

May 30<sup>th</sup> – June 2<sup>nd</sup>, 2003  
The University of Memphis, Memphis, TN, USA

---

**ASSC7**

**MODELS AND MECHANISMS OF  
CONSCIOUSNESS**

Seventh Annual Conference  
of the Association for the  
Scientific Study of Consciousness

# MODELS AND MECHANISMS OF CONSCIOUSNESS

## Seventh Annual Conference of the Association for the Scientific Study of Consciousness

Invited plenary speakers and symposia will address current empirical and theoretical issues in the study of consciousness, focusing on the theme of models and mechanisms of consciousness. The conference will explore the many connections between models of consciousness and their psychological and neurobiological mechanisms, from the perspectives of philosophy, neuroscience, psychology, linguistics, computer science, cognitive ethology, and artificial intelligence.

**ASSC7** is intended to promote interdisciplinary dialogue in the scientific study of consciousness, and as in previous years almost half the program will be set aside for concurrent sessions of submitted talks. ASSC7 will provide an excellent opportunity for the presentation of new empirical findings or novel theoretical perspectives in an atmosphere that will promote discussion and debate.

**ASSC** is the only international scientific organization devoted to the study of consciousness.

Friday, 30<sup>th</sup> May

08:00..... *Auditorium*  
Registration opens

09:30 – 12:30 Morning Workshops

- **Signal Detection Theory And Consciousness Research**  
William P. Banks - Pomona College
- **Do Current Models Of Color Perception Neglect Phenomenology?**  
James A. Schirillo - Wake Forest University  
Michael E. Rudd - University of Washington
- **In Search Of NCC: Insights From Single Neuron Recordings In The Human Brain**  
Gabriel Krieman - Massachusetts Institute of Technology
- **Complexity And Consciousness**  
Wei Ji Ma - California Institute of Technology
- **Functional Imaging In The Conscious Resting State, Sleep, General Anesthesia And Coma**  
Steven Laureys - Université Libre de Bruxelles, Belgium

12:30 – 14:00 Lunch

14:00 – 17: 00 Afternoon Workshops

- **Temporal And Spatial Analysis Of Electroencephalographic Signals**  
Walter Freeman - University of California at Berkeley  
Rodrigo Quiroga - California Institute of Technology
- **Visibility, Brightness, Shape, And Their Relationship To The Neural Code**  
Susana Martinez-Conde & Stephen L. Macknik - University College London
- **The Phenomenology Of Perception And Cognitive Science: The Continuing Relevance Of Merleau-Ponty's Approach To Conscious Experience And Thought**  
Erik Myin - Free University Brussels (VUB)
- **Unconscious Perception And Its Implications For Consciousness**  
Michael Snodgrass - University of Michigan
- **Chimpanzee Minds**  
Daniel Povinelli - University of Louisiana at Lafayette

17:00 – 18:00..... *Auditorium*

Presidential Address – Ned Block

Saturday, 31<sup>st</sup> May

08:00..... Auditorium  
Registration Opens

08:30 – 09:30 Plenary Talk..... Auditorium  
**High Resolution EEG Brings Us Another Step Closer To The NCC?**  
By Walter Freeman - University of California at Berkeley

09:30 – 09:55 Coffee Break

09:55 – 12:25 Plenary Symposium 1..... Auditorium  
**Global Workspace Theory**

- **Recent Brain Evidence Supports The Basic Global Workspace**  
Bernard J. Baars - The Neurosciences Institute, San Diego
- **Testable Hypotheses From The IDA Model Of Global Workspace Theory**  
Stan Franklin – The University of Memphis
- **Automaticity Revisited In The Light Of The Global Workspace Hypothesis**  
Lionel Naccache - Service Hospitalier Frederic Joliot, France

12:25 – 13:35 Lunch

13:35 – 15:35 Concurrent Sessions

CS 1 .1 Models & Memory.....Psychology 204

- **The Problem Of Subjectivity In Global Workspace Theory**  
Norman D. Cook - Kansai University, Takatsuki,Osaka, Japan
- **Memory Conjunction And The Unity Of Consciousness**  
Sharon L. Hannigan - St. Lawrence University  
Paula Droege - Penn State University
- **A Neural Computational Model Of Cognition And Consciousness**  
Garry Briscoe - University of Wisconsin Oshkosh
- **Modeling Memory Systems With Global Workspace Theory**  
Uma Ramamurthy - St Jude Children's Research Hospital & The University of Memphis  
Sidney K. D'Mello - The University of Memphis  
Stan P. Franklin – The University of Memphis

CS 1.2 Imaging Studies & Anesthesia.....Psychology 206

- **Chess Experts Require Less Brain Activity Than Non-Experts In A Recognition Task With Chess Stimuli.**  
Guillermo Campitelli, Fernand Gobet, Amanda Parker - University of Nottingham

- **Tracking An Illusion: Feedback Activation In V1 During Apparent-Motion Perception.**

Axel Kohler - Max Planck Institute for Brain Research, Germany  
 Alexander T. Sack - Johann Wolfgang Goethe-Universität – Germany  
 Nikolaus Kriegeskorte - Universiteit Maastricht, The Netherlands

13:35 – 15:35 CS 1.2 (contd)

- **Transient Zombie-Like States Of Limbic Temporal Lobe Epilepsy**  
 Thomas Reid Henry - Emory University
- **Halothane Maximally Augments Visual Event-Related Gamma Oscillations When Rats Lose Consciousness.**  
 A. G. Hudetz - Medical College of Wisconsin  
 O. A. Imas - Marquette University  
 J. D. Wood - Medical College of Wisconsin  
 K. M. Ropella - Marquette University

CS 1.3 Miscellaneous.....*Dunn Hall 249*

- **How Is Language Represented?**  
 David Dufty – The University of Memphis
- **The Placebo Response: Implications For Causal Efficacy Of Consciousness**  
 Yoshio Nakamura, C. Richard Chapman - University of Utah
- **What Is It Like To Be An Artificial Agent?**  
 Matthias Scheutz - University of Notre Dame
- **Mental Images And Spatial Sensory Quality**  
 Douglas B. Meehan - CUNY Graduate Center

15:35 – 16:00 Tea

16:00 – 18:30 Plenary Symposium 2..... *Auditorium*  
**Binocular Rivalry And The NCC**

- **Binocular Rivalry And The Illusion Of Monocular Vision.**  
 David Leopold - Max Planck Institute for Biological Cybernetics, Tübingen
- **Binocular Rivalry And Perceptual Awareness In Human Primary Visual Cortex**  
 Frank Tong – Princeton University
- **What Does Binocular Rivalry Teach Us About Consciousness?**  
 Alva Noe - University of California, Santa Cruz

19:00 – 21:00.....*Fogelman*  
**Poster Session / Conference Reception**

Sunday, 1<sup>st</sup> June

08:30 – 09:30 Plenary Talk..... Auditorium  
The Fantasy Of A First-Person Science Of Consciousness  
Daniel C. Dennett - Center for Cognitive Studies

09:30 – 09:55 Coffee Break

09:55 – 12:25 Plenary Symposium 3..... Auditorium  
Feedback And Re-Entrant Processes In Consciousness

- **Why Visual Attention And Awareness Are Different**  
Victor A.F. Lamme - University of Amsterdam, The Netherlands
- **To Be Announced**  
Alvaro Pascual-Leone - Beth Israel Deaconess Med. Center and Harvard Medical School
- **Two-Way Pathways In The Brain: What Are They For?**  
Vince Di Lollo - University of British Columbia, Vancouver

12:25 – 13:35 Lunch

13:35 – 15:35 Concurrent Sessions

CS 2.1 BinocularRivalry/NeuralCorelates.....Psychology204

- **Variability And Adaptability Of The Visual System In Binocular Rivalry.**  
Fumihiko Taya - Osaka University & Sony Computer Science Laboratories  
Ken Mogi - Sony Computer Science Laboratories
- **Differential Amygdala But Not Extrastriate Activity Is Evidence For Categorization Of Objects Not Seen During Binocular Rivalry.**  
Brian Pasley, Robert Schultz - Yale Child Study Center
- **Re-Entrant Loops, Neural Codes, And Conscious Awareness.**  
Peter Cariani - Harvard Medical School
- **Can Neural Darwinism Explain Consciousness? An Empirical Evaluation**  
Anil K. Seth, Bernard J. Baars - The Neurosciences Institute

CS 2.2 Phenomenology.....Psychology206

- **Phenomenology Ain't Just In The Head**  
Justin C. Fisher - University of Arizona
- **Either Ho Or Fo: A False Dichotomy**  
Robert W. Lurz - Brooklyn College, CUNY

- **Closing The Gap On Pain**  
Thomas Polger - University of Cincinnati, Kenneth Sufka - University of Mississippi

- **Reportability And The Single Index Challenge**  
Dan Ryder - Indiana University, Zena Ryder - UNC Chapel Hill

13:35 – 15:35 Concurrent Sessions (contd)

CS 2.3 Perception.....*Dunn Hall 249*

- **Studies Of The Dichoptic Standing Wave Of Invisibility: Implications For Visual Awareness**  
Stephen L. Macknik, Susana Martinez-Conde - University College London
- **Perception Training Of The Visual Potentialities**  
Sharipov Amir, Gafurova Zulfia - Russian Eye and Plastic Surgery Center
- **Changes In Shape Are Confounded With Changes In Intensity In Early Visual Neurons**  
Susana M-Conde, Stephen L. Macknik, Xoana G. Troncoso - University College London
- **Illusory Body Image Induced By Double Touch In Fingers**  
Takayasu Sekine - Tokyo Institute of Technology & Sony Computer Science Lab  
Ken Mogi - Sony Computer Science Laboratories

15:35 – 16:00 Tea

16:00 – 18:30 Plenary Symposium 4..... *Auditorium*

Computational Models Of Consciousness

- **What Kind Of Virtual Machine Is Capable Of Human Consciousness?**  
Aaron Sloman - The University of Birmingham
- **Is It Conscious? A Question Of Mechanism**  
Igor Aleksander - Imperial College, London
- **The Search For The Computational Correlates Of Consciousness**  
Axel Cleeremans - Universite Libre de Bruxelles

19:00 – 21:00..... *Holiday Inn*

Southern Gourmet Banquet

Monday, 2<sup>nd</sup> June

08:30 – 09:30 Plenary Talk..... Auditorium

**A Framework For Consciousness**

Christof Koch - California Institute of Technology, Pasadena

09:30 – 09:55 Coffee Break

09:55 – 12:25 Plenary Symposium 5..... Auditorium

**Animal Consciousness**

- **Bonobo Beliefs And Desires: An Inference For Non-Human Consciousness**  
Sue Savage-Rumbaugh & Bill Fields - Georgia State University, Atlanta
- **Cultivating Consciousness: Chimpanzees And The Impact Of Enculturation**  
Sarah T. Boysen - Ohio State University, Columbus
- **Why The Question Of Animal Consciousness Might Not Matter Very Much**  
Peter Carruthers - University of Maryland, College Park

12:25 – 13:35 Lunch

13:35 – 15:35 Concurrent Sessions

CS 3.1 Voluntary Action/ Metacognition.....Psychology 204

- **Single-Trial Event-Related Potentials And Their Relation To Consciousness**  
Rodrigo Quian - California Institute of Technology
- **On The Nature Of Forced And Spontaneous Choices**  
Ayako Onzo - Tokyo Institute of Technology & Sony Computer Science Lab  
Ken Mogi - Sony Computer Science Laboratories
- **Biased Metacognitive Measurement Of Implicit Knowledge**  
Matt Twyman - University of York, Zoltan Dienes - University of Sussex
- **The Role Of Voluntary Attention In Chromatic Infusion Of Afterimages**  
Liang Lou - Grand Valley State University

CS 3.2 Animal Consciousness.....Psychology 206

- **Carruthers On Animal Consciousness And The Dispositional HOT Theory**  
Rocco J. Gennaro - Indiana State University
- **Equine And Elephantine Epistemology**  
Dr. M. Kiley-Worthington - University of Cambridge & Eco Research Center



- **The Self-Recognition Emotion Stroop Task: A Novel Method For Quantitatively Assessing Self-Recognition**  
Steve Joordens, Linda Scuccimarri, Carol Borlido - University of Toronto at Scarborough
- **The Mind In The Mirror: Self-Awareness, Self-Recognition, And The Mark Test**  
Roblin R. Meeks - City University of New York Graduate Center

13:35 – 15:35 Concurrent Sessions

CS 3.3 Emotions & Attention..... *Dunn Hall 249*

- **Awareness Of Emotional "Gut Feelings": A Comparison Of Long-Term Meditators And Non-Meditators Using A Visual Masking Paradigm**  
Lisbeth Nielsen - University of Arizona and Stanford University  
Alfred W. Kaszniak - University of Arizona
- **First-Person Perspective And The Prefrontal Cortex - A Neurophilosophical fMRI Study**  
Felix Bermpohl, Alexander Heinzl, Georg Northoff -, Beth Israel Deacones Medical Center & Harvard Medical School
- **Ambivalent Emotions And The Structure Of Mental States Capable Of Becoming Conscious**  
Maxim I. Stamenov - Germany
- **Behavioral And Physiological Consequences Of Shifts In Conscious Awareness**  
Jonathan M. Smallwood - Glasgow Caledonian University

15:35 – 16:00 Tea

16:00 – 18:30 Closing Talk..... *Auditorium*

**Blindsight And Plasticity**

Petra Stoerig - Princeton University

Poster Participants:

PS- 01

Dissociating Phenomenal And Representational Aspects Of Mental Imaging

Bill Faw - BrewtonParker College

PS – 02

Reading The Language Of The Universe

Steven E. Romer

PS – 03

Consciousness Out Of A 'Coherent' World: New Developments From The Top (Theory Of Psychiagenia).

Ivan O. Godfroid - Universite Libre de Bruxelles

PS – 04

Elements of Life

Maritza Castillo

PS – 05

Using The Forms Of The Recommendation Architecture To Understand Consciousness

L. Andrew Coward - Murdoch University

PS – 06

Does Hal Have Feelings?

James Mattea - Marquette University

PS – 07

Libet's Mental Timing Experiments: A Further Support To The Theory Of Psychiagenia (Top)?

Francois J. Legros, Laurent Wanson, Ivan O. Godfroid - Universite Libre de Bruxelles

PS – 08

The Fallacy Of Eidentity

Richard Brown - University of Connecticut

PS – 09

First Person Logic: Toward A Language Of Consciousness

Nikolai Telmann - Daübler Institute

Kelly A. Forrest - Franklin College & Daübler Institute

PS – 10

Connected Consciousnesses? A Conditional Testing Approach To Unorthodox Forms Of Interaction

Dr. Schneider Rainer, Dr. Walach Harald - University Hospital Freiburg, Germany  
Dr. Julius Kuhl - University of Osnabrueck, Germany

**PS – 11**

**A Physiological Basis Of The Sprague Effect?**

J. G. McHaffie, H. Jiang, B. E. Stein - Wake Forest University School of Medicine<sup>1</sup>

**PS – 12**

**Learning During Anesthesia: The Role Of Depth**

Dr Catherine Deeprose, Dr Jackie Andrade - University of Sheffield

**PS – 13**

**On The Function Of “What It’s Like”: A Semantic Solution To The Hard Problem?**

Dave Beisecker - UNLV

**PS – 14**

**The Reverse Perspective Illusion And The Projection Of Internal Contradictions**

Takefumi Hayashi and Norman D. Cook - Kansai University, Takatsuki, Osaka, Japan

**PS – 15**

**Consciousness And Anesthesia: The Affect Of Ascorbic Acid**

Henry C. Talley V, Michael Carter, Mona N. Wicks - U of Tenn HSC  
Brad Roper - VAMC Memphis

**PS – 16**

**Am I Necessarily Me?**

Allen Y. Houg - National Yang Ming University, Taiwan

**PS – 17**

**Power Spectrum And Coherence Analysis Of The Eeg From Two Minimally Conscious Patients With Severe Asymmetric Brain Damage**

Erik J. Kobylarz, Nicholas D. Schiff - Weill-Cornell Medical College  
Ayesha Kamal - Temple University School of Medicine

**PS – 18**

**What Kind Of Problem Does Consciousness Pose?**

Par Sundstrom - Umea University & New York University

**PS – 19**

**The Mechanism Of Consciousness**

Victoria Popova, Lidia Andrianova, Elena Savelyev - International Research Center

**PS – 20**

**Meaning And Consciousness**

Joe Becker - University of Illinois at Chicago

**PS – 21**

**Improving The Explanatory Value Of Neuroscientific Models Of Consciousness**

Ilya Farber - George Washington University

All abstracts are available in the ASSC7 Abstract Booklet and at the ASSC7 website at <http://www.cs.memphis.edu/~assc7>

The affiliation and contact details of all participants are also available in the ASSC7 Abstract Booklet.

Scientific Program Committee

**Bernard J Baars**, The Neurosciences Institute  
**David Chalmers**, University of Arizona  
**Axel Cleeremans**, Universite Libre de Bruxelles  
**Stan Franklin** (chair), University of Memphis  
**Thomas Metzinger**, Johannes Gutenberg Universitat  
**Geraint Rees**, University College London  
**Ron Sun**, University of Missouri-Columbia  
**Patrick Wilken**, California Institute of Technology

Local organizers

The **Institute for Intelligent Systems**,  
The **Computer Science Department**, and  
The **FedEx Technology Institute** of the **University of Memphis**