative disease

**Jack Tuszynski**

### **Geo-Pro-Ton, Slovenia**

'Avatar' Cognitive Training and Quantum Zeno Effect

**Niko Gorjup**

## **Wellness – Health**

Daily 7:00 - 8:00 am

**Mark Valladares**, TennisCentric

Daily 6:30-7:30 am and 4-5 pm

**Beryl Bender Birch**, Yoga and Meditation

## **Chopra Center**

You Are The Universe Wellness Space

## **Social Events - badges required**

### **Tuesday, June 6, 2017**

7:00 to 10:00 pm

**Opening Reception**

### **Wednesday, June 7, 2017**

9:00 – 11:00 pm

**Club Consciousness**

*'QUALIATIK', 'Dorian Electra and the Electrodes'*

### **Thursday, June 8, 2017**

6:00 to 10:00 pm

**Conference Banquet\*\***

Advance registration required \$75\* before May 25

*Elaine Chew, Queen Mary University of London*

### **Friday, June 9, 2017**

10:00 pm to midnight

**Club Consciousness**

*Elaine Chew, Queen Mary University of London*

*Scott Makeig - Brain Music Concert*

*'QUALIATIK', 'Dorian Electra and the Electrodes'*

### **Saturday, June 10, 2017**

8:00 pm to ????

*Poetry Slam, Talent Show, Finals: Creativity Competition*

**'End-of-Consciousness' Party**



## **Sponsored by**

- The Center for Consciousness Studies, The University of Arizona 'TSC' 'The Science of Consciousness' conference series since 1994
- The Center for Consciousness Science, The University of Michigan
- Quantum Gravity Research, Los Angeles
- Alvin J. Clark Foundation
- The Roger Penrose Institute, La Jolla, California
- The Bhaumik Institute of Theoretical Physics at UCLA (Mani Bhaumik Foundation)
- The Arthur C. Clarke Center for Human Imagination, UCSD
- Dayalbagh Educational Institute, Agra, India

## **Conference Program Committee**

Stuart Hameroff (Chair),  
Abi Behar-Montefiore, Betsy Bigbee, James Tagg,  
Erik Viirre, Jay Sanguinetti, Paavo Pylkkanen

## **LINKS**

### **REGISTER / PAYMENT SITE**

University of Arizona  
<https://eagle.sbs.arizona.edu/sc/>

### **WEBSITE**

Center for CONSCIOUSNESS STUDIES  
TSC 2017 La Jolla - Conference  
[www.consciousness.arizona.edu](http://www.consciousness.arizona.edu)

### **Hyatt Regency Hotel - La Jolla at Aventine**

Link to group rate \$199  
3777 La Jolla Village Drive  
San Diego, CA 92122 USA  
Tel: +1 858 552 1234

### **INFORMATION / EMAIL**

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