

Curriculum Vitae



FAMILY, GIVEN NAMES: IRIKI, Atsushi
入來 篤史

DATE OF BIRTH, GENDER: 3 June 1957, Male

PLACE OF BIRTH: Tokyo, Japan

REGISTERED DOMICILE: Kagoshima, Japan

NATIONALITY: Japanese

AFFILIATION: Laboratory for Symbolic Cognitive Development,
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BIOGRAPHICAL SKETCH

Atsushi IRIKI received his Ph.D. in Neuroscience from Tokyo Medical and Dental University in 1986. He held research associate positions at the Tokyo Medical and Dental University and then at The Rockefeller University (USA). He joined the faculty of Toho University Medical School as an assistant professor and then as an associate professor in Physiology (1991-1999). In 1999, he returned to Tokyo Medical and Dental University as a full professor and chairman of Cognitive Neurobiology. Atsushi IRIKI is now a Head of Laboratory for Symbolic Cognitive Development at RIKEN Brain Science Institute since 2004. He is currently a visiting professor of University College London (UK) and Nanyang Technological University (Singapore), an adjunct professor of Keio University, a research professor of Kyoto University, a senior fellow of the Canadian Institute for Advanced Research (Canada), and the president and CEO of RIKEN ANALYSIS Corporation (RIKEN Venture, Tokyo, Japan).

The origin of my interest to initiate my scientific carrier was to understand brain mechanisms of human spoken language. However, at that time in the late 1970's, it was generally regarded far out of the reach of the natural sciences. Therefore, I decided to start with studying sensori-motor mechanisms of the oro-facial organs (which are effectors of speech actions). Being a dental student, I first studied neural mechanisms of tooth-pain and its descending control and discovered effects that endogenous opioids, which were thought to mediate Chinese therapeutics, were in part responsible for the effects of electroacupuncture analgesia on tooth pain. As a graduate student, I discovered the "rhythm generator" in the brainstem controls rhythmical mastication-like jaw movements, directly driven by cortico-bulbar projection neurons in the "cortical masticatory area". Later I discovered in that this coricobulbar projection is reorganized in its cortical location and brainstem projection during postnatal development, transitioning from controlling sucking to chewing. This made me realize the importance of the cortical plasticity for learning skillful oro-facial movements. As postdoctoral researcher in US, I identified that associative LTP (long-term potentiation) is induced when thalamocortical and corticocortical (arising from primary somatosensory cortex) afferents converge onto the motor cortical neurons in the superficial layers. After returning to Japan, while studying somatosensory processing in the monkey postcentral gyrus, I realized that in some neurons in the banks of the intraparietal sulcus, somatosensory responses were modulated by visual input related to monkey's own body. Thus, I imagined that this somatosensory cortex might store subjective images of the body parts by integrating somatosensory and visual information. This inspired to consider if we could train monkeys to use tools to empirically observe the mental state of the subjective introspections. Although generally believed not possible, I eventually accomplished this task and was one of the first to train monkeys to use tools in a laboratory setting. Thereafter, I discovered that monkeys can learn to generate vocalizations for specific tools, also make small modifications to those innate vocalizations, and this training was associated with changes in cortical structure. These discoveries led to novel hypothesis on understanding symbolic communication and language, and brought me back to my original interest.

Now I am trying to uncover evolutionary precursors of human higher cognitive functions grounded onto physical morphologies and patterns of structured bodily actions, based on behavioral and neurophysiological analyses on chronic macaque monkeys, which were trained to use tools and other high-tech apparatus. By sharing these machineries among individuals, I extrapolate the mechanisms to constitute bases of communicatory functions, and eventually understand neural mechanism to form intellectual and altruistic society to comprise humanistic civilization environment. Further, I am aiming at elucidating neurobiological mechanisms, through the development of Marmoset experimental models, of evolutionary as well as developmental (*Evo-Devo-Eco*) processes that give rise to symbolic cognitive functions subserving inference, metaphysical thoughts, etc. that characterize human intellectual ecology, through the mechanisms of the *Triadic (environmental, neural, cognitive) Niche-Construction*.

EDUCATION

1976-1982 Faculty of Dentistry, Tokyo Medical and Dental University.
1982-1986 Graduate School, Tokyo Medical and Dental University.

DEGREES

D.D.S. 1982 Dentistry; Tokyo Medical and Dental University
Ph.D. 1986 Neuroscience; Tokyo Medical and Dental University
D.M.Sc. 1991 Medicine; Toho University

APPOINTMENTS

1986-1990 Research Associate, Department of Physiology, Faculty of Dentistry, Tokyo Medical and Dental University.
1987-1988 Guest Investigator, The Rockefeller University, New York, USA.
1988-1990 Research Associate, The Rockefeller University, New York, USA.
1990-1991 Research Associate, Department of Physiology, Toho University School of Medicine.
1991-1997 Assistant Professor, Department of Physiology, Toho University School of Medicine.
1995-1998 PRESTO Researcher, Japan Science and Technology Corporation.
1996-2001 Project Leader, Research for the Future Program, Japan Society for the Promotion of Science.
1997-1999 Associate Professor, Department of Physiology, Toho University School of Medicine.
1999-2005 Professor and Chairman, Section of Cognitive Neurobiology, Tokyo Medical and Dental University.
2002-2005 Director, Instrument Analysis Research Center for Science, Tokyo Medical and Dental University.
2004-present Head of Laboratory for Symbolic Cognitive Development, RIKEN Brain Science Institute.
2005-2010 Adjunct Professor, Tokyo Medical and Dental University.
2005-2008 Visiting Senior Fellow, University College London, UK.
2006-present Member, Science Council of Japan.
2006-2009 Group Director, Intellectual Brain Function Research Group, RIKEN Brain Science Institute.
2008-2011 Adjunct Professor, The University of Tokyo.
2009-present Adjunct Professor, Keio University.
2009-present Adjunct Professor, Keio-RIKEN Centre for Human Cognition.
2009-present Senior Team Leader, RIKEN Brain Science Institute.
2010-2012 Senior Fellow, Center for Research and Development Strategy, Japan Science and Technology Agency.
2010-present Visiting Professor, University College London, UK.
2012-present Research Professor, Kyoto University.

2012-2013	Lee Wee Nam Visiting Professor, Nanyang Technological University, Singapore.
2013-present	Adjunct Professor, Keio University Global Research Centre of Logic and Sensibility.
2014-present	Visiting Professor, Nanyang Technological University, Singapore.
2015-present	President and CEO, RIKÆNALYSIS Corporation (RIKEN Venture Company, Tokyo).
2016-present	Senior Fellow, Canadian Institute for Advanced Research, Toronto, Canada.

SOCIETIES

Program Committee Member	Society for Neuroscience (Washington DC)
International Affairs Committee Member, past	Society for Neuroscience (Washington DC)
Global Advocacy Initiative Member	International Brain Research Organization (Paris), past
Regional Representative & Executive Committee, past	International Neuropsychological Symposium
Advisory Council Member, past	International Association for the Study of Attention and Performance
Faculty Member	Faculty of 1000 Biology (London)
Directors Board Member	Japan Neuroscience Society
Outreach Committee Chair, past	Japan Neuroscience Society
International Relations Committee Chair, past	Japan Neuroscience Society
President	39 th Annual Meeting of Japan Neuroscience Society
Council Member, past	The Physiological Society of Japan

JOURNALS

Editor-in-Chief	Neuroscience Research (Japan Neuroscience Society)
Co-Editor	Experimental Brain Research
Associate Editor	Open Science, The Royal Society (London)
Editorial Board, past	Philosophical Transaction B of The Royal Society (London)
Editor, ad hoc	The National Academy of Sciences of the U.S.A.
Editorial Advisory Board	Progress in Neurobiology
Editorial Board	Open Mind: Discoveries in Cognitive Science
Editorial Board, past	Cognitive Neuroscience
Review Editor	Frontiers in Integrative Neuroscience
Review Editor	Frontiers in Physiology
Review Editor	Frontiers in Neuroanatomy
Review Editor	Frontiers in Psychology, Language Sciences

ADMINISTRATIONS

Main Scientific Advisor	OECD, Lifelong Learning Network (Paris)
Governing Board Member	International Council for Laboratory Animal Science (Brussels)
ICLAS Committee, Deputy Chair	Science Council of Japan
Neuroscience Committee Deputy Chair, past	Science Council of Japan
Expert Advisor	MEXT, Brain Science Council, past
Expert Advisor	MEXT, Central Council for Education, past
Expert Advisor	MEXT, Council for Science and Technology, past
Advisory Board Member	JSPS, Frontier of Science Symposium
Steering Committee Member	Kyoto University, Primate Research Institute, past
Steering Committee Member	Kyoto University, Wildlife Research Center Sanctuary

HONORS / AWARDS

2002	Neuroscience Research Excellent Paper Award (Japan Neuroscience Society)
2004	The Golden Brain Award (The Minerva Foundation, Berkeley CA, U.S.A.)
2006	Excellent Paper Award (Society of Instrument and Control Engineers, Japan)
2008	The Creative Research Award (Neurocreative NPO, Tokyo, Japan)
2009	The Otto-Creutzfeldt-Lecture (German Neuroscience Society, Berlin)
2013	The Lee Wee Nam Lecture (Nanyang Technological University, Singapore)

INVITED TALKS

1. 4th Neural Control of Movement Annual Meeting, *Symposium*, “Somatosensory cortex and motor control “ Maui HI, USA (17 April, 1994).
2. 9th Neural Control of Movement Annual Meeting, *Symposium*, “Taking sensorimotor transformation to higher levels” Kauai HI, USA (14 April, 1999).
3. Canadian-Japanese Physiological Societies Winter Meeting, *Symposium*, “Cortical mechanisms underlying monkey tool-use” Lake Louise, Canada (22 January, 2000).
4. International Neuropsychology Symposium, *Symposium*, “Tool-use-evoked plasticity of parietal receptive fields”, Grado, Italy (29 June, 2001).
5. Experimental Psychology Society London Meeting, *Symposium*, “Plasticity and extensibility of body schema with tool use”, London, UK (3 January, 2002).
6. Oxford University, *Cognitive Neuroscience Seminar*, “ Neurobiology of higher cognitive functions; from tool-use to symbol manipulation”, Oxford, UK (7 January, 2002).
7. 3rd International Multisensory Research Forum, *Symposium*, “Tool use-induced plasticity of visuo-somatosensory integration in the monkey parietal cortex”, Geneva, Switzerland (26 May, 2002).
8. 8th International Conference on Functional Mapping of the Human Brain, *Presidential Symposium*, “ Neural basis of body image in the parietal cortex”, Sendai, Japan (3 June, 2002).
9. 5th Japanese-American Frontiers of Science Symposium, *Symposium*, “Biological bases of the ‘sense of self’ learned and stored in the parietal cortex”, Irvine CA, USA (7 December, 2002).
10. Queens University, *Brain and Behavior Lecture*, “Spontaneous vocal ‘naming’ of tools and food by Japanese monkeys” Kingston, Canada (26 March, 2003).
11. Queens University, *Neuroscience Seminar* “Cortical Mechanisms of Tool-Use as an Evolutionary Precursor of Symbol Manipulation” Kingston, Canada (26 March, 2003).
12. Queens University, *Physiology Seminar* “Cortical mechanisms subserving formation and modification of body-centered coordinates” Kingston, Canada (27 March, 2003).
13. Cognitive Neuroscience Meeting, *Symposium* “Cognitive neurobiology of monkey tool-use” New York NY, USA (1 April, 2003).
14. International symposium on touch, neural plasticity and body representation, *Symposium*, “Intraparietal bimodal neurons delineating exterior space through intimate actions”, London, UK (25 April, 2003).
15. Nobel Conference, Neural Control of Skilled Hand Movements: Cognitive and Computational Aspects, *Conference*, “Parietal mechanisms subserving tool-use” Stockholm, Sweden (13 June, 2003).
16. University of Parma, *Seminario*, “Tool as a symbol of intentionality” Parma, Italy (17 June, 2003).
17. A Fyssen Colloquium, From Monkey Brain to Human Brain, *Colloquium*, “ Peri-personal space in monkeys and its modifications with tool use” Saint Germain en Laye, France (22 June, 2003).
18. McGovern Institute Symposium, Mechanisms underlying perception, action & mind, *Symposium*, “Parietal mechanisms subserving monkey tool-using behaviors” Cambridge MA, USA (20 October, 2003).
19. Keio Medical Science Prize Symposium, *Symposium*, “A prototype of homo-faber: an insight from neurobiology of tool-using monkeys” Tokyo, Japan (4 December, 2003).
20. Erasmus University, *Neuroscience Seminar*, “A prototype of ‘homo-faber’: silent precursor of human intelligence in monkey tool-user’s brain.” Rotterdam, The Netherlands (2 February, 2004).
21. International Neuropsychology Symposium, *Organizer*, “Prefrontal-intraparietal interactions subserving complex tool-using actions in monkeys” Porto Heli, Greece (22 June, 2004).
22. Dartmouth College Summer Institute in Cognitive Neuroscience, *Faculty*, “A silent precursor of

- human intelligence in the tool-using monkey brain.” Hanover NH, USA (7 July, 2004).
23. 112th American Psychological Association Annual Convention, *Symposium*, “Parietal mechanisms of plasticity and extensibility of body schema with tool use in monkeys.” Honolulu HI, USA (28 July, 2004).
 24. l’Ecole Normale Supérieure, *Conference*, “Silent precursors of human intelligence in monkey tool-user’s brain” Paris, France (17 May, 2005).
 25. Action – Prediction, *Symposium* “Multisensory integration in the monkey parietal cortex for mentalizing meaningful actions of the self and others” Paris, France (18 May, 2005).
 26. Neuroscience 2005 Satellite Symposium- Unraveling higher brain functions: recent progress with animal models, *Symposium*, “Neurobiology of human intelligence – perspectives through tool-using monkey brain” Yokohama, Japan (25 July, 2005).
 27. JSPS-UCL Large-scale Symposium-Cognition and Action, *co-Organizer* “Silent precursors of human intelligence in monkey tool use actions” London, UK (8 September, 2005).
 28. 5th Picower-RIKEN Neuroscience Symposium, *Symposium*, “Cortical mechanisms enabling monkeys to use tools”, Cambridge MA, USA (28 March, 2006).
 29. International Symposium on Social Cognition as Higher Brain Function. *Symposium*, “Cortical mechanisms for cognition of modified body images upon tool-use.” Tokyo, Japan (1 August, 2006).
 30. Princeton University, *Neuroscience Seminar*, “Silent precursor of human intelligence in tool-using monkey brain.” Princeton NJ, USA (8 February, 2007).
 31. New York University, *Neuroscience Colloquia*, “Neural origins of humanity in well-behaved monkeys using tools.” New York NY, USA. (12 February, 2007).
 32. City University New York, *Special Colloquium*, “Neural origins of humanity in well-behaved monkeys using tools.” New York NY, USA (13 February, 2007).
 33. Columbia University, *Special Seminar*, “The neural origin and implications of imitation, mirror neurons and tool use”. New York NY, USA (14 February, 2007).
 34. Stanford University, *Neuroscience Colloquia*, “Neural origins of humanity in well-behaved monkeys using tools.” Stanford CA, USA (16 February, 2007).
 35. California Institute of Technology, *Neuroscience Seminar*, “Neural origins of humanity in well-behaved monkeys using tools.” Pasadena CA, USA (19 February, 2007).
 36. Institute Para Limes, Conceptual Neuroscience, *Workshop*, Neural origins of humanity in well-behaved monkeys.” Wageningen, The Netherlands (16 April, 2007).
 37. Vocalisation, Communication, Imitation and Deixis in Infant and Adult Human and Non-human Primates, *Symposium*, “Humanity as well-behaved monkeys: the neural origins and implications of imitation, mirror neurons and tool use.” Grenoble, France (16 May, 2007).
 38. ETC Zurich, *Neuroscience Seminar*, “Neural origins of humanity in well-behaved monkeys.” Zurich, Switzerland (25 June, 2007).
 39. Robotics Science and Systems, *Invited Lecture*, “Latent precursors of human intelligence in monkey tool use actions”. Atlanta GA, USA (28 June, 2007).
 40. Oxford University, *Neuroscience Seminar*, “Humanity as well-behaved monkeys: the neural origins and implications of imitation, mirror neurons, and tool use”. Oxford, UK (10 July, 2007).
 41. 6th International Conference on Development and Learning, *Keynote Presentation*, “Neural origins of humanity in well-behaved monkeys”. London, UK (13 July, 2007).
 42. 30th International Ethological Conference, *Plenary Lecture*. “Brain mechanism for development and evolution of monkey tool-use as a latent precursor of human intelligence.” Halifax, Canada (17 August, 2007).
 43. 6th International Symposium of Neuronal Mechanisms of Vision, *Symposium*, “Parietal mechanisms subserving monkey usage of externalized hands and eyes”, Bochum, Germany (13 October, 2007).
 44. 3rd Yamada International Symposium on From Chaos to Cosmos: Integration in Biological Systems, *Symposium*, “Neurobiology of primates’ intellectual evolution”, Hayama, Japan (19, November, 2007).
 45. The RIKEN BSI-Karolinska Institute Symposium, *Symposium*, “Latent precursors of human intelligence in well-behaved monkeys using tools” Stockholm, Sweden (22 November, 2007).
 46. Santa Fe Institute, Principles of Biological Computation, *Symposium*, “Neurobiology of primate intellectual evolution through intentional niche construction.” Santa Fe NM, USA (May 20, 2008).
 47. The Royal Society and JSPS Joint Symposium on the Special Issue of Japan: Its Tradition and Hot Topics in Biological Sciences, *Symposium*, “Neuroscience”, London, UK (16 June, 2008).
 48. An Interdisciplinary Summer School on Body Representation, *Faculty*, “The body in the mind and brain.” Bologna, Italy (19 June, 2008).

49. International Neuropsychology Symposium, *Symposium*, “Evolutionary precursors of human higher cognitive functions retained in monkeys” Tenerife, Spain (27 June, 2008).
50. 31th Annual Meeting of the Japan Neuroscience Society, *co-Organizer speaker*, “Neurobiology of primate’s intellectual evolution”. Tokyo, Japan (9 July, 2008).
51. Asia-Pacific Conference on Vision, *Symposium*, “Externalized eye, a tool to extend vision through action in monkeys.” Brisbane, Australia (18 July, 2008).
52. World Knowledge Dialogue, *Symposium*, “Neuroscience, Culture and Civilization”. Crans-Montana, Switzerland (12 September, 2008).
53. 2008 Global Perspectives on Science & Spirituality workshop on "Brain Science and Religion", *Workshop*, “Brain Science and Kokoro/Spirituality”, Soeul, Korea (25 October, 2008).
54. 8th International Conference on Neuroethics – Reflections on Mirror Neurons, Mirrors of Reality? *Organizer*, Berkeley CA, USA (17 January 2009).
55. European Workshop on Cognitive Neuropsychology, *Keynote Speaker*, Bressanone, Italy (25 January 2009).
56. ESF-JSPS Frontier Science Conference: Social Cognitive Neuroscience, *Co-Organizer*, Acquafredda di Maratea, Italy (27 February-4 March, 2009).
57. 8th Meeting for the German Neuroscience Society, *Otto Creutzfeldt Lecture*, “Neuroscience of primate intellectual evolution”, Göttingen, Germany (28 March 2009).
58. University of Magdeburg Neuroscience Seminar, Seminar, “Latent precursor of human intellect in tool-using monkey brain”, Magdeburg, Germany (31 March, 2009).
59. The Primate Mind, *Invited Speaker*, “Neural basis of tool use & sociality in monkeys.” Erice, Italy (4-7 June, 2009).
60. 32nd Annual Meeting of the Japan Neuroscience Society, *Organizer Chair*, “JNS-SfN-FENS-ANS special symposium on Neuroscience and Society: Global Perspectives”. Nagoya, Japan (16 September, 2009).
61. IV International Interdisciplinary Conference – Body, Perception and Awareness. *Guest Speaker*, “Hierarchical classes of tools as externalization of motor and sensory body-parts”. Torun, Poland (23-25 November 2009).
62. 2009 GPSS International Conference on – Brain Science and Spirituality: Some Asian Perspectives, *Invited Speaker*, “Intentional Niche-Construction: Neurobiological Bases of a Novel Inclusive Human Evolution”. Nagoya, Japan (27-29 November 2009).
63. HFSP Frontiers Meeting, *Invited Speaker*, “Neuroscience of human intellectual evolution”. Strasburg, France (3-6 March, 2010).
64. 33rd Annual Meeting of the Japan Neuroscience Society, *Organizer Chair*, “The posterior parietal cortex and non-spatial cognition”. Kobe, Japan (2-4 September, 2010).
65. 4th International Symposium of the Biodiversity and Evolution, Global COE project “Evolution of Sensor, Communication and Society”, *Invited Speaker*, “Primate intellectual evolution by niche construction”, Kyoto, Japan (11-12 September, 2010).
66. 11th Winter Workshop on Mechanisms of Brain and Mind on “The origins and evolution of human intelligence”. *Invited Speaker*, “Neuroscience of Primate Intellectual Evolution”. Rusutsu, Japan (11-13 January, 2011).
67. IPL/NTU/SFI/CHC network symposium, *Organizer, Chair, Plenary Speaker*, “Setting the scene for interdisciplinary science”. Singapore (14-15 March, 2011).
68. International Conference on Social Neuroscience, *Plenary Speaker*, “Neural basis of on-line social interactions”. Utrecht, The Netherlands (21-23 March, 2011).
69. University of Washington, *Neuroscience Seminar*, “Neuroscience of Primate’s Intellectual Evolution.” Seattle WA, USA (1 April, 2011).
70. Ernst Strüngmann Forum on "Language, Music and the Brain: A Mysterious Relationship". *Invited Panel*, “Culture and Evolution”. Frankfurt, Germany (8-13 May, 2011).
71. 15th Annual Meeting of the Association for the Scientific Study of Consciousness, *Special Session Speaker*, “Triadic (ecological, neural, cognitive) niche construction viewed through primate brain evolution”. Kyoto, Japan (9-12 June, 2011).
72. 8th IBRO World Congress of Neuroscience, *Symposium*, “Ethics of Scientific Publishing – Why does it matter? Advice from editors of major neuroscience journals”. Florence, Italy (14-18 July, 2011).
73. 10th International Society of Neurochemistry, Advanced School of Neurochemistry, “Molecular basis of higher cognitive functions”. *Faculty Lecture*, “Neuroscience of Primate Intellectual Evolution”. Delphi, Greece (24-28 August, 2011).
74. Janelia Conference, *Invited Speaker*, “The Neural Basis of Motor Control”. HHMI Janelia Farm

- Research Campus VA, USA (30 October - 2 November, 2011).
75. University of Maryland, *Neuroscience and Cognitive Science Lecture*, “Triadic (ecological, neural, cognitive) niche construction viewed through primate brain evolution”. College Park MD, USA (4 November, 2011).
 76. Centro de Biociências da Universidade Federal do Rio Grande do Norte, *Neuroscience Seminar*, “Induction of higher cognitive functions through monkey tool-use training by triadic niche-construction”, Natal, Brazil (14 December, 2011).
 77. 1st Latin America Society for Social Neuroscience International Symposium. *Invited Speaker*, “Triadic niche construction: a scenario of human intellectual evolution through social interactions”. Buenos Aires, Argentina (20 December, 2011).
 78. 1st Japan Society for Marmoset Research Symposium: Frontiers in Biomedical Researches on Marmosets as a Primate Model, *Invited Speaker*, “Neurobiology of primates’ cognitive nich-construction in the ‘new world’”. Tokyo, Japan (20-21 February, 2012).
 79. 1st Conference of Center for Complexity Sciences at the Nanyang Technological University, “More is different”, *Invited Speaker*, “The brain at the interface of evolution and society”, Singapore (27-29 February, 2012).
 80. Satellite Symposium of the AOSCE Meeting: Neuroendocrinology and Behaviour, *Invited Speaker*, Penang Island, Malaysia (8-9 March, 2012).
 81. 9th International Conference on the Evolution of Language, *Special Lecture*, “Triadic niche construction: a scenario of human brain evolution extrapolating tool-use and language from control of the reaching actions”. Kyoto, Japan (13-16 March, 2012).
 82. Johns Hopkins University Mind/Brain Institute, *Special Seminar*, “Neurobiology of primates’ intellectual evolution through tiadic niche construction”, Baltimore MD, USA (23 March, 2012).
 83. Royal Society International Scientific Seminar, *Invited Speaker*, “Tool-use as adaptation”, Buckinghamshire, UK (2-3 April, 2012).
 84. International Neuropsychology Symposium 2012, *Organizer & Speaker*, “Expression and Development of Observational Learning”, Bonifacio, France (26-30 June, 2012).
 85. The School of Ethology, *Invited Speaker*, “Mirror Neurons: New Frontiers 20 Years after Their Discovery.” Erice, Italy (30 August - 6 September, 2012).
 86. Italian Institute of Technology, *Robotics, Brain & Cognitive Neuroscience Seminar*, “Neuroscience of primate intellectual evolution via tool-use”. Geneva, Italy (28 September, 2012).
 87. 2nd Champalimaud Neuroscience Symposium, *Invited Speaker*, “Triadic (ecological, neural, cognitive) niche construction: a scenario of human brain & mind evolution”. Lisbon, Portugal (30 September - 3 October, 2012).
 88. 1st Marmoset Social at Society for Neuroscience, *Organizer Speaker*, “Marmoset research in RIKEN Brain Science Institute”. New Orleans LA, USA (13-17 October, 2012).
 89. Nanyang Technological University, *NTU-Keio-RIKEN Human Cognition Workshop*, *Invited Speaker*, “Evolutionary biology of human intelligence: triadic niche-construction to advance our knowledge/world beyond boundary condition”. Singapore (12 November, 2012).
 90. International Institute for Advanced Studies Research Conference and Lecture 2012 on “Evolutionary Origins of Human Mind”, *Invited Speaker & Public Lecturer*, “Cognitive niche construction”. Kyoto/Tokyo, Japan (3-8 December, 2012).
 91. University of Pittsburgh, *Neuroscience Seminar*, “The neural substrate for tool usage and imitation in non-human primates: Exploring Evolutionary Mechanisms of Human Intelligence”. Pittsburgh PA, USA (18 February, 2013).
 92. Nanyang Technological University, *Lee Wee Nam Public Lecture*, “Triadic Niche-Construction: Cognitive Neurobiology of Primates’ Intellectual Evolution”. Singapore (7 March, 2013).
 93. 90th Annual meeting of the Physiological Society of Japan, *Symposium*, “Responsible Conduct of Research and Ethics of Scientific Publishing”. Tokyo, Japan (29 March, 2013).
 94. 6th IGAKUKEN International Symposium on Marmoset Neuroscience –Anatomy Development Function–, *Symposium*, “Long-term brain structure changes by acquisition of tool-use in adult marmosets”. Tokyo, Japan (3-4 October, 2013).
 95. 2nd Marmoset Social at Society for Neuroscience, *Organizer Speaker*, “Adaptive data collection and analysis system.” San Diego CA, USA (11 November, 2013).
 96. 36th Annual Meeting of the Molecular Biology Society of Japan, *Symposium*, “Toward the Understanding of Higher Order Complex Functional Networks”, Kobe, Japan (3 December, 2013).
 97. Motor control: from periphery to the cortex and back, *Symposium*, “Triadic niche construction: human brain evolution extrapolating tool use and language from the control of reaching actions”,

- London, UK (5-6 December, 2013).
98. University College London Laboratory of Neurobiology Seminar, *Seminar*, “Triadic niche construction and segregation: a neurobiological mechanism for primate intellectual evolution”, London, UK (9 December, 2013).
 99. 5th Singapore Non-Human Primate Scientific Network, *Symposium*, “Potential frameworks for Japanese-Singaporean integrated primate (macaque & marmoset) research project”, Singapore (20 February, 2014).
 100. Computational and Systems Neuroscience (COSYNE) 2014, *Workshop on Theories of mammalian perception – Open and closed loop modes of brain-world interactions*, “Triadic niche construction: primate brain evolution through closed-loop interactions among ecological, neural and cognitive worlds/niches”, Snowbird UT, USA (3-4 March, 2014).
 101. Mapping the Mind, *Moderator*, “A dialogue (with His Holiness the 14th Dalai Lama) between scientists and contemplative scholars-practitioners”, Kyoto, Japan (11-12 April, 2014).
 102. Para Limes Workshop, *Invited speaker/panel*, “East–West Connections”, Singapore (15-17 September, 2014).
 103. 2nd Institut de Neurosciences de la Timone Neuroscience Conference, “Evolution of human intelligence by the triadic interaction of neural, cognitive and ecological niches”, *Keynote Speaker*, Marseille, France (2-3 October, 2014).
 104. Ernst Strüngmann Forum on “Where’s the Action? The Pragmatic Turn in Cognitive Science”, *Invited Panel*, Frankfurt, Germany (26-31 October, 2014).
 105. Symposium on Primate Cognition and Neuroscience Research, *Invited Speaker*, “Field-Laboratory Complex for Combined Ecological and Neuroscience Research”, Bangkok, Thailand (16-17 December, 2014).
 106. 11th Germany-Japan Science Colloquium 2015, “Knowledge Transfer across Borders: Integrative Approaches”, *Keynote Speaker*, Göttingen, Germany (14-16 January, 2015).
 107. 4th Conference of Center for Complexity Sciences at the Nanyang Technological University, “Emerging Patterns”, *Invited Speaker*, “How Human Intelligence May Have Emerged”, Singapore (2-4 March, 2015).
 108. Janelia Conference, “The common marmoset as a transgenic model of the human brain in health and disease”, *Invited Speaker*, “Long-term brain structure changes by sustained intrinsic motivation for tool-use learning in adult marmosets” HHMI Janelia Farm Research Campus VA, USA (14-17 June, 2015).
 109. International Neuropsychology Symposium 2015, *Invited Speaker*, “Structural Organization and Evolution of Parietal Cortex (Parieto-Frontal Streams)”, Colloioire, France (24-25 June, 2015).
 110. International Neuropsychology Symposium 2015, *Organizer*, “Neural Basis of Embodiment”, Colloioire, France (26-27 June, 2015).
 111. 6th Brain Research Institute Symposium in Niigata, “Neural Mechanisms of Brain Functions that Require Awareness”, *Invited Speaker*, “Neurobiological Mechanisms for Emergence of the Objective-Self during Primate Brain Evolution”, Niigata, Japan (25-27 July, 2015).
 112. 38th Japan Neuroscience Society Meeting, *Organizer*, “Perspectives and future directions in neuroscience of consciousness”, Kobe, Japan (28-31 July, 2015).
 113. 4th Para Limes workshop, *Invited Speaker*, “East-West Barrier”. Tempe AZ, USA (23-25 September 2015).
 114. CCS’15: Conference on Complex Systems, *Plenary Lecture*, “How human intelligence may have emerged through primates’ brain evolution”, Tempe AZ, USA (28 September - 2 October, 2015).
 115. Primate Neuroscience Workshop at Tsinghua University, *Invited Speaker*, “Neuroscience of primate intellectual evolution through interaction of neural, cognitive and ecological niches”, Beijing, China (9-10 October, 2015).
 116. 8th Congress of the Federation of Asian and Oceanian Physiological Societies, *Special Lecture*, “Evolutionary and comparative cognitive neurobiology of human and non-human primates”, Bangkok, Thailand (22-25 November, 2015).
 117. Canadian Institute for Advanced Research (CIFAR) scientific meeting for Brain, Mind, and Consciousness, *Invited speaker*, “Evolutionary biology of human consciousness: Triadic niche construction”, Toronto, Canada (17-18 December, 2015).
 118. Workshop on Computational Brain Research, *Invited Speaker*, “Evolution of human intelligence through the triadic interaction of neural, cognitive and ecological niches”, Chennai, India (4-8 January, 2016).
 119. 2nd International Symposium on Cognitive Neuroscience Robotics: Before and Beyond Mirror

- Neurons , *Invited Speaker*, “Representation of self-other equivalence acquired by self-objectification processes in the primate brain”, Osaka, Japan (23 February, 2016).
120. Future Primate Neuroscience Symposium, *Invited panel*, Shenzhen, China (22-23 March, 2016).
 121. ABLE (Action-Brain-Language-Evolution) Workshop, *Invited Speaker and Public Lecturer*, “From Tools and Gestures to the Language-Ready Brain”, Atlanta, USA (10-12 April, 2016).
 122. CIFAR (Canadian Institute for Advanced Research) meeting of the Azrieli Program in Brain, Mind & Consciousness at the Royal Society, “Biomarkers of Consciousness”. *Program member*, London, UK (24-25 May, 2016).
 123. Deutsches Primatenzentrum Seminar, *Invited Speaker*, “Triadic Niche Construction: How human intelligence may have evolved in the primate brain through interaction of neural, cognitive and ecological niches.”. Göttingen, Germany (13 June, 2016).
 124. 39th Japan Neuroscience Society Annual Meeting, *Organizer*, “Joint Symposium by the Presidents of Japan Neuroscience Society and Japanese Society for Neurochemistry: Dynamic neural processes for whole-body multi-organ network as a complexity system”, Yokohama, Japan (20-22 July, 2016).
 125. 31st International Congress of Psychology ICP 2016, *Symposium*, “Artificial living environment and mind”, Yokohama, Japan (24-29 July, 2016).
 126. 2nd Frontiers in Interdisciplinary Neuroscience and Technology “Auditory Neuroscience”. *Invited speaker*, Hangzhou, China. (24-25 September, 2016).
 127. East-West workshop on the human brain and cognition, *Invited speaker*, “Tools that Advance Our Knowledge/World beyond the Border”, Singapore. (3-5 October, 2016).
 128. “East of West, West of East”, *Organizer and Speaker*, “Cultural Differences as Opportunities for Collaboration in Healthcare and Medicine”, Singapore. (17-19 October, 2016).

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REVIWS / BOOK CHAPTERS / BOOKS / *et cætera*

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