

# CURRICULUM VITAE

August,

2011

## Personal

Jerry Alan Hogan  
Psychology  
25 February 1936

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## Education

B.A.	1956	Psychology	University of Chicago
M.A.	1960	Psychology	Harvard University
Ph.D.	1961	Psychology	Harvard University

Ph.D. Thesis: "Motivational aspects of instinctive behavior in *Betta splendens*"  
Supervisor: E. B. Newman

## Employment

NSF Postdoctoral Fellow	1961-62	Zoology	U. of Groningen, Netherlands
NIMH Postdoctoral Fellow	1962-63	Zoology	U. of Groningen, Netherlands
Research Associate	1963-64	Zoology	U. of Groningen, Netherlands
Assistant Professor	1964-65	Psychology	University of Toronto
Associate Professor	1965-75	Psychology	University of Toronto
Professor	1975-98	Psychology	University of Toronto
Professor Emeritus	1998-	Psychology	University of Toronto
Visiting Research Assoc.	1971-72	Zoology	Cambridge University, England
Visiting Research Assoc.	1978-79	Biology	University of Sussex, England
Visiting Research Assoc.	1985-86	Zoology	U. of Groningen, Netherlands
Visiting Research Assoc.	1993	Zoology	University of Stockholm, Sweden
Visiting Professor (Nov., 1977)		Psychology	University of São Paulo, Brasil
Visiting Professor (Nov., 1978)		Zoology	U. of Groningen, Netherlands
Visiting Professor (Feb., 1980)		Psychology	U. of Mexico (UNAM), Mexico
Visiting Professor (Nov., 1980)		Psychology	U. of Mexico (UNAM), Mexico
Visiting Professor (April, 1997)		Psychology	U. of Mexico (UNAM), Mexico
Visiting Professor (Jan., 2010)		Psychology	University of São Paulo, Brasil
Visiting Professor (Aug., 2011)		Psychology	University of São Paulo, Brasil

## Professional Activities and Honors

*Behaviour: An International Journal of Behavioural Biology*  
Associate Editor, 1975-1980  
Executive Editor (Western Hemisphere), 1980-1997  
Associate Editor, 1997-2004

Fellow, American Psychological Association, elected 1983  
Fellow, American Psychological Society, elected 1989  
Fellow, Animal Behavior Society, elected 1997

President, International Society for Comparative Psychology, 2002-2006.

### Refereed Publications

- Hogan, J. A. Copying redundant messages. *Journal of Experimental Psychology*, 1961, vol. 62, pp. 153-157.
- Hogan, J. A. and Rozin, P. An automatic device for dispensing food kept in a liquid medium. *Journal of the Experimental Analysis of Behavior*, 1961, vol. 4, pp. 81-83.
- Hogan, J. A. and Rozin, P. An improved mechanical fish lever. *American Journal of Psychology*, 1962, vol. 75, pp. 307-308.
- Adler, N. and Hogan, J. A. Classical conditioning and punishment of an instinctive response in *Betta splendens*. *Animal Behaviour*, 1963, vol. 11, pp. 351-354.
- Hogan, J. A. Operant control of preening in pigeons. *Journal of the Experimental Analysis of Behavior*, 1964, vol. 7, pp. 351-354.
- Kruijt, J. P. and Hogan, J. A. Organization of the lek in Black Grouse (*Lyrurus t. tetricus* L.). *Archives Néerlandaises de Zoologie*, 1964, vol. 16, pp. 136-137.
- Hogan, J. A. An experimental study of conflict and fear: An analysis of behavior of young chicks to a mealworm. Part I. The behavior of chicks which do not eat the mealworm. *Behaviour*, 1965, vol. 25, pp. 45-97.
- Hogan, J. A. An experimental study of conflict and fear: An analysis of behavior of young chicks to a mealworm. Part II. The behavior of chicks which eat the mealworm. *Behaviour*, 1966, vol. 27, pp. 273-289.
- Kruijt, J. P. and Hogan, J. A. Social behavior on the lek in Black Grouse (*Lyrurus t. tetricus*). *Ardea*, 1967, vol. 55, pp. 203-240.
- Hogan, J. A. Fighting and reinforcement in the Siamese fighting fish (*Betta splendens*). *Journal of Comparative and Physiological Psychology*, 1967, vol. 64, pp. 356-359.
- Hogan, J. A., Kleist, S., and Hutchings, C. S. L. Display and food as reinforcers in the Siamese fighting fish (*Betta splendens*). *Journal of Comparative and Physiological Psychology*, 1970, vol. 70, pp. 351-357.
- Hogan, J. A. The development of a hunger system in young chicks. *Behaviour*, 1971, vol. 39, pp. 128-201.
- Hogan, J. A. and Abel, E. L. Effects of social factors in response to unfamiliar environments in *Gallus gallus spadiceus*. *Animal Behaviour*, 1971, vol. 19, pp. 687-694.

- Hogan, J. A. Development of food recognition in young chicks: I. Maturation and nutrition. *Journal of Comparative and Physiological Psychology*, 1973, vol. 83, pp. 355-366.
- Hogan, J. A. Development of food recognition in young chicks: II. Learned associations over long delays. *Journal of Comparative and Physiological Psychology*, 1973, vol. 83, pp. 367-373.
- Langford, A. and Hogan, J. A. Effects of chick vocalizations on ongoing behaviour. *Animal Behaviour*, 1973, vol. 21, pp. 160-163.
- Hogan, J. A. On the choice between eating and aggressive display in the Siamese fighting fish (*Betta splendens*). *Learning and Motivation*, 1974, vol. 5, pp. 273-287.
- Hogan, J. A. Responses in Pavlovian conditioning studies. *Science*, 1974, vol. 186, pp. 156-157.
- Hogan, J. A., Kruijt, J. P., and Frijlink, J. A. Supernormality in a learning situation. *Zeitschrift für Tierpsychologie*, 1975, vol. 38, pp. 212-218.
- Hogan, J. A. Development of food recognition in young chicks: III. Discrimination. *Journal of Comparative and Physiological Psychology*, 1975, vol. 89, pp. 95-104.
- Hogan, J. A. Development of food recognition in young chicks: IV. Associative and nonassociative effects of experience. *Journal of Comparative and Physiological Psychology*, 1977, vol. 91, pp. 839-850.
- Van der Kooy, D. and Hogan, J. A. Priming effects with food and water reinforcers in hamsters. *Learning and Motivation*, 1978, vol. 9, pp. 332-346.
- Bols, R. J. and Hogan, J. A. Runway behavior of Siamese fighting fish, *Betta splendens*, for aggressive display and food reinforcement. *Animal Learning and Behavior*, 1979, vol. 7, pp. 537-542.
- Sherry, D. F., Mrosovsky, N., and Hogan, J. A. Weight loss and anorexia during incubation in birds. *Journal of Comparative and Physiological Psychology*, 1980, vol. 94, pp. 89-98.
- Hogan, J. A. and Bols, R. J. Priming of aggressive motivation in *Betta splendens*. *Animal Behaviour*, 1980, vol. 28, pp. 135-142.
- Hogan-Warburg, A. J. and Hogan, J. A. Feeding strategies in the development of food recognition in young chicks. *Animal Behaviour*, 1981, vol. 29, pp. 143-154.
- Hogan, J. A. Pecking and feeding in chicks. *Learning and Motivation*, 1984, vol. 15, pp. 360-376.
- Hogan, J. A. Cause, function, and the analysis of behavior. *Mexican Journal of Behavior Analysis*, 1984, vol. 10, pp. 65-71.
- Hogan, J. A. The integration of pecking into the hunger system in young chicks. *Mexican Journal of Behavior Analysis*, 1984, vol. 10, pp. 161-174.
- Hogan, J. A. The structure versus the provenance of behavior: A comment on B. F. Skinner's "Ontogeny and phylogeny of behavior". *Behavioral and Brain Sciences*, 1984, vol. 7, p. 690.
- Hogan, J. A. The interaction of incubation and feeding in broody junglefowl hens. *Animal Behaviour*, 1989, vol. 38, pp. 121-128.

- Vestergaard, K., Hogan, J. A., & Kruijt, J. P. The development of a behavior system: Dustbathing in the Burmese red junglefowl. I. The influence of the rearing environment on the organization of dustbathing. *Behaviour*, 1990, vol. 112, pp. 99-116.
- Giraldeau, L-A., Hogan, J. A., & Clinchy, M. J. The payoffs to producing and scrounging: What happens when patches are divisible? *Ethology*, 1990, vol. 85, pp. 132-146.
- Hogan, J. A., Honrado, G. I., & Vestergaard, K. The development of a behavior system: Dustbathing the the Burmese red junglefowl (*Gallus gallus spadiceus*). II. Internal factors. *Journal of Comparative Psychology*, 1991, vol. 105, pp. 269-273.
- Moffatt, C. A. & Hogan, J. A. Ontogeny of chick responses to maternal food calls in the Burmese red junglefowl (*Gallus gallus spadiceus*). *Journal of Comparative Psychology*, 1992, vol. 106, pp. 92-96.
- Gerlai, R. & Hogan, J. A. Learning to find the opponent: An ethological analysis of the behavior of paradise fish (*Macropodus opercularis*, Belontiidae). *Journal of Comparative Psychology*, 1992, vol. 106, pp. 306-315.
- Vestergaard, K. & Hogan, J. A. The development of a behavior system: Dustbathing in the Burmese red junglefowl. III. Effects of experience on stimulus preference. *Behaviour*, 1992, vol. 121, pp. 215-230.
- Vestergaard, K., Kruijt, J. P. & Hogan, J. A. Feather pecking and chronic fear in groups of red junglefowl: Its relations to dustbathing, rearing environment and social status. *Animal Behaviour*, 1993, vol. 45, pp. 1127-1140.
- Hogan, J. A. & van Boxel, F. Causal factors controlling dustbathing in Burmese red junglefowl: Some results and a model. *Animal Behaviour*, 1993, vol. 46, pp. 627-635.
- Hogan-Warburg, A. J., Panning, L. & Hogan, J. A. Analysis of the brooding cycle of broody junglefowl hens with chicks. *Behaviour*, 1993, vol. 125, pp. 21-37.
- Hogan, J. A. Structure and development of behavior systems. *Psychonomic Bulletin and Review*, 1994, vol. 1, pp. 439-450.
- Hogan-Warburg, A. J., Hogan, J. A. & Ashton, M. C. Grooming in crickets: time sharing or competition? *Animal Behaviour*, 1995, vol. 49, pp. 531-533.
- Hogan, J. A. Energy models of motivation: A reconsideration. *Applied Animal Behaviour Science*, 1997, vol. 53, pp. 89-105.
- Hogan, J. A. Interaction of circadian and Lorenzian control of dustbathing in junglefowl. (Abstract) *Advances in Ethology (Ethology, Supplement 32)*, 1997, p.72.
- Hogan, J. A., Hogan-Warburg, A. J., Panning, L. & Moffatt, C. A. Causal factors controlling the brooding cycle of broody junglefowl hens with chicks. *Behaviour*, 1998, vol. 135, pp. 957-980.
- Larsen, B. H., Vestergaard, K. S. & Hogan, J. A. Development of dustbathing behavior sequences in the domestic fowl: The significance of functional experience. *Developmental Psychobiology*, 2000, vol. 37, pp. 5-12.

- van Kampen, H. S. & Hogan, J. A. Courtship food-calling in Burmese red junglefowl: III. Factors influencing the male's behavior. *Behaviour*, 2000, vol. 137, pp. 1191-1209.
- Chow, A. & Hogan, J. A. The development of feather pecking in Burmese red junglefowl: The influence of early experience with exploratory-rich environments. *Applied Animal Behaviour Science*, 2005, vol. 93, pp. 283-294.
- Hogan, J. A. Causation: The study of behavioural mechanisms. *Animal Biology*, 2005, vol.55, pp. 323-341.
- Hogan, J. A. & Bolhuis, J. J. The development of behaviour: trends since Tinbergen (1963). *Animal Biology*, 2005, vol. 55, pp. 371-398.

## Books

- Hogan, J. A. and Bolhuis, J. J., Eds. *Causal Mechanisms of Behavioural Development*. Cambridge: Cambridge University Press, 1994.
- Bolhuis, J. J. and Hogan J. A., Eds. *The Development of Animal Behavior: A Reader*. Oxford: Blackwell Publishers Ltd., 1999.

## Chapters in Books

- Hogan, J. A. How young chicks learn to recognize food. In R. A. Hinde and J. G. Stevenson-Hinde, Eds., *Constraints on Learning: Limitations and Predispositions*. London: Academic Press, 1973. Pp. 119-139.
- Hogan, J. A. The ontogeny of food preferences in chicks and other animals. In L. M. Barker, M. Best, and M. Domjan, Eds., *Learning Mechanisms in Food Selection*. Waco, Texas: Baylor University Press, 1977. Pp. 71-97.
- Hogan, J. A. and Roper, T. J. A comparison of the properties of different reinforcers. In J. S. Rosenblatt, R. A. Hinde, C. Beer, and M. C. Busnel, Eds., *Advances in the Study of Behavior*, vol. 8, New York: Academic Press, 1978. Pp. 155-255.
- Hogan, J. A. Mechanisms of preference development. In J. H. A. Kroeze, Ed., *Preference Behaviour and the Chemical Senses*. London: Information Retrieval Ltd., 1979. Pp. 193-202.
- Hogan, J. A. Homeostasis and behaviour. In F. M. Toates and T. R. Halliday, Eds., *Analysis of Motivational Processes*. London: Academic Press, 1980. Pp. 3-21.
- Hogan, J. A. Cause and function in the development of behavior systems. In E. M. Blass, Ed., *Handbook of Behavioral Neurobiology. Vol. 9: Developmental Psychobiology and Behavioral Ecology*. New York: Plenum Press, 1988. Pp. 63 - 106.
- Hogan, J. A. The structure versus the provenance of behavior. In A. C. Catania and S. Harnad, Eds., *The Selection of Behavior: The Operant Behaviorism of B. F. Skinner: Comments and Consequences*. Cambridge: Cambridge University Press, 1988. Pp. 433-434.

- Hogan, J. A. Animal behavior. In J. Grusec, R. S. Lockhart and G. Walters, Eds., *The Foundations of Psychology*. Toronto: Pitman, 1990. Pp. 138-186.
- Hogan, J. A. and Slamecka, N. J. Motivation and emotion. In J. Grusec, R. S. Lockhart and G. Walters, Eds., *The Foundations of Psychology*. Toronto: Pitman, 1990. Pp. 187-229.
- Hogan, J. A. The concept of cause in the study of behavior. In J. A. Hogan and J. J. Bolhuis, Eds., *Causal Mechanisms of Behavioural Development*. Cambridge: Cambridge University Press, 1994. Pp. 3-15.
- Hogan, J. A. The development of behavior systems. In J. A. Hogan and J. J. Bolhuis, Eds., *Causal Mechanisms of Behavioural Development*. Cambridge: Cambridge University Press, 1994. Pp. 242-264.
- Hogan, J. A. Motivation. In G. Greenberg & M. Haraway, Eds., *Comparative Psychology: A Handbook*. New York: Garland Publishing, 1998. Pp. 164-175.
- Hogan, J. A. Development of behavior systems. In E. M. Blass, Ed., *Handbook of Behavioral Neurobiology. Vol. 13: Developmental Psychobiology*. New York: Kluwer Academic/Plenum, 2001. Pp. 229-279.
- Bolhuis, J. J. and Hogan, J. A. Ethological theories. In B. Hopkins, Ed., *The Cambridge Encyclopedia of Child Development*. Cambridge: Cambridge University Press, 2005. Pp. 64-69.
- Hogan, J. A. Motivation. In J. J. Bolhuis and L-A. Giraldeau, Eds., *Behavior of Animals*. London: Blackwell Publishing, 2005. Pp. 41-70.
- Hogan, J. A. and Bolhuis, J. J. Tinbergen's four questions and contemporary behavioral biology. In J. J. Bolhuis and S. Verhulst, Eds., *Tinbergen's Legacy: Function and Mechanism in Behavioral Biology*. Cambridge: Cambridge University Press, 2009. Pp. 25-34.
- Hogan, J. A. Causation: the study of behavioral mechanisms. In J. J. Bolhuis and S. Verhulst, Eds., *Tinbergen's Legacy: Function and Mechanism in Behavioral Biology*. Cambridge: Cambridge University Press, 2009. Pp. 35-53.
- Hogan, J. A. and Bolhuis, J. J. The development of behavior: trends since Tinbergen (1963). In J. J. Bolhuis and S. Verhulst, Eds., *Tinbergen's Legacy: Function and Mechanism in Behavioral Biology*. Cambridge: Cambridge University Press, 2009. Pp. 82-106.

### **Book Reviews, etc.**

- Hogan, J. A. An eccentric view of development: A review of *The Dynamics of Behavior Development* by Zing-Yang Kuo. *Contemporary Psychology*, 1978, vol. 23, pp. 690-691.
- Hogan, J. A. A fisherman's platter: A review of *The Behavior of Fish and Other Aquatic Animals*, ed. by D. I. Mostofsky. *Contemporary Psychology*, 1979, vol. 24, pp. 326-327.
- Hogan, J. A. Review of *Contrasts in Behavior*, ed. by E. S. Reese and F. J. Lighter. *New Scientist*, 19 July 1979, p. 210.

- Hogan, J. A. Hierarchy and behavior: A review of *The Organization of Action* by C. R. Gallistel. *Behavioral and Brain Sciences*, 1981, vol. 4, p. 625.
- Hogan, J. A. Biology and Learning: A review of *Advances in analysis of behavior. Vol. 3: Biological factors in learning*, ed. by M. D. Zeiler & P. Harzem. *Behavioural Processes*, 1985, vol. 11, pp. 331-333.
- Hogan, J. A. Review of *The ontogeny of information: Developmental systems and evolution* by S. Oyama. *Quarterly Journal of Experimental Psychology*, 1987, vol. 39B, pp. 295-296.
- Hogan, J. A. Review of *Memory, imprinting, and the brain: An inquiry into mechanisms* by G. Horn. *Quarterly Journal of Experimental Psychology*, 1988, vol. 40B, pp. 301-303.
- Hogan, J. A. Review of *Plasticity of development*, ed. by S. E. Brauth, W. S. Hall & R. J. Dooling. *Quarterly Journal of Experimental Psychology*, 1992, vol. 44B, pp. 323-324.
- Hogan, J. A. Homage to Hinde: A review of *The development and integration of behaviour: Essays in honour of Robert Hinde*, ed. by P. P. G. Bateson. *Contemporary Psychology*, 1993, vol. 38, pp. 1196-1197.
- Hogan, J. A. Lorenz on the philosophy of behavioral science: A review of *The natural science of the human species* by K. Lorenz. *Contemporary Psychology*, 1997, vol. 42, pp. 682-683.
- Hogan, J. A. Review of *The World of Instinct: Niko Tinbergen and the rise of ethology in the Netherlands* by D. R. Röell. *Ethology*, 2001, vol. 107, pp. 1053-1054.
- Hogan, J. A. Obituary: Jaap Kruijt 1928-2002. *Behaviour*, 2003, vol. 140, pp. 429-431.
- Hogan, J. A. Review of *Animal Behaviour: Mechanism, Development, Function and Evolution* by C. Barnard. *Animal Behaviour*, 2004, vol. 69, pp. 752-753.
- Hogan, J. A. The rise and fall of ethology: A review of *Patterns of Behavior: Konrad Lorenz, Niko Tinbergen, and the founding of ethology* by R. W. Burkhardt. *Ethology*, 2006, vol. 112, pp. 726-728.
- Hogan, J. A. Review of *The ephemeral shorebird: Population history of ruffs* by Y. I. Verkuil. *Ardea*, 2010, vol. 98, pp. 253-255.

### Invited Lectures

- Research seminar. Department of Zoology, University of Groningen, Netherlands. Sept., 1967.
- Research seminar. Ethology Group, University of Sussex, England. Nov., 1971
- Research seminar. Behaviour Round Table, University of Bristol, England. Nov., 1971.
- Research seminar. Department of Zoology, University of Reading, England. March, 1972.
- Research seminar. Sub-department of Animal Behaviour, Cambridge University. Feb., 1972.
- Conference: Constraints on Learning. Cambridge University. April, 1972.
- Colloquium. Department of Psychology, University of Toronto. Nov., 1972.
- Colloquium. Department of Psychology, Hunter College, New York. Dec., 1973.
- Plenary address. 14th International Ethological Conference. Parma, Italy. Sept., 1973.
- Conference: Learning Mechanisms in Food Selection. Baylor University. March, 1975.

Symposium: Ontogeny of Feeding Behavior. Eastern Psychological Association, New York. May, 1976.

Symposium: Development of Feeding Behavior. Canadian Psychological Association, Vancouver. June, 1977.

Lecture. Association for the Study of Animal Behaviour. Durham, England. July, 1977.

Research seminar. Department of Psychopharmacology, Escola Paulista de Medicina, São Paulo, Brasil. Dec., 1977.

Colloquium. Department of Psychology, Northeastern University, Boston. March, 1978.

Research seminar. Department of Experimental Psychology, University of Sussex, England. Nov., 1978.

Colloquia (3). Biology Center, University of Groningen, Netherlands. Nov., 1978.

Research seminar. Neurophysiology and Ethology Group, University of Sussex. Feb., 1979.

Research seminar. Department of Zoology, University of Reading, England. Feb., 1979.

Research seminar. Sub-department of Animal Behaviour, Cambridge University March, 1979.

Research seminar. Animal Behavior Research Group, Oxford University March, 1979.

Symposium: Preference and Chemoreception. European Chemoreception Research Organization. Eindhoven, Netherlands. May, 1979.

Conference: Analysis of Motivational Processes. Open University, England. Sept., 1979.

Symposium: Fish Social Behavior. Northeast Animal Behavior Society. Binghamton, New York Oct., 1980.

Colloquium. Department of Psychology, University of California, San Diego. Feb., 1981.

Keynote address. Northeast Animal Behavior Society. Queen's University Oct., 1981.

Plenary address. 18th International Ethological Conference. Brisbane, Australia. August, 1983.

Lecture. 7th Congress of the Mexican Society for the Analysis of Behavior. Oaxtepec, Mexico. Aug., 1984.

New Fellow's address. American Psychological Association, Toronto. August, 1984.

Research seminar. Biology Center. University of Groningen, Netherlands. Feb., 1986.

Research seminar. Neurophysiology and Ethology Group, University of Sussex. May, 1986.

Colloquium. Department of Zoology, University of Toronto. October, 1986.

Lecture. Association for the Study of Animal Behaviour. St. Andrews, Scotland. July, 1987.

Colloquium. Department of Biology, Erindale College. November, 1988

Research seminar. Department of Psychology, University of Toronto. March, 1989.

Symposium: Imprinting. Zoology Laboratory, University of Groningen. August, 1989.

Colloquium. Department of Veterinary Medicine, Royal Veterinary and Agricultural University, Copenhagen, Denmark. December, 1989.

Colloquium. Center for Advanced Study in the Behavioral Sciences, Stanford, California. April, 1990.

Colloquium. Department of Psychology, University of Geneva, Switzerland. June, 1990.

Colloquium. Department of Zoology, Leiden University, Netherlands. October, 1990.

Symposium: Ethological models of behavior. BION meeting, Netherlands. November, 1990.

Research seminar. Sub-department of Animal Behaviour, Cambridge University. June, 1992.

Keynote address. X. Nordic Ethology Symposium. Tune, Denmark. Sept., 1992.

Symposium: Behavior systems: motivation, learning, and development. American Psychological Association., Toronto. August, 1993.

Symposium: Aspects of the development of social behavior. Zoology Laboratory, University of Groningen, Netherlands. October, 1993.

Lecture. International Society for Comparative Psychology. University of São Paulo, Brasil. July, 1994.

Workshop: Motivation in the 90s. Association for the Study of Animal Behaviour. London. November, 1994.

Lecture. Association for the Study of Animal Behaviour. London. December, 1994.



Symposium: Aggression. University College, University of Toronto. Jan., 1996.

Lecture. Society for Quantitative Analyses of Behavior. San Francisco. May, 1996.

Symposium: Theory in Comparative Psychology. 26<sup>th</sup> Intl Congress of Psychology. Montreal. August, 1996.

Symposium. Animal Welfare. Swiss Society for Care of Experimental Animals (Versuchstierkunde), Lausanne, Switzerland. March, 1998.

Colloquium. Department of Psychology, University of Geneva, Switzerland. March, 1998.

Colloquium. Zoology Department, Leiden University, Netherlands. March, 1998.

Colloquium. Department of Psychology, University of Pennsylvania. April, 1998.

Colloquium. Section for Ethology and Health, Royal Veterinary and Agricultural University, Copenhagen, Denmark. December, 1998.

Colloquium. Departments of Zoology and Psychology, University College, Dublin, Ireland. May, 2000.

Colloquium. Development of hierarchical behavior systems. Instituto di Scienze e Tecnologie della Cognizione, Rome, Italy. May, 2002.

Symposium: Tinbergen's four questions. Causation: The study of behavioral mechanisms. Royal Netherlands Zoological Society. Leiden University, Netherlands. September, 2003.

Presidential Address, International Society for Comparative Psychology. Oviedo, Spain. September, 2004.

Colloquium. Zoology Department, St. Andrew's University, Scotland. December, 2004.

Colloquium. Department of Psychology, University of Bologna, Italy. April, 2005.

Lecture series: NOVA Ph.D. course, Norwegian University of Life Sciences, Sørmarka, Norway. November, 2005.

Research seminar: Department of Poultry Science, Guelph University. February, 2006.

Colloquium. Department of Psychology, University of Toronto. February, 2006.

Colloquium. Department of Psychology, University of Ulster, Northern Ireland. April, 2006.

Presidential Address, International Society for Comparative Psychology. Christchurch, New Zealand. September, 2006.

Colloquium. Department of Experimental Psychology, UNAM, Mexico City. April, 2007.

Conference. Development of circadian control of behavior. Institute of Advanced Studies, University of São Paulo, Brasil. October, 2008.

Lecture series: Summer institute on evolutionary psychology. Natal, Brasil. April, 2009.

Mini-course: The study of behavior. Department of Experimental Psychology, University of São Paulo, Brasil. January, 2010.

Colloquium. UNIFESP, São Paulo, Brasil. February, 2010

Colloquium. Department of Experimental Psychology, University of São Paulo, Brasil. November, 2010.

Colloquium. Department of Psychology, USP, Ribeirão Preto, Brasil. November, 2010.

Plenary address. Tinbergen's four questions and the causation of behavior. 28<sup>th</sup> Encontro Annual de Etologia, Alfenas, Brasil. November, 2010.

Colloquium. Department of Biology, University of Stockholm, Sweden. June, 2011.

Lecture. Motivation. Department of Experimental Psychology, University of São Paulo. August, 2011.

Mini-course: Development of Behavior. Department of Experimental Psychology, University of São Paulo. August, 2011.