2024
THE SCIENCE OF CONSCIOUSNESS
April 22–27, 2024
Loews Ventana Canyon Resort • Tucson, AZ
www.consciousness.arizona.edu
Welcome to the 30th annual ‘The Science of Consciousness’ (TSC) Conference, the world’s largest, longest-running and premier gathering addressing fundamental questions regarding consciousness, the brain, reality and existence. TSC is organized and hosted by the Center for Consciousness Studies at the University of Arizona, and is an interdisciplinary conference emphasizing rigorous approaches to the study of consciousness and its place in the universe. Topical areas include neuroscience, philosophy, psychology, cognitive science, biology, quantum physics and quantum brain biology, cosmology, meditation, psychedelic and altered states, artificial intelligence/machine consciousness, the nature of reality, culture and experiential phenomenology. Held annually since 1994, TSC alternates yearly between Tucson, Arizona and various locations including Italy, Denmark, Japan, Sweden, Czech Republic, Hungary, Hong Kong, India, Finland, San Diego and Switzerland. This year our live participation and broadcast will take place at the Loews Ventana Canyon Resort, a beautiful eco-lodge in the hills above Tucson, Arizona.

TSC 2024 is a 6-day gathering consisting of 8 Workshops, 1 Symposium, 14 Plenary/Keynote Sessions, 30 Concurrent Sessions, 2 Poster Sessions and Exhibitor presentations, social, wellness, Poetry Slam and entertainment. We anticipate in person over 600 scientists, philosophers, educators, academicians, students, mediators, artists, interested public and seekers from around the world. Plenary and Keynote sessions, 2 workshops and the Monday evening Symposium will be live streamed virtually and uploaded for on-demand review.

We thank our sponsors, program committee, support staff, hosts, presenters, attendees, exhibitors and volunteers and all the Plenary and Keynote speakers for making TSC possible. We especially acknowledge the extraordinary efforts and many years of service of Abi Behar-Montefiore, Assistant Director of the Center for Consciousness Studies at the University of Arizona. Without Abi, The Center and TSC conferences would not be possible. Special thanks and appreciation to Edgar Mendoza and BioCommunications at the University of Arizona for their overall contribution to the University of Arizona. Without Abi, The Center and TSC conferences would not be possible. Special thanks and appreciation to Edgar Mendoza and BioCommunications at the University of Arizona for their overall contribution to

Plenary bios, abstracts and exhibitor information can be found on the Center’s Website: www.consciousness.arizona.edu

Sincerely,

Stuart Hameroff
Director Center for Consciousness Studies
Program Co-Chair, The Science of Consciousness

MONDAY, APRIL 22, 2024
Workshops
8:30 AM – 12:30 PM
Kiva, Catalina KL, Catalina J, Executive Board Room - Santa Rita, Sabino

QUANTUM BIOLOGY
Chair: Paige Den, NIH/NCATS; Stuart Hameroff, U Arizona; Albert Sipskorn, UCI; Niroska Murugan, Wilfrid Laurier; Manisha Patel, UCSB, Travis Craddock, NSU, (Remote); Philip Kunian, Howard Li, (Remote) – Kiva Ballroom

INDIAN KNOWLEDGE, HEALTH AND MEDICAL APPLICATIONS (IKSHA)
Chair: Martin Fleming, SPI, Remote: Kunal Mooley, CalTech, IIT Mandi, IIT Kanpur, IMICS; Lakshmi Behers, IIT Mandi; Rama Jayasundar, AIIMS Delhi; In person Tucson: Martin Fleming, SPI; Donald Hoffman, UC Irvine; Christopher Lord, Charles U-Prauge; Ramana Vinjamuri UMC; Guruprasad Raghavan, Yurts AI – Catalina J

DUAL ASPECT MONISM
Chair: Michael Silberstein, Elizabethtown College; William Seager, U Toronto; Harald Atmanspacher, Collegium Helveticum, ETH Zurich - Jeffrey Kripal, Rice U – Catalina KL

DREAMLESS SLEEP
Chair: JF Padel, U Colorado, Jerome Alonso, U Calgary; Antonio Zadra, U Mote; Gina Poe, UCLA – Executive Board Room

BREAK
12:30 PM – 1:30 PM

WORKSHOPS, continued
2:00 PM – 6:00 PM

NEUROPHYSIOLOGY OF LOSS & RECOVERY OF CONSCIOUSNESS
Chair: M. Bruce MacIver, Stanford U; Kathleen Vincent, Harvard U; Anthony Hudetz, U Michigan; Hyunwoo Jang, U Michigan – Kiva

MEDITATION & GLOBAL SPIRITUAL PRACTICES
Chair: Thomas Brophy, CIHS/IONS; Deepak Chopra, Chopra Global; Jeffery Martin, CIHS; Hidehiko Saegusa, IIT Mandi; UArizona, CIHS; AABC; Arnaud Delorme, IONS; Timothy Laporte, CIHS; Sohail Shakeri, CIHS; Dean Radin, IONS (Remote); Helane Wahbeh, IONS; Garret Yount, IONS; – Catalina KL

TERMINAL LUCIDITY
Chair: Manjiree Warkhedkar, U Oregon; Michael Nahm, IFAP Freiburg; Natasha Tassei-Matamuras, Massey U, NZ; Chris Roe, U Northampton; Maryne Mutis, U de Lorraine, Fr; Karalee Kothe, U Colorado – Catalina J

EDUCATION IN CONSCIOUSNESS STUDIES
Chair: Laurel Waterman, U Toronto, Joan Walton, St. John U-York; Thomas Beever, UArizona; Justin Riddle, FSU; Sue Blackmore, U Plymouth; Emily Toscianko, NSU, (Remote), Philip Kunian, Howard Li, (Remote) – Kiva Ballroom

SYMPOSIUM
7:00 PM – 10:00 PM

INTEGRATED INFORMATION THEORY OF CONSCIOUSNESS
Moderator: Pavo Pylkanen, U Helsinki & U Skovde; Christof Koch, Allen Institute; Tiny Blue Dot Foundation; Giulio Tononi, Melanie Boly & Matteo Grasso, U Wisconsin - Madison – Kiva
TUESDAY, APRIL 23, 2024
Conference Opening
Conference Sessions by Day
Early morning experiential clinic: Refreshments

7:30 AM – 8:15 AM
MEDITATION WELLNESS KICKOFF – Kiva Plaza
Deepak Chopra

PLENARY SESSIONS – Kiva Ballroom

8:30 AM – 10:40 AM
PLENARY 1 ‘DETECTING CONSCIOUSNESS’
Steven Laureys, Claudia Passos, Gina Poe

11:10 AM – 12:30 PM
PLENARY 2 ‘CORTICAL OSCILLATIONS, WAVES AND CONSCIOUSNESS 1’
Earl K. Miller, KEYNOTE (Remote)

BREAK

2:00 PM – 4:10 PM
PLENARY 3 ‘CONSCIOUSNESS AND REALITY’
Donald Hoffman, Deepak Chopra, Paavo Pylkkänen

BREAK

5:00 PM – 7:00 PM
TUESDAY CONCURRENT SESSIONS C-1 – C-10
C-1 IMPLICATIONS OF ARTIFICIAL INTELLIGENCE
Ken Mogi, Jonathan Erickson, Bill Mensch, Rizwan Virk, Maria Howard, JF Pagel – Catalina J

C-2 PARAPSYCHOLOGY & NEAR-DEATH EXPERIENCES
Fr. Nathan Castle, O.P., Marina Weiler, Terri Gilbert, Birgitta Therner, Nicole Johnson – Grand Ballroom Salon D

C-3 EXPERIENTIAL APPROACHES TO CONSCIOUSNESS
Roger Russell, Igor Nazarov, Raul Valverde, Carlton ‘Perk’ Clark, Timothy Laporte, Rubin Naaman – Santa Rita

C-4 PHILOSOPHY OF MIND
Scott Ventura, Scott Olsen, Jonathan Shear, Gustavo Rodrigues Rocha, John Strozier, Patrick Schotanus – Grand Ballroom Salon E

C-5 REPRESENTATION AND ACCESS MODELS OF MIND
Roger C. Schriner, Susan Blackmore, Frank Heile, Matthew Williams, Rakenduadhana Srinivasan – Grand Ballroom Salon F

C-6 GEOMETRY OF MIND
Terrence Howard, Andres Gomez-Emilsson, Elena Bezzubova, Uziel Aweret, Jason Padgett – Executive Board Room

C-7 QUANTIFYING COGNITIVE STATES IN NEURAL DATA
Logan Trujillo, Dimitri Van De Ville, William Bosl, Kira Dolhan, Sandeep Gupta – Sabino

C-8 STUDYING SPIRITUALITY IN NEUROSCIENCE AND THERAPY
Stephen Zerfas, Marco Ruggiero, Master Zhi Gang Sha, Rulin Xiu, Kirit Goyal – Grand Ballroom Salon G

C-9 NEUROSCIENCE OF ALTERED STATES
Nicolas Glynos, Clayton Coleman, Nicholas Denomme, Gratiana Chen – Grand Ballroom Salon H

C-10 QUANTIFYING ALTERED STATES OF CONSCIOUSNESS
Robert Tromm, Marjorie Woolliscott, Jessica Corneille, Sebastian Ehmann, Mona Letourneau – Grand Ballroom Salon I

7:00 PM – 9:00 PM
WELCOME RECEPTION
Cascade Terrace - Drink tickets, hearty appetizers

WEDNESDAY APRIL 24, 2024
Early Wednesday Morning Experiential Clinics

7:15 AM – 8:15 AM
Soul Sickness and Healing Techniques – Master Zhi Gang Sha, Peter Hudoba, Rulin Xiu – Catalina KL

Rumi Healing Meditation – Sohail Shakeri – Catalina J

Finding and Clearing the Emotional Roots of your Suffering – Douglas Tataryn – Santa Rita

7:00 PM – 9:00 PM
Welcome Reception
Cascade Terrace - Drink tickets, hearty appetizers

PLENARY SESSIONS – KIVA BALLROOM

8:30 AM – 10:40 AM
PLENARY 4 ‘CORTICAL OSCILLATIONS, WAVES AND CONSCIOUSNESS 2’
André Bastos (Remote), Pulin Gong, Dimitris Pinotsis

11:10 AM – 12:30 PM
PLENARY 5 ‘THE GLOBAL BRAIN ARGUMENT: “Nodes, Computroniums and the AI Megasystem”’
Susan Schneider, Florida Atlantic University, Boca Raton, FL, USA, KEYNOTE

LUNCH TIME EXHIBITORS & DEMOS
12:30 PM – 1:30 PM
Exhibitors

Demos
"Lunch Time Sound Reset and Integration – Sound Medicine® – Binaural Beats” – Elizabeth Krasnoff - Rincon
The Artwork of Ayahuasquero, Pablo Amaringo – NeoAmazonian style – Scott Olsen - Grand Ballroom Lobby

Altered States Art as a Meditative & Restorative Tool: Painting Colour and Sound with Gestures in Virtual Reality, Leslie Deere - Coronado

2:00 PM – 4:10 PM
PLENARY 6 ‘CONSCIOUSNESS IN RELIGION AND ALTERED STATES’
Tanya Luhmann, Justin Riddle, George Mashour

BREAK

5:00 PM – 7:00 PM
WEDNESDAY CONCURRENT SESSIONS C-11 – C-20
C-11 ANOMALOUS COGNITION
Helane Walbehe, James Lake, Christine Simmonds-Moore, Arnaud Delorme, Milena Braticevic, Sean Edsbom-Hargens – Salon D

C-12 CONSCIOUSNESS & MENTAL HEALTH
Carsten Korth, Ingrid Fredriksson, Daaija Kobal Grum, Jurgen Kornmeier, Nina Carrubba, Criscilla Benford – Executive Board Room
C-13 QUANTUM COMPUTATION
James Tagg, Akihiro Nishiyama, Vasyl Semenov, Roumiana Tsenkova, Mithun Paul, Rachid Lopez – Santa Rita

C-14 INTEGRATED INFORMATION THEORY
Brian Archibald, Kevin McQueen, Garrett Mindt, Isaac David, Matteo Grasso – Salon G

C-15 ARTIFICIAL INTELLIGENCE
William Robinson, Tam Hunt, Karina Vold, Aids Elamrani, Vickram Premakumar, Jay Myers – Salon H

C-16 TIME AND COGNITION
Laura Deutsch, Abdellatif Abujudeh, Yu Zheng, Joel Bennett, James Corrigan – Salon I

C-17 SOCIAL IMPLICATIONS FOR UNDERSTANDING CONSCIOUSNESS
Stephen Deiss, Richard Morley, Steven Wingate, Staci Newmahr – Salon F

C-18 PHYSICS OF MIND
Florian Metzler, Gregory Horne, Amal Alachkar, Xiaolin Ge, Alon Retter, William Softky – Sabino

C-19 NOVEL MODELS OF CONSCIOUSNESS
Donald Mender, Meijuan Lu, Christopher Tyler, Meir Weinstein, Sean Clayton – Santa Rita

C-20 PSYCHOANALYSIS AND THE UNCONSCIOUS
Jenny Vanbergen, Teresa Nowak, Garrett Yount, Asher Soryl – Grand Ballroom Salon E

7:00 PM – 9:00 PM
RECEPTION, CASH BAR
– Grand Ballroom Lobby

7:00 PM – 10:00 PM
POSTERS, ART TECH DEMOS, EXHIBITORS – Grand Ballroom Lobby, Ballroom B
Posters in Grand Ballroom B - Additional Digital Posters on the perimeter of the Ballroom

POSTER SESSION 1

PO 1 - 1.0 - PHILOSOPHY
William J. Cox, Richard Gill, U.B. Lozano, Steve Kercel/Mona Letourneau, Ramanujam Prakash, Jeff Sugar

PO 1 - 2.0 - NEUROSCIENCE
Kewei Chen, Ryo Sato, Pavel Kraikivski, SooSan Beeshisht

PO 1 - 3.0 - COGNITIVE SCIENCE & PSYCHOLOGY
Antonio Zadra, Jin Ma, David Stone, Bruce Nappi, Malcolm Lett, Deni Van, Michael Kutch, Ruslana Remennikova/Bernard Beitman

PO 1 - 4.0 - PHYSICAL & BIOLOGICAL SCIENCES
Richard Harrington, Peter Lugten, Steen Loeth, Steve Finette, Seungju Ahn, Georges Karma, Deanna Minich, James Beran, William Softky, Criscilla Benford

PO 1 - 5.0 - EXPERIENTIAL APPROACHES
James Driessen, Palash Goyal, Carl Flynt

PO 1 - 6.0 - CULTURE & HUMANITIES
Steven Ferrara, Olga Colbert, Kevin Goodrich, Joan Walton, Laurel Waterman, Marianne Nell

EXHIBITORS & DEMOS

7:00 PM – 9:00 PM
THURSDAY, APRIL 25, 2024
Early Thursday Morning Experiential Clinics
7:15 AM – 8:15 AM

Global Spiritual Meditation – Hidehiko Saegeusa – Catalina KL
Rumi Healing Meditation – Sohail Shakeri – Catalina J
Feldenkrais Awareness through Movement® – Roger Russell, Jeff Haller – Ventana 2nd Floor
Finding and Clearing the Emotional Roots of Your Suffering – Douglas Tataryn – Santa Rita
TennisCentric Approach to Consciousness – Mark Valladares – Tennis Courts

PLENARY SESSIONS - KIVA BALLROOM
8:30 AM – 10:40 AM
PLENARY 7 ‘MECHANISMS OF CONSCIOUSNESS’
Aaron Schurger, Pieter-Jan Maes, Jerome Busemeyer

11:10 AM – 12:30 PM
PLENARY 8 ‘DOECONOGRAPHY’ (‘DDG’) – 12 ORDERS OF FREQUENCY OSCILLATIONS IN EEG’
Anirban Bandopadhyay, KEYNOTE

LUNCH TIME EXHIBITORS & DEMOS
12:30 PM – 1:30 PM
Grand Ballroom Lobby, Rincon, Lobby & Coronado

2:00 PM – 4:10 PM
PLENARY 9 ‘ASTROBIOLOGY AND ASTROCONSCIOUSNESS’
Caleb Scharf, Philippe Schmitt-Kopplin, Stuart Hameroff

5:00 PM – 6:30 PM
EXPERIENTIAL CLINICS
PO 1 - 1.0 - PHILOSOPHY
– Grand Ballroom Lobby

PO 1 - 2.0 - NEUROSCIENCE
– Grand Ballroom Lobby, Ballroom B

PO 1 - 3.0 - COGNITIVE SCIENCE & PSYCHOLOGY
– Grand Ballroom Lobby

2:00 PM – 4:10 PM
PLENARY 9 ‘ASTROBIOLOGY AND ASTROCONSCIOUSNESS’
Caleb Scharf, Philippe Schmitt-Kopplin, Stuart Hameroff

6:00 PM – 9:00 PM
OPTIONAL DINNER UNDER THE STARS - SOLD OUT
– Ventana Terrace – TICKETS are Required

FRIDAY APRIL 26, 2024
Early Friday Morning Experiential Clinics
7:15 AM – 8:15 AM

Soul Sickness & Healing Techniques – Master Zhi Gang Sha, Peter Hudoba, Rulin Xiu – Catalina KL
Rumi Healing Meditation – Sohail Shakeri – Catalina J
Finding and Clearing the Emotional Roots of your Suffering – Douglas Tataryn – Santa Rita
Feldenkrais Awareness through Movement® – Roger Russell, Jeff Haller – Ventana 2nd Floor
TennisCentric Approach to Consciousness – Mark Valladares – Tennis Courts

PLENARY SESSIONS - KIVA BALLROOM
8:30 AM – 10:40 AM
PLENARY 10 ‘DUAL ASPECT MONISM’
Harald Atmanspacher, Bill Seager, Dean Rickles

11:10 AM – 12:30 PM
PLENARY 11 ‘MOLECULES OF LIFE & CONSCIOUSNESS FROM THE ASTEROID BENNU’
Dante Lauretta, KEYNOTE
LUNCH TIME DEMOS & EXHIBITORS
12:30PM – 1:30PM
Grand Ballroom B & Lobby

2:00 PM – 4:10 PM
PLENARY 12 ‘THE SCIENCE OF CONSCIOUSNESS - 30 YEARS ON’
Panel: David Chalmers, Susan Blackmore, Christof Koch, Stuart Hameroff, Paavo Pylkkänen, Giulio Tononi

5:00 PM – 7:00 PM
FRIDAY CONCURRENT SESSIONSC-21 - C-20
20 min talks: 5 min Q&A - Breakout Rooms:
Catalina J, Catalina KL, Executive Board Room, Grand Ballroom Salons G, H, I, Salons D, E, F, Sabino, Santa Rita

C-21 QUANTUM THEORIES OF MIND
Philise Todd, Peter Lloyd, Thomas Brophy, Anatoly Goldstein, Ivan Kuznetsov, Natalia Cortes – Catalina J

C-22 MULTISCALAR ELECTROPHYSIOLOGY
Asa Young, Bruce MacIver, Ryo Sato, Anthony Hudetz, Hide Saegusa – Salon J

C-23 PERCEPTION AND ATTENTIONAL CONTROL
Michael Silver, Cedric Cannard, Satya Pradhan, Nick Day, Sascha Seifert, Rahul Jain, Jeffery Martin – Salon E

C-24 CAUSALITY AND FREEWILL
Mihretu Guta, Edward Neafsey, Brian Key, John Sanfey, Lynn Rasmussen – Salon F

C-25 PHENOMENOLOGY OF MIND
Łukasz Kurowski, Jenny Simon, Abre Fournier, Soosan Beheshti – Salon G

C-26 PANPSYCHISM AND GLOBAL CONSCIOUSNESS
Scott Ventureyra, Anand Rangarajan, John Starrett, Todd Bureau, Ulf Holmberg – Salon H

C-27 NEUROSTIMULATION TO UNDERSTAND THE MIND
Sanjay Rutherford, Cedric Cannard, Satya Pradhan, Nick Day, Sabino, Santa Rita

C-28 MEDITATION PRACTICE TO UNDERSTAND THE MIND
Paul Dalaghian, Peter Hudoba, Rulin Xiu / Master Sha, Dorote Weyers-Lucci, Lavanya Rajesh Kumar, Sky Nelson – Ski Run

10:00 PM – TBD
FRIDAY POETRY SLAM - ZOMBIE BLUES - NO-END OF CONSCIOUSNESS PARTY – Salon Kiva
Food, Drink DJ Dancing - refreshments / cash bar

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### EXPERIENTIAL FACILITATORS

- Deepak Chopra
- Leslie Deere
- Jeff Haller
- Peter Hudoba
- Roger Russell
- Hidehiko Saegusa
- Master Zhi Gang Sha
- Sohail Shakeri
- Douglas Tataryn
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