

3<sup>rd</sup> biennial conference on:

# Brain Development & Learning: Making Sense of the Science



July 16-20, 2010 Vancouver, BC Canada

<http://www.interprofessional.ubc.ca/bdl.html>

An interdisciplinary conference devoted to improving children's lives by making cutting-edge research in neuroscience, child psychology, & medicine understandable & applicable to those who work with children on a daily basis



*"Best conference in N. America!"*

Reading & Math

Learning & Memory

Social Pediatrics

Effects of Experiences in the Womb

Adolescent Mental Health

Autism & Theater

How Early Experience shapes Gene Expression

*"I left energized to improve patient care"*



Conference Organizer: Adele Diamond



BC Mental Health & Addiction Services

An agency of the Provincial Health Services Authority



Themes in the Presentations at this year's conference:

		Pediatrics	Neurology	Psychiatry	Social Work	Education	Law
<b>Parent- Infant Interaction: Longterm Effects of Early Experience</b>							
Lifelong Effects of Good Parenting: How Experience affects Gene Expression for good or ill <i>Meaney</i>	Page # 5	✓		✓	✓	✓	✓
Early Skin-to-Skin Contact enhances Newborn Development (even in the NICU) <i>Bergman</i>	5	✓	✓	✓	✓		✓
Hormonal and Behavioral Regulation of the Bond between Parents and Newborns <i>Feldman</i>	6	✓	✓	✓	✓		
Oxytocin & Implications for Mental Health and Illness <i>Carter</i>	6	✓	✓	✓	✓		
Mom's Mood Matters: How Early Life Events influence the Development of Stress Reactivity <i>Oberlander</i>	6	✓	✓	✓	✓	✓	
<b>In Utero Effects</b>							
Nutrition in the Womb and its Lifelong Health Consequences <i>Barker</i>	6	✓			✓		✓
Independent Effects of Mother's Mood and Use of Anti-depressant Medication on the Developing Fetus <i>Oberlander</i>	6	✓	✓	✓	✓		✓
How the Immune Response mounted by Mom Increases the Risk for Schizophrenia and Autism <i>Patterson</i>	7	✓	✓	✓			
Developmental Origins of Health and Illness: Focus on Stress and Infection <i>Coe</i>	7	✓	✓	✓	✓	✓	
<b>Neuroscience of Learning and Memory</b>							
Cellular and Molecular Bases of Learning and Memory <i>Silva</i>	7		✓			✓	
Optimizing Instruction for Learning and Memory <i>Bjork</i>	8					✓	
Brain Network Connectivity and Alterations in Disabilities and Pathologies <i>Ribary</i>	10	✓	✓	✓		✓	✓
Neuroscientific Insights: How Infant Crack the Speech Code <i>Kuhl</i>	10		✓			✓	
Neuroimaging Investigations of Reading Difficulties <i>McCandliss</i>	10		✓			✓	
Sleep, Memory, and Learning: Neuroscience of the "Sleep Boost" <i>Stickgold</i>	8	✓	✓		✓	✓	
Development of Learning and Memory <i>Bauer</i>	8		✓			✓	
Mirror Neurons and Social Learning in Infants <i>Meltzoff</i>	8		✓	✓	✓	✓	
<b>Math &amp; Reading</b>							
"JUMP Math": Anyone and Everyone can learn Math <i>Mighton</i>	9					✓	
Montessori Mathematics from Pre-school through Pre-calculus <i>Lawrence</i>	9					✓	
Outreach Math Activities with Aboriginal Students <i>Alvarez</i>	9				✓	✓	
Minds, Brains, and Early Learning: How Infants 'Crack the Speech Code' <i>Kuhl</i>	10		✓			✓	
Brain-based Interventions that Improve Reading <i>McCandliss</i>	10		✓			✓	
"Experience Corps": Elders helping Students <i>Rebok</i>	16			✓	✓	✓	

Continued from previous page

Themes in Presentations

			Pediatrics	Neurology	Psychiatry	Social Work	Education	Law
<b>Respecting Cultural Differences; Identifying and Reducing Unconscious Biases</b>								
Implicit Biases are Learned and can be Unlearned	<i>Banaji</i>	Page # 14	✓		✓	✓	✓	✓
Differences Across Cultures in Thinking and Perception	<i>Norenzayan</i>	14	✓	✓	✓	✓	✓	✓
The Challenges of Intergroup Interaction: Enhancing Trust for Better Intergroup Relations	<i>Dovidio</i>	14	✓		✓	✓	✓	✓
What I Learned in Class Today: Aboriginal Issues in the Classroom (film and discussion)	<i>Crey &amp; Perrault</i>	19			✓	✓	✓	✓
<b>Child and Adolescent Mental Health</b>								
Creatively Helping Youths 'tame' Anxiety and Depression	<i>Garland</i>	15	✓	✓	✓	✓	✓	✓
Schizophrenia and Autism: Recognizing the Role of the Immune System	<i>Patterson</i>	7	✓	✓	✓			✓
Autism and a theater program that helps	<i>Corbett</i>	19			✓	✓	✓	
Adolescent Mental Health and Mental Health Care in Developing Countries	<i>Kutcher</i>	15			✓	✓		
Helping Children with Conduct Disorders Beat the Odds	<i>Webster-Stratton</i>	15			✓	✓	✓	✓
Mindfulness-based Reduction of Stress and Pain (MBSR)	<i>Kabat-Zinn</i>	16	✓	✓	✓	✓	✓	✓
<b>Developmental Disorders/ Learning Problems</b>								
Reversing deficits in Neurofibromatosis type I (NF1)	<i>Silva</i>	7	✓	✓	✓	✓	✓	✓
Dyslexia: Brain signatures and Interventions	<i>McCandliss</i>	10		✓			✓	
Deciphering Dyslexia (film and discussion)		9		✓			✓	
<b>Promoting Joy, Resilience, and Creativity</b>								
Social Pediatrics	<i>Julien</i>	5	✓		✓	✓	✓	✓
Creativity & Flow: Making Life and Learning more Enjoyable	<i>Csikszentmihalyi</i>	16			✓	✓	✓	✓
<b>Interventions</b>								
Social Pediatrics	<i>Julien</i>	5	✓		✓	✓	✓	✓
Helping Youths 'Tame' Anxiety and Depression	<i>Garland</i>	15			✓	✓		
Reversing deficits in Neurofibromatosis type I (NF1)	<i>Silva</i>	7		✓			✓	✓
"JUMP Math": Anyone and Everyone can Learn Math	<i>Mighton</i>	9					✓	
Outreach Math Activities with Aboriginal Students	<i>Alvarez</i>	9				✓	✓	
Autism and a Theater Program that helps	<i>Corbett</i>	19			✓	✓	✓	
Helping Children with Conduct Disorders Beat the Odds	<i>Webster-Stratton</i>	15			✓	✓	✓	✓
"Experience Corps": Older Adults helping Young Children	<i>Rebok</i>	16				✓	✓	
Mindfulness-based Reduction of Stress and Pain (MBSR)	<i>Kabat-Zinn</i>	16	✓	✓	✓	✓	✓	✓



**Melania Alvarez**, MSc (Industrial Engineering), MSc (Economics), BC Education Coordinator, Pacific Institute for the Mathematical Sciences, Vancouver, BC: **Foundations for Success: Outreach Mathematics Activities for Aboriginal Students**

**Mahzarin Banaji**, PhD, Richard Clarke Cabot Professor of Social Ethics, Department of Psychology, Harvard University: **The Human Mind and the Social World: Implicit Biases are Learned and can be Unlearned**

**David Barker**, MD, PhD, FRS, Professor of Clinical Epidemiology, University of Southampton, UK, & Professor of Cardiovascular Medicine, Oregon Health and Science University: **Nutrition in the Womb and its Lifelong Consequences for Health**

**Patricia Bauer**, PhD, Asa Griggs Candler Professor of Psychology & Senior Associate Dean for Research, Emory College of Arts and Sciences, Emory University, Atlanta, GA: **Learning and Memory in Development: How and Why they Change**

**Nils Bergman**, MPH, PhD, Consulting Public Health Physician & Honorary Research Assoc, Faculty of Health Sciences, Univ of Cape Town, South Africa: **Improving Life from the Beginnings: Early Skin-to-Skin Contact Enhances Newborn Development**

**Robert Bjork**, PhD, Distinguished Professor and Chair, Department of Psychology, University of California at Los Angeles: **Optimizing Instruction: How We Learn versus How We Think We Learn**

**Sue Carter**, PhD, Professor of Psychiatry and Co-Director of the Brain Body Center, University of Illinois at Chicago: **Oxytocin, Vasopressin, and Love: Implications for Mental Health and Mental Illness**

**Christopher Coe**, PhD, W.B. Cannon Professor of BioPsychology, Department of Psychology, & Director of the Harlow Center for Biological Psychology, University of Wisconsin – Madison: **Developmental Origins of Health and Illness: Focus on Stress and Infection**

**Mihaly Csikszentmihalyi**, PhD, C.S. and D.J. Davidson Professor of Psychology and Management, Claremont Graduate University, Claremont, CA: **Creativity and Flow: Making Life and Learning more Enjoyable**

**John F. Dovidio**, PhD, Professor of Psychology, Yale University, New Haven, CT: **The Challenges of Intergroup Interaction: Enhancing Trust for Better Intergroup Relations**

**Ruth Feldman**, PhD, Prof in the Psychology Dept & Gonda Brain Sciences Center, & Director of Irving B. Harris Infant Mental Health Clinic & Internship Program in Child Clinical Psychology, Bar-Ilan University: **Factors Regulating the Bond between Parents and Newborns**

**Jane Garland**, MD, FRCPC, Clinical Professor of Psychiatry, Faculty of Medicine, University of British Columbia, & Clinical Head, Mood and Anxiety Disorders Clinic, BC Children's Hospital: **What's Right with You! Creatively Helping Youths "Tame" their Worry Dragons**

**Gilles Julien**, Founding Director, Fondation pour la Promotion de la Pédiatrie Sociale, Assoc Prof, Dept of Pediatrics and Family Medicine, McGill University: **Social Pediatrics: A Powerful Approach to Sustaining Child Development in Underserved Communities**

**Jon Kabat-Zinn**, PhD, Professor of Medicine Emeritus, Founding Director of Stress Reduction Clinic, & Founding Director of Center for Mindfulness in Medicine, Health Care, & Society, Univ of Massachusetts Medical School: **Mindfulness-Based Stress and Pain Reduction**

**Patricia Kuhl**, PhD, Bezos Family Foundation Endowed Chair for Early Childhood Learning; Co-Director, Inst for Learning and Brain Sciences, & Director, NSF Science of Learning Center, Univ of WA: **Minds, Brains, and Early Learning: How Infants 'Crack the Speech Code'**

**Stan Kutcher**, MD, FRCPC, CAH, Prof and Sun Life Financial Chair in Adolescent Mental Health, & Director, WHO Collaborating Centre for Mental Health Training and Policy, Dalhousie University: **Adolescent Mental Health & Mental Health Care in Developing Countries**

**Lynne Lawrence**, BA, Mont Int Dip - AMI, FRSA, Executive Director of the Association Montessori Internationale (AMI): **Montessori Mathematics from Pre-school through Pre-calculus**

**Bruce McCandliss**, PhD, Patricia and Rodes Hart Professor of Psychology and Human Development, Vanderbilt University, Nashville, TN: **Neuroimaging Studies of Reading and Interventions that Improve Reading**

**Michael Meaney**, PhD, Director of Program for Study of Behavior, Genes and Environment, & James McGill Prof of Medicine in Psychiatry, Neurology, & Neurosurgery Depts, McGill: **Lifelong Effects of Good Parenting: How Experience affects Gene Expression**

**Andrew Meltzoff**, PhD, Job and Gertrud Tamaki Endowed Chair, Psychology Dept; Co-Director, Inst for Learning and Brain Sciences, University of Washington, Seattle: **Becoming a "People Person": Social-Emotional Development of Infants**

**John Mighton**, MA (Philosophy), PhD (Mathematics), Founder & President of JUMP Math, Toronto, ON; Fellow of the Fields Institute for Research in the Mathematical Sciences, University of Toronto: **The Importance of Teaching Math to Children**

**Ara Norenzayan**, PhD, Assoc Prof, Psychology Dept, & Co-Director of the Centre for Human Evolution, Culture, and Cognition, University of British Columbia: **Thinking across Cultures: What's Variable, What's Universal, & Implications for a Culturally Diverse World**

**Tim Oberlander**, MD, R Howard Webster Prof of Early Childhood Dev., Pediatrics Dept, & Prof, Dev. Pediatrics Division, University of British Columbia & BC Children's Hospital: **Mothers' Mood Matters: How Early Life Events Influence the Dev. of Stress Reactivity**

**Paul Patterson**, PhD, Anne P. & Benjamin F. Biaggini Prof of Biological Sciences, & Director, California Institute of Regenerative Medicine Training Program, Caltech: **Interactions between Brain and Immune System in the Development of Schizophrenia & Autism**

**George Rebok**, PhD, Prof, Mental Health Dept, Bloomberg School of Public Health, Johns Hopkins University, Baltimore: **The Experience Corps® Program: Impacting Young Children's Learning and Behavior through High-Intensity Older Adult Volunteering**

**Urs Ribary**, PhD, Prof & Endowed BC LEEF Leadership Chair in Cognitive Neurosci. in Childhood Health & Dev., and Director, Behavioral and Cognitive Neuroscience Institute, Simon Fraser Univ: **Brain Network Connectivity and Alterations in Disabilities and Pathologies**

**Alcino Silva**, PhD, Prof in the Neurobiology, Psychiatry, & Psychology Depts & Brain Research Institute, & Head, Center for Plasticity and Memory, University of California at Los Angeles: **Reversing Disorders: Cellular and Molecular Bases of Learning and Memory**

**Robert Stickgold**, PhD, Director, Center for Sleep and Cognition, Beth Israel Deaconess Medical Center, Boston and Associate Professor of Psychiatry, Harvard Medical School: **Sleep, Memory, and Learning: The Value of a Good Night's Sleep**

**Carolyn Webster-Stratton**, MSN, MPH, PhD, Professor and Director of Parenting Clinic, University of Washington, Seattle: **Helping Children with Conduct Disorders Beat the Odds**

## OVERVIEW OF THE CONFERENCE



### Opening Keynote Address. **Social Pediatrics: A Powerful Approach for Sustaining Child Development in Underserved Communities**

**Gilles Julien, MD** Founding Director, Fondation pour la Promotion de la Pédiatrie Sociale, Associate Professor, Department of Pediatrics and Family Medicine, McGill University

Dr. Julien has fundamentally changed the profession of pediatrics. All medical students at all major universities in Montréal are now required to do a rotation in social pediatrics supervised by Dr. Julien.

Medical conditions and social conditions are closely intertwined, and socio-economic adversity has serious health ramifications. Children living in poverty require a different kind of pediatric care.

Fri. pm

### **PARENT-INFANT INTERACTION: LONGTERM EFFECTS of EARLY EXPERIENCE**

On the opening day of the conference, Prof. Meaney will present groundbreaking results showing that whether rats are mothered with lots of touch or little has profound, long-lasting effects on their offspring and future generations, affecting gene expression, stress reactivity, and cognitive function.

What are the implications of that for human mothering and child development?

Other talks at the conference will explore the answer to that.

Meaney's results could imply that "good mothering" (expressing the right attitudes and behaviors, such as being responsive to your child) might produce similar beneficial outcomes.

Or, Meaney's results might imply something profound about the importance of touch specifically and the importance of physical contact between caregiver and infant early in life.

#### **Lifelong Effects of Good Parenting: How Experience affects Gene Expression**

**Michael Meaney, PhD** Director of Program for the Study of Behavior, Genes and Environment

& James McGill Professor of Medicine in the Depts. of Psychiatry, Neurology, and Neurosurgery, McGill University

"Good" rat moms (those who more frequently lick and groom their pups) produce offspring who, throughout their lives, explore more, are less fearful and less reactive to stress, perform better cognitively, and preserve their cognitive skills better into old age. It is the mother's behavior that produces these effects: an example of early experience (nurturing touch, or its absence) producing enduring, life-long effects.

Maternal behavior produces these behavioral consequences through altering gene expression. Not all genes in an individual are expressed. Experience affects which genes are turned on and off, in which cells, and when.

Fri. pm



Sat. am

### **Improving Life from the Beginnings: Early Skin-to-Skin Contact enhances Newborn Development**

**Nils Bergman, MPH, PhD**

Consulting Public Health Physician & Honorary Research Associate, Department of Human Biology, Faculty of Health Sciences, University of Cape Town, South Africa



Dr. Bergman started his medical career as a mission doctor in Zimbabwe. He introduced direct skin-to-skin contact between a mother and infant (Kangaroo Mother Care or KMC) to South Africa in 1995. After 5 years, KMC became official policy for care of premature infants in the hospitals of Western Cape province. During the 6 years he was Senior Medical Superintendent of the Mowbray Maternity Hospital he oversaw 5 Midwife Obstetric Units and 18,000 births per year.

After birth, the most important decision a newborn must make is whether his or her world is safe or unsafe. A caregiver's presence (or absence) and particularly skin contact (or its absence) are the primary and possibly sole determinants for an infant deciding he or she is safe or not. Autonomic nervous system activities dynamically chart this. It used to be thought that KMC was appropriate only for stable infants. However, a Randomized Controlled Trial, comparing low birthweight babies stabilized in incubators versus those without incubators in "skin-to-skin contact from birth," provides clear evidence that skin-to-skin contact produces results far superior to those with incubators, and smaller babies actually become more unstable in incubators.

Sat. pm

## Factors Regulating the Bond between Parents & Newborns

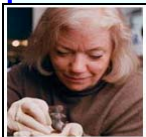
**Ruth Feldman, PhD**

Professor in the Dept. of Psychology and in the Gonda Brain Sciences Cntr, & Dir. of the Irving B. Harris Infant Mental Health Clinic & Internship Program in Child Clinical Psychology, Bar-Ilan University, Israel



For over a decade Ruth Feldman has been conducting groundbreaking research and intervention programs for Israeli and Palestinian children exposed to repeated war and violence.

This talk will examine developmental changes from the first moments of becoming a parent to several months later, when bonds are consolidated. Three conditions that disrupt the bonding process by reducing maternal availability to the infant will be examined as unique windows into the neurobiology of attachment: (a) prematurity, (b) maternal post-partum depression, and (c) war-related trauma. The talk will also present results from a 10-year longitudinal study on the effects of skin-to-skin contact (Kangaroo Care) on the development of premature infants.



## Oxytocin, Vasopressin, & Love: Implications for Mental Health & Mental Illness

**Sue Carter, PhD**

Professor of Psychiatry and Co-Director of the Brain Body Center, University of Illinois at Chicago

Sun. am

Sue Carter is arguably the world's leading expert on oxytocin. She is the Past President of the International Behavioral Neuroscience Society and the recipient of a Research Career Award from NIMH.

Oxytocin is best known for its role in birth and breastfeeding. It is a biochemical tool through which the body builds trust and social bonds, such as those between parents and infants. Infants suffering from childhood neglect may suffer damage to the oxytocin and vasopressin systems that lasts into adulthood, altering their capacity to form relationships. Thus, the absence of love can leave a biological scar.

## IN UTERO EFFECTS

### Nutrition in the Womb and its Lifelong Consequences for Health

**David Barker, MD, PhD, FRS**

Professor of Clinical Epidemiology, University of Southampton, UK, &  
Professor of Cardiovascular Medicine, Oregon Health and Science University



Sat. pm

Twenty years ago Dr. Barker proposed that coronary heart disease, the most common cause of death, originates through malnutrition in the womb (that "fetal origins hypothesis," now called the "Barker hypothesis"). It has since become recognized that early malnutrition permanently alters the body ("fetal programming") in ways that lead to later disease. Malnutrition in the womb initiates not only cardiovascular disease, stroke, high blood pressure, and diabetes, but forms of cancer, and contributes importantly to shorter lifespans and earlier ageing. Pursuit of these new ideas required novel methods.

It has now been confirmed in studies around the world that lower birthweight *within the normal range* increases the likelihood of later heart disease. An important implication of this graded association between birthweight and disease is that what are regarded as normal variations in the supply of energy and nutrients from mothers to their babies have profound longterm effects on health. New results show that the lifetime nutrition of girls and young women is important for the health of the next generation and that optimal growth in childhood can modify the effects of malnutrition in the womb.

Sun. pm

### Mothers' Mood Matters: How Early Life Events Influence the Development of Stress Reactivity during Infancy and Childhood

**Tim Oberlander, MD**

R. Howard Webster Professor of Early Childhood Development, Department of Pediatrics,

& Professor, Division of Developmental Pediatrics, University of British Columbia & BC Children's Hospital

A mother's depressive or stressed mood during pregnancy may be a child's first adverse life event, influencing the child's emotional well-being longterm. A mother's mood and/or antidepressant use during pregnancy can influence or "program" the developing nervous system of her baby and impact the emerging stress reactivity system during childhood. A Clinician Scientist, Dr. Oberlander recognizes how crucial the interplay between experience and biology is for understanding the vast range of individual differences.





## Interactions between the Brain and the Immune System in the Development of Schizophrenia and Autism

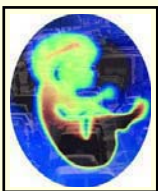
**Paul Patterson, PhD**

Fri. pm



Anne P. and Benjamin F. Biaggini Professor of Biological Sciences, & Director,  
California Institute of Regenerative Medicine Training Program, California Institute of Technology (Caltech)

Infection during pregnancy (such as the mother getting the flu) increases the likelihood that the offspring will develop autism or schizophrenia – but it does *not* appear that the infection has an adverse effect on the fetus – rather it is the *immune response* mounted by the mother (including inflammatory cytokines such as interleukin-6) that produces the adverse effect. Artificial activation of the maternal immune system in animals, in the absence of a pathogen, produces offspring with behavioral and brain abnormalities like those seen in schizophrenia or autism. Stress during pregnancy may be linked to similar mental health disorders because it too elevates inflammatory cytokines. The increasing knowledge of the molecular basis for this has implications for preventative strategies and potential therapeutics.



Tue. am

## Developmental Origins of Health and Illness: Focus on Stress and Infection

**Christopher Coe, PhD**

W.B. Cannon Professor of BioPsychology, Department of Psychology, &  
Director of the Harlow Center for Biological Psychology,  
University of Wisconsin – Madison



Prof. Coe has conducted pioneering research on the relation between mind and body and especially on the effects of maternal experiences during pregnancy on the developing infant. The antecedents of resilience and vulnerability begin early. Maternal well-being, stressful events, infection, and diet during pregnancy influence the development of the baby's brain, immune system, and behavioral responses after birth. These fetal experiences affect how the baby responds to the postnatal environment, which then shapes the continuing lifelong trajectory toward health or illness.



Sat. am

## LEARNING and MEMORY

### Reversing Disorders: Cellular and Molecular Bases of Learning and Memory

**Alcino Silva, PhD**

Professor in the Departments of Neurobiology, Psychiatry, Psychology and Brain Research Institute, &  
Head, Center for Plasticity and Memory, University of California at Los Angeles



Alcino Silva pioneered the field of Molecular & Cellular Cognition and played a key role in the development and expansion of this field of neuroscience. He is an exceptionally engaging, exuberant, and clear lecturer.

Several recent animal models indicate it is possible to reverse at least some neurodevelopmental disorders in adults. The learning and memory deficits and the underlying molecular and cellular deficits in mouse models of Neurofibromatosis type I (NF1) and Tuberous Sclerosis (TSC) can be reversed in adults with drug treatments targeting the underlying biochemical deficits. These studies have led to clinical trials that are starting to yield promising results. Together these findings, and related ones for Down Syndrome, Rett Syndrome, & Fragile X, provide hope to millions of individuals afflicted with a wide range of neurodevelopmental disorders, since they suggest that it may be possible to treat or even cure them in adults.

Sat. pm

## Optimizing instruction: How We Learn versus How We Think We Learn

**Robert Bjork, PhD**

Distinguished Professor and Chair, Department of Psychology, University of California at Los Angeles  
Paradoxically, certain procedures that make learning slower and may result in less impressive initial performance, actually enhance longterm mastery, whereas conditions that make for better performance during instruction frequently fail to support longterm understanding and retention. Such findings point to why instructors often choose less-effective strategies of instruction over more effective ones, why students are prone to illusions of comprehension, and why real-world instruction is seldom as effective as it might be. Prof. Bjork is Past President of the Association for Psychological Science and of the Psychonomic Society. His many awards include UCLA's Distinguished Teaching Award.



## Sleep, Memory, and Learning: The Value of a Good Night's Sleep

**Robert Stickgold, PhD**

Director, Center for Sleep and Cognition, Beth Israel Deaconess Medical Center, Boston  
& Associate Professor of Psychiatry, Harvard Medical School

A good night's sleep might be as important as the classes you attend. Sleep works to make sense of the events of the day, stabilizing and enhancing new memories, extracting their essence, and unearthing insights. Sleep plays a critical role in determining *what* we remember and *how* we remember it. For 20 years, Prof. Stickgold's groundbreaking research has shown the importance of sleep for memory. He also investigates alterations in memory consolidation during sleep in patients with mental health disorders. When sleep-dependent processes fail, psychiatric disorders can follow, including depression and ADHD. Indeed, PTSD may result specifically from a failure of the sleeping brain to process traumatic memories properly.

Mon. pm



## Learning and Memory in Development: How and Why they Change

**Patricia Bauer, PhD**

Asa Griggs Candler Professor of Psychology &

Senior Associate Dean for Research, Emory College of Arts and Sciences, Emory University, Atlanta, GA

You cannot have learning or memory without the other. Yet we do not remember everything we learn, and we do not learn everything we have stored in memory. Prof. Bauer's work has demonstrated that infants remember events and experiences remarkably well and has changed the way we think about the mental life of children. This talk will feature illustrations of how changes in learning and memory are interrelated at the behavioral and neural levels, showing how the brain builds memories and how that process changes with age.

Mon. pm



## Becoming a "People Person": Social-Emotional Development of Infants

**Andrew Meltzoff, PhD**

Job and Gertrud Tamaki Endowed Chair,  
Professor in the Department of Psychology, &

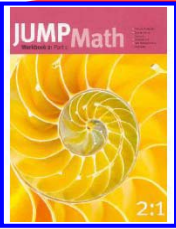
Co-Director, Institute for Learning & Brain Sciences, University of Washington, Seattle

Scientific discoveries have changed our theories about infants and young children. One area of particularly radical change is children's understanding of other people. We now know that human infants are born with the ability to connect socially to others. At early ages they imitate the behaviors of others, think about others' intentions, and follow the direction of their attention or gaze. This talk will tie those 3 areas of social understanding together and will address how as children come to know themselves, their socio-emotional understanding of others is expanded and transformed. Prof. Meltzoff is a Fellow of the American Academy of Arts and Sciences and the Norwegian Academy of Science and Letters, and has advised governors, science museums, and media leaders.

Tues. am



## MATH and READING

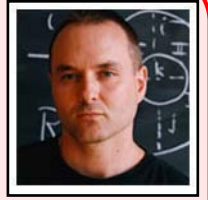


Sun. am

### The Importance of Teaching Math to Children

**John Mighton**, MA (Philosophy), PhD (Mathematics)

Founder and President of JUMP Math, Toronto, ON & Fellow of the Fields Institute for Research in the Mathematical Sciences, University of Toronto



John Mighton is a mathematician, author, playwright, and the founder of *JUMP Math*. He believes all children can learn to think mathematically and has set his sights on proving that: “Even the seemingly weakest students can succeed at math. It is a myth that only a few children are born with the ability to excel at, or enjoy, math or science.” Approaches to the teaching of math presently used in schools will be summarized with an eye to which are working and which need to be re-evaluated or modified. Besides being the author of 2 bestselling books, *The Myth of Ability* and *The End of Ignorance*, John Mighton is also an award-winning playwright and sees many connections between the arts and the sciences.

Sun. am

### Montessori Mathematics from Pre-school through Pre-calculus

**Lynne Lawrence**, BA, Mont Int Dip - AMI, FRSA

Executive Director of the Association Montessori Internationale (AMI), recognized as the gold standard for Montessori teacher training and schools worldwide



There is a capacity in every human being to reason and use logic, to think abstractly and symbolically. The Montessori educational approach to mathematics is based on the understanding that the human mind is ‘mathematical by nature.’ In Montessori schools, children come to understand abstract mathematical concepts through hands-on activities that allow them to work at their own pace, discover and explore concepts, and evaluate their progress. The result is a child who not only can do math but who thinks mathematically, enjoys it, and is able to apply this kind of thinking to everything he or she does. In this tour de force presentation, Lawrence will go from basic concepts like counting, through trigonometry and algebra, to introductory principles of calculus. This is a rare opportunity to see the totality of the Montessori approach to math instruction presented by one of the most influential figures in Montessori education.

Sun. pm

### Foundations for Success: Outreach Mathematics Activities for Aboriginal Students

**Melania Alvarez**, MA (Industrial Engineering), MA (Economics)

BC Education Coordinator, Pacific Institute for the Mathematical Sciences, Vancouver, BC



By expecting children to succeed, introducing new and exciting ways to teach mathematics, and promoting role models, the Pacific Institute for the Mathematical Sciences (PIMS) is making a significant difference in the way students view science and technology and their own mathematical ability. Alvarez’s work at PIMS involves developing, implementing, and assessing outreach activities that help aboriginal students improve their mathematical knowledge and thereby their access to higher education and better jobs. These activities are designed to transform the way students (especially aboriginal students) look at mathematics and empower them to see themselves as fully capable of succeeding at math.



## Brain Network Connectivity and Alterations in Disabilities and Pathologies

**Urs Ribary, PhD**

Professor & Endowed BC LEEF Leadership Chair in  
Cognitive Neuroscience In Childhood Health & Development. &  
Director, Behavioral and Cognitive Neuroscience Institute,  
Simon Fraser University, Vancouver



Sun. pm

Urs Ribary has used brain-imaging technologies including MEG (magnetoencephalography), EEG (electroencephalography), MRI (magnetic resonance imaging), and PET (positron emission tomography) extensively to study structural and functional network properties and dynamics underlying cognition and perception. This is important because to more fully understand human brain development, learning, and memory, we need to better understand the underlying brain networks and brain rhythms, and to better understand how brain areas are connected and communicate with each other.

Brain-imaging technologies provide a superb opportunity to study such neural networks during development and to study structural, functional, and temporal connectivity as a prerequisite for a normal trajectory of brain development and cognitive development. The talk will highlight the significance of brain network oscillations and dynamics. It will also demonstrate how brain networks can become slightly or severely dysrhythmic (in altered perception or cognition) and how brain network connectivity can fracture (when one loses consciousness).

## Minds, Brains, and Early Learning: How Infants 'Crack the Speech Code'

**Patricia Kuhl, PhD**

Bezos Family Foundation Endowed Chair in Early Childhood Learning, Co-Director,  
Institute for Learning and Brain Sciences, & Director, NSF Science of Learning Center (LIFE Center),  
University of Washington, Seattle



Mon. am

Pat Kuhl has convinced two Presidents (Clinton & Bush) and the world's richest person (Bill Gates) that the study of infants will change society's view of children and its approach to education. She is a Fellow of the American Academy of Arts and Sciences, and recipient of the Silver Medal of the Acoustical Society of America and of the Gold Medal of the American Institute of Physics.

Prof. Kuhl's seminal work has played a major role in demonstrating how early exposure to language alters the brain, and how early measures of the brain's responses to language predict the course of language development. As infants' ability to discriminate sound differences in their native language improves, their innate ability to discriminate all phonemes in all languages declines. This narrowing of infants' perceptual skills predicts children's rates of language growth later. Infants use computational skills to crack the speech code, but social interaction also plays a critical role. Thus, the 'social brain' may somehow 'gate' the computational mechanisms underlying language learning.

## Neuroimaging Studies of Reading and Interventions that Improve Reading

**Bruce McCandliss, PhD**

Patricia & Rodes Hart Professor of Psychology and Human Development,  
Vanderbilt University, Nashville, TN



Mon. am

What insight into why some children have dyslexia while others master reading easily can be gleaned from the anatomy, biochemistry, and function of the human brain? Work from three different levels of brain imaging will be discussed. The first level uses fMRI (functional magnetic resonance imaging) to understand brain activity when someone reads. The second looks at individual differences in the anatomical micro-structure of fiber tracts connecting brain regions using DTI (diffusion tensor imaging). The third uses ERP (event-related potentials) to look at brain activity at the speed at which we process information (in milliseconds) and how that brain activity changes with growing expertise. Individual brains differ in ways we can now measure and ways that are important for understanding individual differences in basic cognitive skills that serve as the foundation for the development of reading.



## Schedule & Abbreviated Talk Titles (Continued)

	Saturday, July 17, 2010	Sunday, July 18, 2010					
7:00 AM	<b>Registration &amp; Light Continental Breakfast</b>	<b>Registration &amp; Light Continental Breakfast</b>	7:00 AM				
8:00 AM	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“Creatively Helping Youths ‘Tame’ Anxiety &amp; Depression”</b> Jane Garland                 </td> <td style="width: 50%; padding: 5px;"> <b>“Reversing Disorders: Cellular &amp; Molecular Bases of Learning &amp; Memory”</b> Alcino Silva                 </td> </tr> </table>	<b>“Creatively Helping Youths ‘Tame’ Anxiety &amp; Depression”</b> Jane Garland	<b>“Reversing Disorders: Cellular &amp; Molecular Bases of Learning &amp; Memory”</b> Alcino Silva	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“JUMP Math: Anyone &amp; Everyone can Learn Math”</b> John Mighton                 </td> <td style="width: 50%; padding: 5px;"> <b>“Oxytocin &amp; Implications for Mental Health &amp; Illness”</b> Sue Carter                 </td> </tr> </table>	<b>“JUMP Math: Anyone &amp; Everyone can Learn Math”</b> John Mighton	<b>“Oxytocin &amp; Implications for Mental Health &amp; Illness”</b> Sue Carter	8:00 AM
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9:00 AM	Break	Break	9:00 AM				
9:15 AM	↓	↓	9:15 AM				
10:15 AM	<b>Refreshment Break</b>	<b>Refreshment Break</b>	10:15 AM				
10:45 AM	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“Implicit Biases are Learned &amp; can be Unlearned”</b> Mahzarin Banaji                 </td> <td style="width: 50%; padding: 5px;"> <b>“Early Skin-to-Skin Contact Enhances Newborn Development”</b> Nils Bergman                 </td> </tr> </table>	<b>“Implicit Biases are Learned &amp; can be Unlearned”</b> Mahzarin Banaji	<b>“Early Skin-to-Skin Contact Enhances Newborn Development”</b> Nils Bergman	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“Montessori Math for Pre-school through Pre-calculus”</b> Lynne Lawrence                 </td> <td style="width: 50%; padding: 5px;"> <b>“Enhancing Trust for Better Intergroup Relations”</b> John Dovidio                 </td> </tr> </table>	<b>“Montessori Math for Pre-school through Pre-calculus”</b> Lynne Lawrence	<b>“Enhancing Trust for Better Intergroup Relations”</b> John Dovidio	10:45 AM
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<b>“Montessori Math for Pre-school through Pre-calculus”</b> Lynne Lawrence	<b>“Enhancing Trust for Better Intergroup Relations”</b> John Dovidio						
11:45 AM	Break	Break	11:45 AM				
12:00 PM	↓	↓	12:00 PM				
1:00 PM	<b>Lunch with Speakers</b> a) Julien b) Silva	<b>Lunch with Speakers</b> c) Banaji, Dovidio, & Norenzayan d) Bergman, Carter, Feldman, & Meaney	1:00 PM				
2:30 PM	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“Differences across Cultures in Thinking &amp; Perception”</b> Ara Norenzayan                 </td> <td style="width: 50%; padding: 5px;"> <b>“Factors Regulating the Bond between Parents and Newborns”</b> Ruth Feldman                 </td> </tr> </table>	<b>“Differences across Cultures in Thinking &amp; Perception”</b> Ara Norenzayan	<b>“Factors Regulating the Bond between Parents and Newborns”</b> Ruth Feldman	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <b>“How Early Life Events Influence the Development of Stress Reactivity”</b> Tim Oberlander                 </td> <td style="width: 50%; padding: 5px;"> <b>“Foundations for Success: Outreach Math Activities for Aboriginal Students”</b> Melania Alvarez                 </td> </tr> </table>	<b>“How Early Life Events Influence the Development of Stress Reactivity”</b> Tim Oberlander	<b>“Foundations for Success: Outreach Math Activities for Aboriginal Students”</b> Melania Alvarez	3:00 PM
<b>“Differences across Cultures in Thinking &amp; Perception”</b> Ara Norenzayan	<b>“Factors Regulating the Bond between Parents and Newborns”</b> Ruth Feldman						
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3:30 PM	<b>Refreshment Break</b>	<b>Refreshment Break</b>	4:00 PM				
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<b>“Brain Network Connectivity and its Alterations in Disorders”</b> Urs Ribary	<b>“How Mothers’ Immune Responses Affect the Fetal Brain”</b> Paul Patterson						
5:00 PM	Break	<b>“What I learned in Class Today: Aboriginal Issues in the Classroom”</b> (Film & Panel Discussion)	5:30 PM				
5:15 PM	↓	<b>Gala Dinner &amp; Performance by SENSE Theater</b>	7:00 PM				
6:15 PM	↓		9:00 PM				

“For years I have seen people try to bring educators together with health specialists, or either with researchers. I have never seen any effort work as well as what you put together in Vancouver.”

- Michael Meaney

# Schedule & Abbreviated Talk Titles (Continued)

	Monday, July 19, 2010		Tuesday, July 20, 2010		
7:00 AM	Registration & Light Continental Breakfast		Registration & Light Continental Breakfast		7:00 AM
8:00 AM	"Mind, Brains, and Early Learning: How infants 'Crack the Speech Code'" Patricia Kuhl	"Adolescent Mental Health & Mental Health Care in Developing Countries" Stan Kutcher	"Creativity & Flow: Making Life & Learning more Enjoyable" Mihaly Csikszentmihalyi	"Becoming a 'People Person': Social-Emotional Development of Infants" Andrew Meltzoff	8:00 AM
9:00 AM	Break		Break		9:00 AM
9:15 AM					9:15 AM
10:15 AM	Refreshment Break		Refreshment Break		10:15 AM
10:45 AM	"Neuroimaging Studies of Reading & Interventions that Improve Reading" Bruce McCandliss	"Helping Children with Conduct Disorders Beat the Odds" Carolyn Webster-Stratton	"Developmental Origins of Health & Illness: Focus on Stress and Infection" Christopher Coe	"Experience Corps: Older Adults Helping Young Children" George Rebok	10:45 AM
11:45 AM	Break		Break		11:45 AM
12:00 PM			Lunch with Speakers h) Bauer, Bjork, Meltzoff, & Stickgold i) Barker, Coe, Oberlander, & Patterson j) Csikszentmihalyi & Rebok k) Kabat-Zinn		12:00 PM
1:00 PM	Lunch with Speakers e) Alvarez, Lawrence, & Mighton f) Garland, Kutcher, & Webster-Stratton g) Kuhl, McCandliss, & Ribary		Closing Plenary "Mindfulness-based Stress and Pain Reduction (MBSR)" Jon Kabat-Zinn		2:00 PM
3:00 PM	"Sleep, Memory, & Learning: The Value of a Good Night's Sleep" Robert Stickgold	"Learning & Memory in Development: How & Why they Change" Patricia Bauer			4:00 PM
4:00 PM	Break				4:15 PM
4:15 PM					
5:15 PM	Break				
5:30 PM	"Deciphering Dyslexia" (Film & Panel Discussion)				
7:00 PM					

"This is an excellent interdisciplinary conference. I like the way it used basic science research to speak to clinical practice (I am a child psychiatrist)."

"As a teacher of special ed at the elementary level (age 4-14) for 30 years, I found this conference to be wonderful!"

**Our previous meeting had a 98% Approval Rating !!**

98% reported...  
 learning a lot at our previous conference  
 they'd like to attend another conference in the series

100% reported...  
 the conference was well organized  
 staff was courteous & helpful  
 conference program was informational & well organized

People were particularly pleased with...  
 the choice of speakers  
 how interesting and relevant the sessions were  
 how interactive and engaging presentation were  
 scientific content that was easily understandable

## RESPECTING CULTURAL DIFFERENCES, IDENTIFYING and REDUCING UNCONSCIOUS BIASES



Sun. am

### The Human Mind and the Social World: Implicit Biases are Learned and can be Unlearned

**Mahzarin Banaji, PhD**

Richard Clarke Cabot Professor of Social Ethics, Department of Psychology, Harvard University

Prof. Banaji specializes on the *unconscious* mind and the ways in which preferences and prejudices toward social groups and stereotypes about them (gender, age, class, race/ethnicity, sexuality, nationality, & religion) are expressed without conscious awareness, control, or intention. Her work shows that such implicit biases are pervasive, predict behavior, and are held even by well-meaning people, which helps explain how well-meaning people can behave in ways that deviate from their own expressed wishes and conscious intent. Demonstrations and hands-on exercises will illustrate such unconscious stereotyping and also its malleability. Implicit biases are learned and can be modified through experience. This enables communities, governments, and organizations to develop strategies for change. Implicit biases are *not* amenable to change from simply willing them away, yet they are quite malleable in the face of appropriate interventions. The work on implicit biases has major implications for questions of individual responsibility and social justice in democratic societies and has been of great interest to the legal profession.



Sun. am

### Thinking Across Cultures: What's Variable, What's Universal, and Implications for a Culturally Diverse World

**Ara Norenzayan, PhD**

Associate Professor, Department of Psychology, &

Co-Director of the Centre for Human Evolution, Culture, and Cognition, University of British Columbia, Vancouver

People in different cultures can believe and value different things. But do people perceive, categorize, and reason differently as well? Until recently, little was known about this question since most research on human thinking was done in N. America and Europe – a narrow slice of humanity. In recent years, cross-cultural researchers have begun to examine thinking in diverse cultural groups in Asia, the Middle East, and elsewhere. Although there are many similarities across cultures in thinking, people exposed to different cultures often rely on different strategies to solve the same problems. Possible social, historical, and ecological explanations for cultural differences in thinking will be examined. Implications and dilemmas these findings raise for culturally diverse civil societies such as Canada and the US will be explored. Born and raised in Beirut, Lebanon, where many cultural fault lines intersect, Prof. Norenzayan is fluent in English, French, Arabic, and Arabic, and his native Armenian.



Sun. am

### The Challenges of Intergroup Interaction: Enhancing Trust for Better Intergroup Relations

**John Dovidio, PhD**

Professor of Psychology, Yale University, New Haven, CT

This presentation will explore the nature of subtle and often unintentional biases in actions and in interpreting the intentions of others in intergroup interactions. Whereas much research on intergroup relations has focused on negative intentions in intergroup behavior, this talk will illustrate how well-intentioned people may be subtly biased in ways that contribute to intergroup misunderstandings and erode trust. The second part of the talk will describe how majority group members' attempts to influence the nature of their interactions with minorities perpetuate, often without conscious intent, intergroup inequalities.



## CHILD and ADOLESCENT MENTAL HEALTH

### What's Right with You! Creatively Helping Youths "Tame" their Worry Dragons

Jane Garland, MD, FRCPC

Clinical Professor of Psychiatry, Faculty of Medicine, University of British Columbia, & Clinical Head, Mood and Anxiety Disorders Clinic, BC Children's Hospital, Vancouver

Sat. am

What do fairy tales, family kindness projects, and forest walks have in common? They are all part of a creative cognitive and behavioral approach to helping children and families develop more effective emotion regulation. Our tendencies to become worried, panicked, depressed, angry, and to cope ineffectively are related to the tendency of our immense imaginative capacities to be hijacked by our survival instincts. Luckily, we have extraordinary natural capacities to solve these problems, evident throughout human evolution in universal storytelling through word, music and movement, constructive activities, and play.

Creative, connected, community-based solutions are often more engaging, practical, and cost-effective than therapy settings. In programs such as "Taming Worry Dragons," children develop their own tool bag of coping skills, discover their unique strengths, and tap into the courage to engage in their life quest, moving toward rewarding and meaningful goals despite the challenge of anxiety and depression.

### Adolescent Mental Health and Mental Health Care in Developing Countries

Stan Kutcher, MD, FRCPC, CAH

Professor and Sun Life Financial Chair in Adolescent Mental Health, &

Director, WHO Collaborating Centre for Mental Health Training and Policy, Dalhousie University, Halifax, NS

Dr. Kutcher has worked with governments and international organizations to develop innovative training programs for mental healthcare and has helped write a number of national mental health policies and plans – such as for: peer education for mental health and peace building in Uganda, developing national mental health policies and plans in Grenada and Guyana, developing community-based mental healthcare in Brazil, and developing and delivering a mental-health clinical-research training and capacity-building program in Cuba. Dr. Kutcher has served as Assoc. Dean of Internat'l Medical Dev. and Research in Dalhousie's Faculty of Medicine, Chair of the Psychiatry Dept., and led the development of Dalhousie's Brain Repair Centre and its Internat'l Health Office. His awards include being chosen one of the top 20 innovators in Atlantic Canada by *Atlantic Progress Magazine*, named a "Best Doctor" in Canada, and a Fellow of the Canadian Acad. of Health Sciences.

Mental disorders onset primarily before age 25 years and create substantial short- and long-term disability, and lead to early death. The teen years are characterized by a substantive burden due to mental disorders. This talk will address the adolescent-specific aspects of brain development, the epidemiology and burden of mental disorders in this age group, the challenges of meeting these needs through the health sector, human rights implications and some specific issues more commonly seen in developing countries.



Mon. am

### Helping Children with Conduct Disorders Beat the Odds

Carolyn Webster-Stratton, MSN, MPH, PhD

Professor and Director of Parenting Clinic, University of Washington, Seattle



For 25 years, Prof. Webster-Stratton has been evaluating the effectiveness of intervention programs for promoting social and emotional competence, school readiness skills, and preventing conduct problems in high-risk populations. She developed the acclaimed *Incredible Years* Series (with separate training programs, intervention manuals, and DVDs for therapists, teachers, and group leaders) to help parents and teachers provide young children (0-12 years) with a strong emotional, social, and academic foundation.

Conduct disorders are the most expensive mental health disorder in N. America. Many young children are highly aggressive, oppositional, impulsive, inattentive, and/or difficult to parent or teach. Longterm studies show such children are at high risk for developing conduct disorders that lead to delinquency, violence and/or substance abuse. Prof. Webster-Stratton will present an overview of her evidence-based, award-winning prevention and treatment programs, including research outcomes and video examples. These interventions have been translated into many languages and are used in 15 countries. They have received many awards including the 1997 National Mental Health Lela Rowland Prevention Award for Best Mental Health Prevention Program and the Office of Juvenile Justice Delinquency Prevention "Blueprint" Award.

Mon. am

## PROMOTING JOY, RESILIENCE, and CREATIVITY



Tues. am

### Creativity and Flow: Making Life and Learning more Enjoyable

**Mihaly Csikszentmihalyi, PhD**

C.S. and D.J. Davidson Professor of Psychology and Management, Claremont Graduate University, Claremont, CA

Mihaly Csikszentmihalyi is a much sought-after speaker and the author of 19 books (many of them best sellers), including *Beyond Boredom and Anxiety* (still in print after 5 editions), *Flow: The Psychology of Optimal Experience* (selected by 4 book clubs & translated into 23 languages), *Creativity* (selected by 4 book clubs & translated into 5 languages), and *Good Business* (translated into 9 languages).

He was born in Italy where his father was serving as a consul for the Hungarian government. During WWII as a pre-teen child, he witnessed the crash of European society and wondered why grown-ups had not found a better way to live. The quest to understand how to improve life led him through religion, philosophy, literature and art, before coming to rest on psychology.



He came to the US in 1956 with \$1.25 to his name and almost no English. For his ESL class he wrote the first of two autobiographical short stories that were published in the *New Yorker*. He taught at the University of Chicago for 30 years, eventually becoming Chairman of its Psychology Department.

Children are born with an enormous desire to learn. Unfortunately, formal schooling has never been successful in leveraging this desire. Research on the *flow experience* has begun to offer ideas for how to make learning more enjoyable.

### The Experience Corps® Program: Impacting Young Children's Learning and Behavior through High-Intensity Older Adult Volunteering

**George Rebok, PhD**

Professor, Department of Mental Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore



Prof. Rebok is internationally recognized for his research on the impact of community-based preventative interventions on children and older adults, especially Experience Corps, which places older volunteers in high-impact roles in public elementary schools. Experience Corps brings the time, experience, and wisdom of older adults to bear on improving academic and behavioral outcomes of K-3rd grade children in public schools. Data show the program is beneficial, high impact, and cost-effective.

Tues. am



### Mindfulness-based Stress and Pain Reduction

**Jon Kabat-Zinn, PhD**

Professor of Medicine Emeritus, Founding Director of the Stress Reduction Clinic, & Founding Director of the Center for Mindfulness in Medicine, Health Care, & Society, Univ. of Mass. Med. School, Worcester, MA

Jon Kabat-Zinn founded and for many years directed the Center for Mindfulness in Medicine, Health Care, and Society and the renowned Mindfulness-Based Stress Reduction (MBSR) Clinic at UMMS. He received his Ph.D. in molecular biology from MIT in the lab of Nobel Laureate, Salvador Luria. He is often asked to speak and is the author of several best-selling books, including *Full Catastrophe Living; Wherever You Go, There You Are; The Inner Work of Mindful Parenting* (co-authored by Myla Kabat-Zinn); & *The Mindful Way through Depression: Freeing Yourself from Chronic Unhappiness* (co-authored with Williams, Teasdale, and Segal). His books have been published in over 30 languages.

Dr. Kabat-Zinn will review the work on bringing mindfulness meditation practices into the mainstream of medicine and mental health through mindfulness-based stress reduction (MBSR). He will describe specific clinical applications and outcomes across several medical and psychological conditions. He will also describe mindfulness-based cognitive therapy (MBCT), its use in relapse prevention for depression, and the similarities and differences between MBSR and MBCT. His talk will address optimizing the therapeutic relationship, and the cultivation of greater self-awareness, self-compassion, and emotional balance.



Tues. pm

# CONFERENCE REGISTRATION Worksheet

your name: \_\_\_\_\_

Early Bird Rate before Feb. 1, 2010	Regular Rate Feb. 1 to June 1	Late Registration after June 1, 2010
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## FULL CONFERENCE REGISTRATION – ALL DAYS (check the box that applies)

Regular Rate <input type="checkbox"/>	\$495 + tax = \$519.75	\$595 + tax = \$624.75 <input type="checkbox"/>	\$650 + tax = \$682.50 <input type="checkbox"/>
Scholarship Rate (family income <\$100,000) <input type="checkbox"/>	\$250 + tax = \$262.50	\$300 + tax = \$315.00 <input type="checkbox"/>	\$350 + tax = \$367.50 <input type="checkbox"/>

## SINGLE DAY REGISTRATION

Which day? \_\_\_ FRI, July 16 \_\_\_ SAT, July 17 \_\_\_ SUN, July 18 \_\_\_ MON, July 19 \_\_\_ TUES, July 20

Regular Rate <input type="checkbox"/>	\$400 + tax = \$420.00	\$500 + tax = \$525.00 <input type="checkbox"/>	\$550 + tax = \$577.50 <input type="checkbox"/>
Scholarship Rate (family income <\$100,000) <input type="checkbox"/>	\$200 + tax = \$210.00	\$250 + tax = \$262.50 <input type="checkbox"/>	\$275 + tax = \$288.75 <input type="checkbox"/>

COST OF YOUR REGISTRATION = \_\_\_\_\_

## GALA CONFERENCE DINNER at 7:00 pm on Sunday, July 18<sup>th</sup> with a Theater Performance by Children with Autism and Child Actors

Regular Rate <input type="checkbox"/>	\$60 + tax = \$63.00	\$75 + tax = \$78.75 <input type="checkbox"/>	\$90 + tax = \$94.50 <input type="checkbox"/>
Scholarship Rate (family income <\$100,000) <input type="checkbox"/>	\$35 + tax = \$36.75	\$45 + tax = \$47.25 <input type="checkbox"/>	\$60 + tax = \$63.00 <input type="checkbox"/>

Please let us know if you have any dietary restrictions: \_\_\_\_\_ DINNER COST = \_\_\_\_\_

## LUNCHESES WITH SPEAKERS

A special feature of this conference is the opportunity to sit and speak with, and ask questions of, world-famous speakers in a small, relaxed setting over a lunch with no more than 30 conference participants.

Cost per lunch is \$35 + tax = \$36.75. Check the lunch(es) you would like to attend (only one per day).

- SATURDAY** lunches with: \_\_\_ Gilles Julien \_\_\_ Alcino Silva
- SUNDAY** lunches with: \_\_\_ Mahzarin Banaji, John Dovidio, & Ara Norenzayan  
\_\_\_ Nils Bergman, Sue Carter, Ruth Feldman, & Michael Meaney
- MONDAY** lunches with: \_\_\_ Melania Alvarez, Lynne Lawrence, & John Mighton  
\_\_\_ Jane Garland, Stan Kutcher, & Carolyn Webster-Stratton  
\_\_\_ Patricia Kuhl, Bruce McCandliss, & Urs Ribary
- TUESDAY** lunches with: \_\_\_ Patricia Bauer, Robert Bjork, Andrew Meltzoff, & Robert Stickgold  
\_\_\_ David Barker, Chris Coe, Tim Oberlander, & Paul Patterson  
\_\_\_ Mihaly Csikszentmihalyi & George Rebok  
\_\_\_ Jon Kabat-Zinn

You can also register on site for any lunch that is not already full.

Please let us know if you have any dietary restrictions: \_\_\_\_\_ . # of LUNCHESES: \_\_\_ x \$36.75 = \_\_\_\_\_

NOTE ALL PRICES ARE IN CANADIAN FUNDS

TOTAL (REGISTRATION, DINNER, & LUNCHESES) = \_\_\_\_\_

# Registration Form: Brain Development & Learning 2010

PLEASE PRINT CLEARLY – USE ONE REGISTRATION FORM PER PERSON

\_\_\_\_\_  
Last Name First Name Initials Title

\_\_\_\_\_  
Organization Name (if applicable)

\_\_\_\_\_  
First line of Mailing Address

\_\_\_\_\_  
Second line of Mailing Address

**I would like to get Continuing Education Credits**

Field: \_\_\_\_\_

\_\_\_\_\_  
City\* Prov/State Postal Code Country

\_\_\_\_\_  
Telephone Number Fax Number E-mail Address

\* If you live in or near Vancouver, might you be able to offer housing to an out-of-town conference participant? \_\_\_\_\_ If yes, we'll contact you.

**The full registration fee** covers Friday through Tuesday (5 days), a certificate of attendance, continuing education credits, conference materials including syllabus & readings, a light continental breakfast Saturday through Tuesday, conference reception, and morning & afternoon refreshment breaks. **Single day registrations** are also available.

Instead of processing a great many requests for **scholarships**, we are experimenting this year with offering a blanket scholarship to all participants whose household income is under \$100,000 per year. **We will take you at your word about whether you qualify, and hope and trust you will deal honestly with us.**

**Please use the reverse side of this form to calculate your registration fee. You will also find the fees for the Gala Conference Dinner and the Lunches with Speakers there. PLEASE SUBMIT BOTH PAGES.**

**This Registration Form is online at:** [http://www.interprofessional.ubc.ca/bdl\\_subpages/registration.html](http://www.interprofessional.ubc.ca/bdl_subpages/registration.html)

## FOUR WAYS TO REGISTER!

**REGISTER ONLINE:** [www.interprofessional.ubc.ca](http://www.interprofessional.ubc.ca)

**FAX (credit cards only):** 604 822-4835

**PHONE (credit cards only):** 604 827 3112 Call toll-free phone in Canada & USA: 1-877-328-7744

**MAIL:** Registration, UBC Interprofessional Continuing Ed., Room 105, 2194 Health Sciences Mall, Vancouver, BC Canada V6T 1Z3

**Registration will CLOSE when the conference is full. REGISTER EARLY.**

**Method of Payment:**  Cheque  VISA  MasterCard *We do not accept American Express.*

\_\_\_\_\_  
Credit card number

\_\_\_\_\_  
Exp Date

I authorize UBC to charge my account for:

\$ \_\_\_\_\_ Please initial: \_\_\_\_\_

\_\_\_\_\_  
Name of Cardholder (please print)

**(SEE REVERSE OF THIS FORM TO CALCULATE)**

**SUBMIT BOTH SIDES.**

**# IN9556**

\_\_\_\_\_  
Signature of Cardholder

**If paying by cheque**, please make your cheque payable to UBC in Canadian dollars and mail to the address above.

Full refunds minus a \$50 processing fee will be provided for cancellations prior to May 1, 2010. For cancellations on or after May 1, the refund rate is 50%.

Registration for a lunch with speakers can be done on site at the conference. HOWEVER seating is limited so we suggest you make reservations for the lunch(es) you wish to attend in advance.

Note: The conference dinner plus evening entertainment and lunches with speakers are subsidized by our sponsors. (The cost to us for the dinner plus performance is over \$150 per person. The cost to us for the lunches is \$50 per person.)

## Additional Conference Events

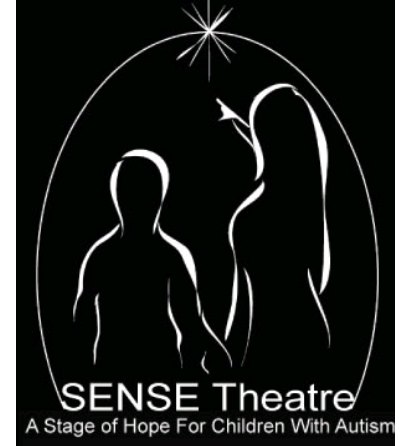
### Helping Children with Autism through Theater

**SENSE Theater is an intervention program for children with autism.** It is a bridge between art and science, utilizing well-established behavioral intervention, peer and video modeling, and theatrical techniques. It has met with remarkable success with children in northern California. We would like to see if it might be helpful to children here, in Vancouver.

A week before our conference, the Developer and Executive Director of SENSE Theater (Blythe Corbett, a clinician and neuroscientist at the MIND Institute of the University of California – Davis, who before becoming an academic was a professional actor), along with the Stage Director and Musical Director, will come up to Vancouver to work with local children with autism and local child actors for a solid week.



The children will then put on the performance they have been rehearsing for us at the Gala Dinner for the conference, Sunday evening, July 18, at 7:00 pm.



### FILM & DISCUSSION: *What I Learned in Class Today: Aboriginal Issues in the Classroom*

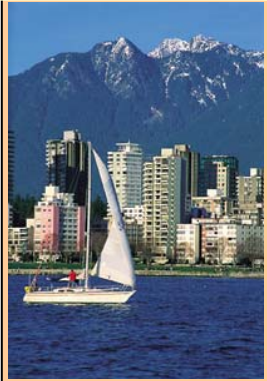
Aboriginal students often feel singled out in the classroom, expected to speak for all Aboriginals, and often encounter unflattering stereotypes and lack of sensitivity to their feelings in class. Such experiences affect Aboriginal students' ability to function in school and do their coursework. This remarkable film by two Aboriginal UBC graduates, Karrmen Crey and Amy Perrault, provides interviews they collected with Aboriginal students talking about situations that have made them feel uncomfortable or worse, and why, and sharing their reflections on the dynamics underpinning such situations. This is an important film with implications to all situations where Aboriginals and non-Aboriginals interact. The filmmakers plus First Nation elders will lead a discussion of the film immediately afterwards on Sunday, July 18, at 5:30.



### FILM & DISCUSSION: *DECIPHERING DYSLEXIA*

*Deciphering Dyslexia* is an award-winning Knowledge Network documentary that brings a human face to dyslexia by profiling four individuals and their families. Their stories plus the expert commentary of top scientific researchers stress early, evidence-based intervention and help to dispel the stigma associated with not being able to read. The film has received 2 international medical media awards (prestigious Freddie awards) one in *Special People* (disability) category and also the best overall consumer documentary (chosen from over 1,000 entries). It will be featured at the UNESCO-sponsored World Forum on Dyslexia in Brussels in Feb. 2010. A parent and researcher who appear in the documentary plus two of our speakers will lead a discussion immediately after the film is shown at our meeting on Mon. July 19, at 5:30.

## CONFERENCE HOTEL: HYATT REGENCY



HYATT



### Special Conference Peak Season Rates:

Standard Room \$229 / night  
same price for 1 or 2 people  
for a 3<sup>rd</sup> person, add only \$35 per night

Thus for 2 people, the per person cost is only \$115 / night,  
and for 3 people, the per person cost is only \$88 / night.

Given that the regular peak season room rate is close to \$300/night,  
this is a substantial discount.

These rates are in Canadian dollars but do not include taxes.

These rates are available for up to 3 days prior to, and 3 days after, the meeting as well.

**It's easy to book online: <https://resweb.paskey.com/go/ubcbraindevelopment>**

You can also call: **Toll-Free in Canada & USA: 1-888-421-1442**

**Overseas: 402-592-6464**

**mention "UBC Brain Development" Meeting to obtain our reduced rates**

★ **Hyatt Regency Hotel**  
**Burrard Street, Vancouver BC V6C 2R7**



### For Assistance in finding persons with whom to share a hotel room or rides, or in finding alternate accommodation.....

We have set up a website to aid people in finding roommates or rideshares, and where people can offer and look for local accommodations in the homes of local attendees.

**CONTACT UBC Interprofessional Continuing Education** for information on less expensive housing options nearby, rideshares, and/or to find out about staying with another conference participant.

Call toll-free phone in Canada & USA: 1- 877- 328 - 7744 in Vancouver or call: 604 822 - 6156

Email: [ipconf@interchange.ubc.ca](mailto:ipconf@interchange.ubc.ca)

**Please be aware, though, that we must book enough rooms at the Hyatt, or the conference incurs a substantial additional charge.** The Hyatt is a wonderful, 4-star hotel, certainly the most convenient place for the meeting, plus being close to parks, the beach, shopping, and restaurants. People love staying there.

If you can attend only one conference this year, you'll want it to be this one:

"The speakers are exceptional, the organization of the conference supreme, the spirit of the whole conference is great; this is the best conference I ever attended."

"Awesome organization! Awesome program! Helpful, friendly people! A wonderful experience!"