TOWARD A SCIENCE OF CONSCIOUSNESS

Brain • Mind • Reality  I  May 3-7, 2011
Aula Magna Hall, Stockholm, SWEDEN

Program Committee
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Welcome to ‘Toward a Science of Consciousness’, the eighteenth annual international, interdisciplinary conference on the fundamental question of how the brain produces conscious experience. Sponsored and organized by the Center for Consciousness Studies at the University of Arizona, this year’s conference is supported by the Perfjell Foundation of Sweden and its President, Mr. Christer Perfjell.

Toward a Science of Consciousness (TSC) is the largest and longest-running interdisciplinary conference emphasizing broad and rigorous approaches to the study of conscious awareness. Topical areas include neuroscience, philosophy, psychology, biology, quantum physics, meditation and altered states, machine consciousness, culture and experiential phenomenology. Held annually since 1994, the TSC conferences alternate yearly between Tucson, Arizona and various locations around the world. We are delighted to bring the TSC 2011 to the beautiful city of Stockholm, Sweden and the historic Aula Magna Hall.

The first conference was held in 1994 in Tucson and continues to be held in Tucson in even-numbered years, alternating with TSC conferences in collaboration with groups in various locations around the world: 1995–Ischia, Italy; 1997–Elsinore, Denmark; 1999–Tokyo, Japan; 2001–Skövde, Sweden; 2003–Prague, Czech Republic; 2005–Copenhagen, Denmark; 2007–Budapest, Hungary; 2009–Hong Kong, China; 2011–Stockholm, Sweden.

TSC conferences continue to bring together various fields approaching the issue of consciousness from different perspectives, orientations and methodologies. These include neuroscience, philosophy, medicine, physics, biology, psychology, anthropology, contemplative and experiential traditions, arts, culture, humanities and others. TSC aims to integrate these disciplines, bridge gaps and pursue relevant details without blind alleys. Stockholm and Aula Magna Hall have austere, esteemed and respected scientific traditions on which we hope to build new advances and understanding of this age-old question reflecting on who we are, the nature of existence, and our place in the universe.

As in previous years, we expect hundreds of participants and presenters from 65 countries on 6 continents. Included are: Pre- and Post-Conference Workshops, 14 Plenary or Keynote sessions, 40 Concurrent talk sessions, 2 Poster sessions, 3 Art-Tech Interactive sessions, our traditional Consciousness Poetry Slam/Talent Show, optional Thursday Dinner Boat Cruise Dinner Destination, and the End-of-Consciousness Party.

The TSC Conference, Center for Consciousness Studies and The Perfjell Foundation wish to thank members of the Program Committee, CCS-TSC Assistant Director Abi Behar Montefiore for her conference management and editorial direction, SBS web guru Ed Xia and the team at Arizona Health Sciences Center Biomedical Communications: artwork/illustration David Cantrell, graphic design Roma Krebs, and web development/support Michael Griffith.
We would also like to express our sincere appreciation to Stockholms Universitet Aula Magna facilities, Agneta Hollström, conference liaison. And to Martin Kotte of Big Travel and Kicki Sjöblom of Mind Event AB for all of her work in coordinating the travel and hotel arrangements for our speakers and attendees. Also all printing of materials, managed by Charlotta Mansfeldt at Trydells Tryckeri AB, Laholm, Sweden. And, of course, to all the volunteers at Mind Event AB for providing help and support throughout the conference.

Additional thanks to the Karolinska grad students and post docs and to Valeria Petkova, Karolinska Institutet.

We also thank the University of Arizona, Department of Anesthesiology Business Manager, Jill Gibson and Department Administrator, Tawnya Tretschok and Steven J. Barker, Chair, Department of Anesthesiology, Arizona Health Sciences Center, University of Arizona, College of Medicine. Special thanks also to Dr. Hameroff’s colleagues in the UMC surgical operating rooms.

Heartfelt thanks to Nancy Clark for serving as chair of the Art-Tech sessions, and to Maureen Seaberg for organizing the Synesthesia workshop. To all of our artists and exhibitors thank you for sharing your art with all of us.

We wish to thank 2011 Keynote Speaker, Sir Roger Penrose, and featured speakers Luc Montagnier and Deepak Chopra and their staff. Also we express our sincere appreciation to all of the Plenary, Concurrent, Poster and Art-Tech Demo presenters, Workshop facilitators, and Poetry Slam/Talent Show entertainers and all the attendees whose registration fees fund the conference.


Thank you to all participants of the public Evening Forum at Aula Magna Hall. We want to thank our Moderator, Mia-Marie Hammarlin of Lund University and all of our participants, Peter Fenwick, Ignacio Silva, Giorgio Innocenti, Lluis Oviedo, Tarja Kallio-Tamminen, Leonard Mlodinow, Paola Zizzi, Menas Kafatos, Stuart Hameroff, and Deepak Chopra.

Finally, we owe special gratitude to our friend, Swedish businessman, Christer Perfjell whose leadership, vision and perseverance brought TSC 2011 to Stockholm and the celebrated Aula Magna Hall. Thank you for all you have done to make this program a success. Your support, inspiration and encouragement made this dream a reality.

Tack för allt du gjort för att göra detta program till en framgång.
Tack Sverige. Tack Stockholm.
FINDING YOUR WAY AROUND
THE CONFERENCE

A full-color map of the Conference site appears on the inside back cover.

AULA MAGNA HALL
Aula Magna Hall, Frescati Campus, Stockholm University
Aula Magna Hall is Stockholm University’s main ceremonial space and is home to the Nobel Prize Award Ceremonies for the Nobel Prizes in Physics, Chemistry, Physiology or Medicine, Literature and the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

The Aula Magna Hall, designed by British-Swedish renowned architect, Ralph Erskine, offers a beautiful setting for the TSC-2011 conference with spacious foyers, steeply raked seating, beautiful wood and ceiling paneling and is known for its phenomenal acoustics. Meeting rooms at the Aula Magna Main Hall and adjacent buildings (Södra Huset “South House” – Juristernas Hus “Law Students House” – Geovetenskapens Hus “Geo-Science Building”) will provide the perfect setting for our Workshops, Concurrents, Art Exhibits, Poster Sessions and informal gatherings.

SESSIONS
Several types of presentation sessions constitute the conference program.

BUILDING AND ROOM LOCATIONS
AM – Aula Magna Hall
SH – Södra Huset (South House)
JH – Juristernas Hus (Law Students House)
GEO – Geovetenskapens Hus (Geo-Science Building)

WORKSHOP LOCATIONS
Sunday, May 1, 2011  Synesthesia 9am–4pm  AM – Bergsmannen
               Neural Correlates 2pm–6pm  AM – Spelbomskan
Monday, May 2, 2011  Deepak Chopra 9am–4pm  AM – Aulan
Saturday, May 7, 2011  Altered States 2pm–6pm  AM – Bergsmannen
               Quantum Biology 2pm–6pm  AM – Aulan
               Binaural Beat 2pm–6pm  GEO – 50-Sal
EVENING PUBLIC FORUM

Science, Consciousness and Spirituality
Aula Magna Hall, Stockholm University
Monday, May 2, 2011, 5pm - 7pm

Scientific accounts of the brain as neuronal computer portray consciousness as epiphenomenal illusion without causal power, free will or spirituality. Subjective reports and spiritual teachings (interconnectedness among living beings, guiding wisdom inherent in the universe, conscious awareness after death) have seemed scientifically impossible, pushing scientists toward atheism or dualism. However in recent decades quantum biology has been considered as a basis for consciousness and spirituality, and end-of-life brain activity defies conventional explanations. Can quantum physics bridge science and spirituality?

Moderator: Mia-Marie Hammarlin
Assistant Professor, Department of Communication and Media, Lund University

PROGRAM

5:00-5:15pm – End-of-Life Conscious Experience
Peter Fenwick
Institute of Psychiatry, Southampton University, Kings College, London

5:15-5:30pm – God and Quantum Mechanics
Ignacio Silva
Theology, Harris Manchester College, University of Oxford

5:30-5:45pm – Quantum Physics and Eastern Philosophy
Tarja Kallio-Tamminen
Physicist, philosopher, author, Helsinki, Finland

5:45-6:00pm – Consciousness and Ultimate Reality
Deepak Chopra
Physician, author, spiritual leader, The Chopra Center, Carlsbad, CA

6:00-6:30pm – Panel/Commentary
Leonard Mlodinow, Physicist, Co-author of “Grand Design” with Stephen Hawking
Lluis Oviedo, Franciscan Theologian, Rome
Paola Zizzi, Astrophysicist, University of Padua
Giorgio Innocenti, Neuroscientist, Karolinska Institutet
Menas Kafatos, Physicist, author, Chapman University
Stuart Hameroff, Physician, Consciousness researcher, The University of Arizona

6:30-7:00pm – General Discussion

Sponsored by: The Center for Consciousness Studies, The University of Arizona, The Chopra Foundation, Perfjell Foundation
WELCOME RECEPTION – Aula Magna Plaza
Tuesday, May 3, 6:30-9pm
Meet outside Aula Magna Hall on the plaza to mingle with food and drinks.

ART-TECHNOLOGY DEMO SESSIONS – Aula Magna Lobby
Tuesday, May 3, 7-10pm | Wednesday, May 4, 7-10pm | Friday, May 6, 7-10pm
More interactive and experiential than concurrent sessions, the Art-Tech demo sessions occur in the evenings, demonstrating art, media, sculpture, and experiential techniques with PowerPoint presentations, body and canvas. Thank you to all the artists: Koei Endo, Ikuyo Endo, Jol Thomson, Ole Hagen, Jack Sneh, Werner Pans, Carrie Firman, Fiammetta Rubin, Jason Padgett and Dave Cantrell (refreshments will be served).

POSTER SESSIONS – Aula Magna Lobby
Wednesday evening, May 4, 7-10pm | Friday, May 6, 7-10pm
Poster presentations will be held over 2 evening sessions. Presenters stand by their material posted on a large poster board as audience circulates (refreshments will be served).

AFTERNOON CONCURRENT TALK SESSIONS
Tuesday, May 3, 4:30-6pm | Wednesday, May 4, 4:30-6pm | Friday, May 5, 4:30-6pm

EVENING CONCURRENT TALK SESSIONS
Wednesday, May 4, 7-10pm | Friday, May 6, 7-10pm

CONFERENCE DINNER – meet at Aula Magna Lobby
Thursday, May 5, 5-10pm | Aquaria Restaurant and Water Museum
Enjoy a boat ride from the Stadshuset, the City Hall of Stockholm, across Lake Mälaren through the locks to the Baltic Sea and the beautiful archipelago of Stockholm passing the island of Riddarfjärden (a part of Mälaren) to the island of Djurgården and the picturesque Aquaria Restaurant and Water Museum. Enjoy a wonderful meal and light entertainment in the Stockholm tradition (ticket required).

Poetry Slam/Talent Show
Friday, May 6, 10pm to Midnight
As in previous conferences, a Poetry Slam/Talent show will take place on Friday evening from 10pm to Midnight (cash bar). Conference attendees are invited to perform for a cheering and sometimes jeering audience.

END-OF-CONSCIOUSNESS PARTY – Brain-Berg at the Ice Bar
Saturday night, May 7 (7:30pm - ???)
This is a TSC Conference tradition. The party will start at the famous Nordic Sea Absolut Ice Bar. Enjoy food, drinks, cash bar, and music.
Keynote Speaker | Sir Roger Penrose

Sir Roger Penrose, OM, FRS is Emeritus Rouse Ball Professor at the Mathematical Institute at Oxford, and Emeritus Fellow at Wadham College. He is an historic and world-wide authority on the nature of reality, and renowned for pioneering work in black holes, twistors, spacetime geometry, cosmic censorship, Penrose tilings, quantum gravity and other areas. In 1989 he proposed consciousness as a particular form of quantum state reduction intrinsic to the universe, and later teamed with Stuart Hameroff to formalize the process in brain microtubules. His awards include the 1988 Wolf Prize (shared with Stephen Hawking). He has authored numerous books including *The Road to Reality* and *Shadows of the Mind*. His most recent book, *Cycles of Time* proposes serial universes preceding the Big Bang.

Sir Roger Penrose

**Consciousness and Physical Law**

*Friday May 6, 11:10am to 12:30pm*

Aula Magna Hall

*Abstract:* A profound puzzle of quantum mechanics is that the discontinuous and probabilistic procedure adopted for measurement is in blatant contradiction with the continuous and deterministic unitary evolution of the Schrödinger equation. An inanimate measuring device, being made from quantum particles, ought to follow the unitary laws, so many physicists take the view that consciousness is ultimately needed for measurement. I here express the almost opposite view that the unitary law must be violated for massive enough systems, and that it is consciousness itself that depends upon this violation, requiring new physics and exotic biological structures for its manifestation. The issue of what kind of universe history could provide laws fine-tuned enough for consciousness to arise will also be raised.
Program Outline
Toward a Science of Consciousness
May 3-7, 2011
Frescati Campus, Stockholm University
Aula Magna Hall | Stockholm, Sweden

Tuesday May 3

Registration
Aula Magna Hall
8:30am to 10:40am  PLENARY 1
Brain Electromagnetic Fields and Consciousness
David A. McCormick, Yale – Endogenous Electric Fields Guide Cortical Network Activity
Susan Pockett, Auckland – Electromagnetic Field Theory of Consciousness
Johnjoe McFadden, Surrey – The Cemi Field Theory: Gestalt Information and the Meaning of Meaning

10:40am to 11:10am  Break

11:10am to 12:30pm  PLENARY 2
Time and Consciousness I
Harald Atmanspacher, Freiberg – Temporal Nonlocality in Bistable Perception
Sara Gonzalez Andino, Geneva – Backward Time Referral in the Amygdala of Primates

12:30pm to 2:00pm  Lunch

2:00pm to 4:10pm  PLENARY 3
Consciousness and Reality I
Deepak Chopra, The Chopra Center, Carlsbad – Vedic Approaches to Consciousness and Reality
Leonard Mlodinow, Pasadena – The Grand Design of Our Universe
Paola Zizzi, Padua – Consciousness in the Early Universe

4:30pm to 6:35pm  Concurrent Sessions 1-8 / Locations
C1 Representation/HOT  GEO, 50-Sal
C2 Knowledge/Hard Problem  GEO, 40-Sal
C3 Free Will/Libet  GEO, Allamn/Högboromssalne
C4 Synesthesia  AM, Aulan
C5 NCC I  SH, E-10
C6 Medicine I  SH, F-11
C7 Quantum I  GEO, 35-sal
C8 Altered States  AM, Bergsmannen

6:30pm to 9:00pm  Welcome Reception – Aula Magna Plaza

7:00pm to 10:00pm  Art-Tech Exhibits – Aula Magna Lobby

AM Aula Magna – JH Juristernas Hus (Law Student’s House) – SH Södra Huset (South House) – GEO Geovetenskapens Hus (Geo-Science Building)
Program Outline

WEDNESDAY MAY 4

8:30am to 10:40am  
**PLENARY 4**

**Transcranial Therapies**

*Eric Wassermann*, NIH – Transcranial Stimulation and Consciousness  
*Allan Snyder*, Sydney – Accessing Information Normally Beyond Conscious Awareness  
*W. Jamie Tyler*, Virginia Tech – Mechanical Waves and Consciousness

10:40am to 11:10am  
Break

11:10pm to 12:30pm  
**PLENARY 5**

**Neural Correlates of Consciousness I**

*Rafael Malach*, Weizmann – Local Neuronal Ignitions and the Emergence of Perceptual Awareness  
*Dietmar Plenz*, NIH – Neuronal Avalanches, Coherence Potentials, and Cooperativity

12:30pm to 2:00pm  
Lunch

2:00pm to 4:10pm  
**PLENARY 6**

**Consciousness and Reality II**

*Menas Kafatos*, Chapman – Consciousness and The Universe  
*Tarja Kallio-Tamminen*, Helsinki – Quantum Physics and Eastern Philosophy  
*Paavo Pylkkanen*, Helsinki – Bohmian View of Consciousness and Reality

4:30pm to 6:35pm  
**Concurrent Sessions 9-16 / Locations**

*C9 Phenomenology/Content*  
SH, C-6  
*C10 Panpsychism*  
SH, B-5  
*C11 Time*  
SH, E-10  
*C12 NCC I*  
SH, D-8  
*C13 Medicine II*  
JH, Reinholdsalen  
*C14 Quantum II*  
SH, F-11  
*C15 Religion*  
AM, Bergsmannen  
*C16 Experiential I*  
AM, Aulan

6:35pm to 10:00pm  
**Poster Session** – Aula Magna Lobby

6:35pm to 10:00pm  
**Art-Tech Exhibit** – Aula Magna Lobby

7:00pm to 10:00pm  
**Concurrent Sessions 17-24 / Locations**

*C17 Language/Reporting*  
SH, C-6  
*C18 AI/Computationalism*  
AM, Aulan  
*C19 TBA*  
SH, B-5  
*C20 Microtubules I*  
JH, Reinholdsalen  
*C21 Altered States II*  
AM, Bergsmannen  
*C22 Integrative Models I*  
SH, F-11  
*C23 Experiential II*  
SH, D-8  
*C24 Eastern Approaches I*  
SH, E-10
THURSDAY, MAY 5

8:30am to 10:40 am  PLENARY 7  
**Varieties of Religious Experience**  
*Mario Beauregard*, Montreal – Neuroscience of Transcendent Experiences  
*Alexander Moreira-Almeida*, Juiz De Fora – Spiritual Experiences and Mental Disorders  
*Padr. Paulo Roberto*, Rio de Janeiro – Sacred Plants of Amazonia

10:40am to 11:10am  Break

11:10am to 12:30pm  PLENARY 8  
**Time and Consciousness II**  
*Dick Bierman*, Amsterdam – Presentiment  
*Moran Cerf*, NYU – Time Effects in Human Cortical Neuronal Firings

12:30pm to 2:00pm  Lunch

2:00pm to 4:10pm  PLENARY 9  
**Quantum Biology**  
*Luc Montagnier*, Nobel Laureate, Paris – DNA, Waves and Water  
*Giuseppe Vitiello*, Salerno – DNA: On the Wave of Coherence  
*Gustav Bernroider/Johann Summhammer*, Salzburg – Quantum Properties in Ion Channel Proteins

5:00pm  CONFERENCE DINNER CRUISE  
Dinner participants meet at the Registration Desk in the AM lobby  
(optional event, ticket required)

FRIDAY, MAY 6

8:30am to 10:40am  PLENARY 10  
**Microtubules**  
*Jack Tuszyński*, University of Alberta – Information Processing Within Dendritic Cytoskeleton  
*Anirban Bandyopadhyay*, NIMS – Quantum States in Microtubules and Topological Invariance  
*Rudolph E. Tanzi*, Harvard University – “The Amyloid Trap” Hypothesis of Alzheimer’s Disease

10:40am to 11:10am  Break

11:10am to 12:30pm  PLENARY 11  
**Keynote – Sir Roger Penrose, Oxford**  
**Consciousness and Physical Law**

12:30pm to 2:00pm  Lunch

2:00pm to 4:10pm  PLENARY 12  
**Neural Correlates of Consciousness II**  
*Germund Hesslow*, Lund – The Inner World As Simulated Interaction With The Environment  
*Henrik Ehrsson*, Karolinska – How We Come To Experience That We Own Our Body  
*Fredrik Ullén*, Karolinska – The Psychological Flow Experience
4:30pm to 6:35pm

Concurrent Sessions 25-32 / Locations
C25 Materialism/Physicalism SH, E-10
C26 Self/Identity SH, D-8
C27 NCC III AM, Bergsmannen
C28 Body Consciousness AM, Aulan
C29 Biology/Microtubules II SH, C-6
C30 Experiential III SH, B-5
C31 PSI/Altered States III JH, Reinholdsalen
C32 Eastern Approaches II SH, F-11

6:35pm to 10:00pm

Poster Session | Aula Magna Lobby

6:35pm to 10:00pm

Art-Tech Exhibit | Aula Magna Lobby

7:00pm to 10:00pm

Concurrent Sessions 33-40 / Locations
C33 Medicine III SH, E-10
C34 Embodiment SH, F-11
C35 Integrative Models SH, B-5
C36 Experiential IV AM, Aulan
C37 Ontology/Panpsychism SH, D-8
C38 Mental Imagery AM, Bergsmannen
C39 Physics/Integr Models II SH, C-6
C40 Language II/Integr Models JH, Reinholdsalen

10:00pm to midnight

Poetry Slam/Talent Show

SATURDAY, MAY 7

8:30am to 10:40am

PLENARY 13
Anesthesia and Consciousness
Anthony Hudetz, Milwaukee – Anesthetics and Gamma Synchrony
Nicholas Franks, London – Molecular Actions of Anesthetics
Stuart Hameroff, UMC Arizona – Meyer-Overton Meets Quantum Physics

11:10am to 12:30pm

PLENARY 14
End-of-Life Brain Activity
Lakhmir S. Chawla, GWU – Surges of Electroencephalogram Activity at the Time of Death.
Peter Fenwick, London – Death and the Loosening of Consciousness

2:00pm to 6:00pm

Optional Workshops

7:30pm to ???

End-of-Consciousness Party
Brain-Berg at the Ice Bar
Nordic Sea Hotel Absolut Ice Bar
Index to Plenary Sessions

PL 1 – PL 14
AM Aulan | Aula Magna Hall

PLENARY SESSIONS
Tuesday-Saturday, May 3-7
(PL 1-3 Tues. – PL 4-6 Wed. – PL 7-9 Thurs. – PL 10-12 Fri. – PL 13-14 Sat.)

All Plenary Sessions will be held in the historic Aula Magna Hall. Fourteen plenary
and keynote sessions will be presented to the entire conference audience.

PL 1   BRAIN ELECTROMAGNETIC FIELDS AND CONSCIOUSNESS
David McCormick, Endogenous Electric Fields Guide Cortical Network Activity [111]
Sue Pockett, Electromagnetic Field Theory of Consciousness: The Shape of Conscious Fields [224]
Johnjoe McFadden, The Cemi Field Theory: Gestalt Information and the Meaning of Meaning [64]

PL 2   TIME AND CONSCIOUSNESS I
Harald Atmanspacher, Temporal Nonlocality in Bistable Perception [189]
Sara Gonzalez Andino, Backward Time Referral in the Amygdala of Primates [98]

PL 3   CONSCIOUSNESS AND REALITY I
Deepak Chopra, MD, Vedic Approaches to Consciousness and Reality [204]
Leonard Mlodinow, The Grand Design of our Universe [205]
Paola Zizzi, Consciousness in the Early Universe [203]

PL 4   TRANSCRANIAL THERAPIES
Eric Wassermann, Transcranial Stimulation and Consciousness [226]
Allan Snyder, Accessing Information Normally Beyond Conscious Awareness
by Non-Invasive Brain Stimulation: Opening the Doors to Perception and Memory? [170]
William Tyler, Mechanical Waves and Consciousness [136]

PL 5   NEURAL CORRELATES OF CONSCIOUSNESS I
Rafael Malach, Local Neuronal Ignitions and the Emergence of Perceptual Awareness [110]
Dietmar Plenz, Neuronal Avalanches, Coherence Potentials, and Cooperativity:
Dynamical Aspects that Define Mammalian Cortex [113]

PL 6   CONSCIOUSNESS AND REALITY II
Menas Kafatos, Consciousness and the Universe: Non-Local, Entangled,
Probabilistic and Complementary Reality [210]
Tarja Kallio Tamminen, Quantum Physics and Eastern Philosophy [197]
Paavo Pylkkanen, Bohmian View of Consciousness and Reality [41]
PL 7  VARIETIES OF RELIGIOUS EXPERIENCE
Mario Beauregard, Neuroscience of Transcendent Experiences [100]
Alexander Moreira-Almeida, Differential Diagnosis Between Spiritual Experiences
and Mental Disorders [264]
Padrinho Paulo Roberto, Sacramental Plants of Amazonia: Consciousness Expansion,
Self Knowledge and Religious Experience [241]

PL 8  TIME AND CONSCIOUSNESS II
Dick Bierman, Presentiment [273]
Moran Cerf, Time Effects in Human Cortical Neuronal Firings [101]

PL 9  QUANTUM BIOLOGY
Luc Montagnier, DNA, Waves and Water [135]
Giuseppe Vitiello, DNA: on the Wave of Coherence [202]
Gustav Bernroider/Johann Summhammer, Quantum Properties in Ion Channel Proteins and
their Effect on Neural Signal Segregation and Perception [193]

PL 10  MICROTUBULES
Jack A. Tuszynski, Information Processing within a Neuron via Electrodynamic Signaling
by the Dendritic Cytoskeleton [225]
Anirban Bandyopadhyay, Direct Experimental Evidence for the Quantum States in
Microtubules and Topological Invariance [191]
Rudolph E. Tanzi, “The Amyloid Trap” – Hypothesis of Alzheimer’s disease [125]

PL 11  KEYNOTE
Sir Roger Penrose, Consciousness and Physical Law [201]

PL 12  NEURAL CORRELATES OF CONSCIOUSNESS II
Germund Hesslow, The Inner World as Simulated Interaction with the Environment [105]
H. Henrik Ehrsson, How We Come to Experience that We Own Our Body:
The Cognitive Neuroscience of Body Self-Perception [121]
Fredrik Ullén, The Psychological Flow Experience: From Phenomenology to
Biological Correlates [185]

PL 13  ANESTHESIA AND CONSCIOUSNESS
Anthony Hudetz, Anesthetics and Gamma Synchrony [132]
Nicholas Franks, Molecular and Neuronal Mechanisms of General Anesthesia [130]
Stuart Hameroff, Meyer-Overton Meets Quantum Physics: Consciousness,
Memory and Anesthetic Binding in Tubulin Hydrophobic Channels [131]

PL 14  END-OF-LIFE BRAIN ACTIVITY
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A Case Series [128]
Peter Fenwick, Death and the Loosening of Consciousness [274]
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C 1 – C 40

Afternoon Concurrent Sessions – 4:30pm to 6:35pm
Tuesday, May 3 | Wednesday, May 4 | Friday, May 6

Evening Concurrent Sessions – 7:00pm to 10:00pm
Wednesday, May 4 | Friday, May 6

Concurrent talks are 20 minutes each, with 5 minutes for questions. There are
5-6 speakers per session, covering focused areas of the same theme. LCD
projectors and lap tops available. There is additional time at the end of each
track for general discussion. The following list consists of the Section Number,
Session Name, Order of Speakers, Corresponding Abstract Index Number and
the Building/Room Location.

C 1 Representation/HOT
Geovetenskapens Hus, Geo-Science Building
Jordan Pop-Jordanov, Brain electric field and consciousness level [114]
Mette Kristine Hansen, Do higher-level properties influence the phenomenal
character of visual experiences? [93]
George Seli, The utility of perceptual consciousness on higher-order theory [58]
Sean Allen-Hermanson, A critique of pure representation [91]
Andrea Borsato, A counterexample for weak representationalism [246]

C 2 Knowledge/Hard Problem
Geovetenskapens Hus, Geo-Science Building
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Shigeki Sugiyama, Between knowledge and consciousness (II) [20]
José M. Matías, The Meta-structure of knowledge: Object, meaning, reference
and the explanatory gap [72]
Ståle Gundersen, Epistemic pessimism and the mind-body problem [61]
Krzysztof Swiatek, The problem of content and self-knowledge of one’s mental states [76]

C 3 Free Will/Libet
Geovetenskapens Hus, Geo-Science Building
Eva-Maria Leicht, Free Will: A question of personality and self-involvement?
Hints from interindivudual differences in the lateralized readiness potential [89]
Michael Franklin, Using retrocausal practice effects to predict random binary
events in an applied setting [275]
Andrew Westcombe, Decisions, Decisions [90]
Anastasia Karpukhina, Generalization in human thinking [56]
Stephen Whitmarsh, Meditation, mindfulness, visualization and retroactive recall [256]
C 4 Synesthesia

Maureen Seaberg, Reading synesthesia between the lines [272]
Patricia Lynne Duffy, The landscapes of synesthesia
(filling out the definition of synesthesia--it’s more than just color) [155]
Michael Sollberger, Synaesthesia and the structural approach to perceptual content [95]
Alexandra Kirschner, Synesthesia and singing: a challenge [287]
Berit Brogaard/ Jason Padgett, The superhuman mind: From synesthesia to savant syndrome/
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C 5 NCC I

Hans Liljenstrom, Consciousness and mesoscopic brain dynamics [108]
Shawn Hayley, Neural correlates of massage therapy in healthy adults:
Role of the default mode network [127]
Frederick Travis, Quantum effects, brain functioning, consciousness, and meditation practice [99]
Zoran Josipovic, Default to nonduality [106]
Juliana Yordanova, Increased Alpha (8-12 Hz) activity during slow-wave sleep
as a marker for the transition from implicit knowledge to explicit insight [116]

C 6 Medicine I

Heather A. Berlin, Implicit self-esteem in borderline personality and depersonalization disorder [165]
Ovidiu Brazdau, Validation studies of the Consciousness Quotient Inventory (CQI) [149]
Leanna J. Standish, Using fMRI to evaluate the non-local, ‘entangled’ mind hypothesis:
The effects of distant Qi Gong on blood flow in gliomas and healthy human brains [242]
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Lobby | Aula Magna Hall
The Jol Thomson Installation: Polstjanan Room

Interactive | Innovative | Evocative

CURATORS
Nancy Clark, Chair
Maureen Seaberg
Abi Behar Montefiore

ARTISTS
Koei Endo & Ikuyo Endo
Jol Thomson
Fiammetta Rubin
Dave Cantrell
Jack Sneh
Werner Pans
Ole Hagen
Carrie C Firman
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**Moderator, Maureen Seaberg**  
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Workshop 3  
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Consciousness: The Ultimate Reality

Workshop 4  
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AM Aula Magna – JH Juristernas Hus (Law Student’s House) – SH Södra Huset (South House) – GEO Geovetenskapens Hus (Geo-Science Building)