

## Listes des publications de C. Touzet

### Livres

1. C. Touzet, *Hypnose, sommeil, placebo ? Les réponses de la Théorie neuronale de la Cognition - Tome 2*, éd. la Machotte, 2014
2. C. Touzet, *Conscience, intelligence, libre-arbitre ? Les réponses de la Théorie neuronale de la Cognition – Tome 1*, 156 pages, éd. la Machotte, 2010.
3. C. Touzet, *Les réseaux de neurones artificiels : introduction au connexionnisme*, 150 pages, Préface de Jeanny Hérault, EC2 éd., Paris, 1992.

### Revue

1. C. TOUZET, "The Theory of neural Cognition applied to Robotics", *International Journal of Advanced Robotic Systems*, to appear (2014).
2. C. TOUZET, "L'intelligence existe-t-elle ?", *Hors Série la Recherche - Tangente - Spécial logique* - Juillet 2012, p. 6-8.
3. GLOTIN HP, WARNIER F, DANDURAND S, DUFAU S, LETE B, TOUZET C, ZIEGLER JC and GRAINGER JA (2010) "An Adaptive Resonance Theory Account of the Implicit Learning of Orthographic Word Forms", *Special Issue of J. Physiol*, Paris 104 (1-2):19-26
4. S. DUFAU, LETE, B., TOUZET, C., GLOTIN, H., ZIEGLER J.C., and GRAINGER, J. A., "Developmental Perspective on Visual Word Recognition: New Evidence and a Self-Organizing Model", *European Journal of Cognitive Psychology*, 22: 5, 669 — 694, 2010.
5. PABAN V, CHAMGOOD C, MANRIQUE C, TOUZET C, ALESCIO-LAUTIER B (2010) Neurotrophic signaling molecules associated with cholinergic damage in young and aged rats. *Neurobiology of aging*.
6. V. PABAN, C. CHAMBON, C. MANRIQUE, C. TOUZET and B. ALESCIO-LAUTIER, "Neurotrophic signaling molecules associated with cholinergic damage in young and aged rats - Environmental enrichment as potential therapeutic agent", *Neurobiology of Aging*, In Press, Corrected Proof, Available online 23 April 2009.
7. S. DUFAU, LETE, B., TOUZET, C., GLOTIN, H., ZIEGLER J.C., and GRAINGER, J. A., "Developmental Perspective on Visual Word Recognition: New Evidence and a Self-Organizing Model", *European Journal of Cognitive Psychology*, in press.
8. C. TOUZET, "Modeling and Simulation of Elementary Robot Behaviors using Associative Memories", *International Journal of Advanced Robotic Systems*, Vol 3 n° 2, June 2006.
9. C. TOUZET, "Robot Awareness in Cooperative Mobile Robot Learning," *Autonomous Robots*, Vol. 8 , No. 1, January 2000.
10. J. M. SANTOS & C. TOUZET, "Dynamic Update of the Reinforcement Function during Learning," *Connection Science, Special issue on Adaptive Robots*, Carme Torras guest editor, Vol. 11, No 3/4, December 1999, 23 pages.
11. J. M. SANTOS & C. TOUZET, "Exploration Tuned Reinforcement Function," *Neurocomputing*, Vol. 28 , No. 1-3, September 1999, pp. 93-105.
12. C. TOUZET, "Neural Reinforcement Learning for Behaviour Synthesis," *Robotics and Autonomous Systems, Special issue on Learning Robot: the New Wave*, N. Sharkey Guest Editor, Vol. 22, No. 3-4, December 1997, pp 251-281.

13. A. BRONS, G. RABATEL, F. ROS, F. SEVILA & C. TOUZET, "Plant grading by vision using neural networks and statistics", *Computers and Electronics in Agriculture*, n°9, 1993.

### Chapitres de livre

1. C. Touzet, Kermorvant C. and Glotin H., "A Biologically Plausible SOM Representation of the Orthographic Form of 50,000 French Words", in Villmann, Th., Schleif, F.-M., Kaden, M., Lange, M. (Eds.) *Proceedings of the 10th International Workshop, WSOM 2014, Advances in Self-Organizing Maps and Learning Vector Quantization, Advances in Intelligent Systems and Computing Series*, Springer, Vol. 295, pp 303-312, 2014.
2. C. Touzet, "Why Neurons are Not the Right Level of Abstraction for Implementing Cognition", in A. Chella, R. Pirrone, K. Jóhannsdóttir, R. Sorbello (Eds.) *Biologically Inspired Cognitive Architectures 2012: Proceedings of the Third Annual meeting of the BICA Society, Advances in Intelligent Systems and Computing 196*, Springer, pp. 317-318, 2013.
3. Touzet C (2012) Le plaisir : un effet de bords des mémoires associatives. In Joël Quinqueton et Jean Sallantin (Eds) *Autonomie, mémoire et co-évolution*. Les chemins de Tr@verse Editions (sous presse)
4. Touzet C (2011) The Illusion of Joy. In J. Schmidhuber, K.R. Thórisson, and M. Looks (Eds.). *Artificial General Intelligence 2011*. Springer-Verlag LNAI 6830, pp. 357–362.
5. C. Touzet, P. Paubel et B. Alescio-Lautier (2006). Importance des facteurs attentionnels et mnésiques lors de l'accès aux sites Web. In A. Piolat (Ed.). *Lire, écrire, communiquer et apprendre avec Internet*, Marseille : Editions Solal.
6. S. Dufau, C. Touzet et J. Grainger (2006). Lisibilité des mots sur le Web : ce que nous apprend la modélisation de la reconnaissance orthographique. In A. Piolat (Ed.). *Lire, écrire, communiquer et apprendre avec Internet*, Marseille : Editions Solal.
7. C. Touzet, "Distributed Lazy Q-learning for Cooperative Mobile Robots," *International Journal of Advanced Robotic Systems*, Vol. 1, No. 1, January 2004, pp. 5-13.
8. C. Touzet, "Q-learning for robots", *The Handbook of Brain Theory and Neural Networks (Second Edition)*, M. Arbib editor, MIT Press, 2003, pp. 934-937.
9. L. E. PARKER, C. TOUZET, and F. FERNANDEZ, " Techniques for Learning in Multi-Robot Teams," *Robot Teams: From Diversity to Polymorphism*, Tucker Balch and Lynne E. Parker (eds.), Natick, MA, 2002.
10. L. E. PARKER and C. TOUZET, " Multi-Robot Learning in a Cooperative Observation Task," *Distributed Autonomous Robotic Systems 4*, Lynne E. Parker, George Bekey, and Jacob Barhen (eds.), Springer, 2000:391-401.
11. C. TOUZET, N. GIAMBIASI, "Application of Connectionist Models to Fuzzy Inference Systems", in *Parallelization in Inference Systems*, Lectures Notes in Artificial Intelligence 590, B. Fronhofer & G. Wrightson Eds., Springer Verlag, April 1992.

### Conférences internationales avec comité de lecture

1. C. Touzet, "Cognition Neural Theory & Reading", *ERMITES 2014 (IX Summer School for advanced studies in Multimodal Information Retrieval)*, September 23rd-25th, 2014, Ile de Porquerolles, Var, France (tutorial).
2. C. Touzet, "Theory of Neuronal Cognition and Consciousness". *ASCC 2014 (Association for the Scientific Study of Consciousness)*, July 16th-19th, 2014, Brisbane, Australia (Tutorial).

3. C. Touzet, "Why Neurons are Not the Right Level of Abstraction for Implementing Cognition", *BICA 2012 : Annual International Conference on Biologically Inspired Cognitive Architectures (BICA)*, Palermo, I.
4. C. Touzet, "Théorie neuronale de la Cognition et entraînement cognitif", *Premier Congrès Européen de Stimulation Cognitive*, Dijon, mai 2012.
5. C. Touzet et B. Alescio-Lautier, "Six critères à respecter pour l'entraînement cognitif", *Premier Congrès Européen de Stimulation Cognitive*, Dijon, mai 2012.
6. Touzet C.(2011). Expected cortical measurements in the context of the Theory of neural Cognition. *31st European Winter Conference on Brain Research*, les 2 Alpes, France.
7. GLOTIN, H., P. WARNIER, F. DANDURAND, S. DUFAU, LETE, B., TOUZET, C., ZIEGLER J.C., and GRAINGER, J. A., "An Adaptive Resonance Theory Account of the Implicit Learning of Orthographic Word Forms", *Neurocomp 2008*.
8. C. Herrera, C. Touzet et B. Alescio-Lautier (2009). « Stimulation Cognitive et Prévention », *XXIIème journées du GRAL (Groupe de Recherche sur la Maladie d'Alzheimer)*, Marseille, F.
9. Warnier, P., Glotin H., Dandurand, F., Dufau, S., Fraihat S., Touzet, C., Lété, B., Ziegler, J.C., Grainger, J. (2008). Adaptive Resonance Theory : l'ordre de présentation des mots compte-t-il ? *Proceedings of the second French conference on Computational Neurosciences*. Marseille, France.
10. C. Herrera, C. Touzet et B. Alescio-Lautier (2008). « Stimulation Cognitive au cours du Vieillessement Normal : Transfert des Bénéfices à la Vie Quotidienne », *Xième Colloque International sur le Vieillessement Cognitif*, Paris, France.
11. Dufau, S., Grainger, J., Ziegler, J., Touzet, C., Lété, B. & Glotin, H.(2007). Self-Organized Learning of Orthographic Representations. *Proceedings of the XVth Conference of the European Society for Cognitive Psychology (ESCOP 2007)*, Marseille, France.
12. C. TOUZET, P. DEMOULIN, B. BURLE, F. VIDAL and F. MACAR, "Neuromimetic model of interval timing," *Proceedings of the 13th European Symposium on Artificial Neural Networks*, Bruges, B, 2005, pp. 393-398.
13. C. TOUZET, "Modeling and Simulation of Elementary Behaviors using Associative Memories," *I3M, International Mediterranean Modeling Multiconference*, Marseille, October 2005, pp. 111-116.
14. C. TOUZET, "The last 20 years of Learning in Robotics," at *ASAI2002*, (4th Argentinian Symposium on Artificial Intelligence), Buenos Aires, Argentine, September 12, 2002.
15. C. TOUZET and J-M. SANTOS "Q-learning and Robotics ," *ESS'01, European Simulation Symposium 2001*, Marseille, October 2001.
16. L. E. PARKER and C. TOUZET, " Multi-Robot Learning in an Inherently Cooperative Task," *Proceedings of SPIE Conference on Unmanned Ground Vehicle Technology III*, 2001, vol. 4364, 127-135.
17. A. SCOTT, L. E. PARKER and C. TOUZET, Quantitative and qualitative comparison of three laser-range mapping algorithms using two types of laser scanner data," *IEEE SMC'2000, Proceedings of Systems, Man, and Cybernetics Conference*, 2000.
18. L. E. PARKER, C. TOUZET and D. JUNG " Learning and Adaptation in Multi-Robot Teams," *Proc. of Eighteenth Symposium on Energy Engineering Sciences*, 2000: 177-185.
19. C. TOUZET, "Programming Robots with Associative Memories," *IJCNN'99*, Washington D. C. , USA, July 10-16, 1999.

20. J. M. SANTOS & C. TOUZET, "Automatic Tuning of the Reinforcement Function," *NEURAP'98*, Marseilles, France, March 11-13, 1998.
21. M. LE GOC, C. TOUZET & C.-C. THIRON, "The SACHEM Experience on Artificial Neural Networks Application," *NEURAP'98*, Marseilles, France, March 11-13, 1998.
22. C. TOUZET, "Cooperative robot learning," *AAAI Fall Symposium in Planning with Partially Observable Markov Decision Processes*, Orlando, FL, October 1998.
23. C. TOUZET, "Learning Approaches in Cooperative Robotics: A Few Facts," *CONALD workshop "Robot Exploration and Learning"*, Pittsburgh, PA, June 1998.
24. C. TOUZET & J. M. SANTOS, "Reinforcement Function Design and Bias for Efficient Learning in Mobile Robots," *WCCI-FUZZ-IEEE'98*, Anchorage, Alaska, May 4-9, 1998.
25. C. TOUZET, "Neural reinforcement learning for behavior synthesis," *CESA'96 (Computational Engineering in Systems Applications)*, IMACS Multiconference, Lille, France, 9-12 July 1996, pp 734-739.
26. P. DROUOT, C. TOUZET and M. LE GOC, "Artificial Neural Networks for Data Validation in Blast Furnaces Monitoring," *NEURAP'96*, Marseille, France, March 1996.
27. S. SEHAD and C. TOUZET, "Neural Reinforcement Path Planning for the Miniature Robot Khepera," *WCNN'95*, Washington D.C., USA, 17-21 July 1995.
28. C. TOUZET, S. SEHAD and N. GIAMBIASI, "Improving Reinforcement Learning of Obstacle Avoidance Behavior with Forbidden Sequences of Actions," *International Conference on Robotics and Manufacturing*, Cancun, Mexico, 14-16 June 1995.
29. C. TOUZET, N. KIEFFER and M. LE GOC, "Artificial Neural Networks Forecasting and Monitoring Scaffold and Scaffolding Phenomena in Blast Furnaces," *IEEE International Conference on SMC*, Vancouver, Canada, 22-25 October 1995.
30. C. TOUZET, F. BLAYO, C. LEHMANN & N. GIAMBIASI, "Neural Networks in Simulation," *European Simulation Symposium*, Istanbul, Turkey, October 1994.
31. C. TOUZET, "Extending Immediate Reinforcement Learning on Neural Networks to Multiple Actions," *ESANN 94*, Bruxelles, April 1994.
32. S. SEHAD and C. TOUZET, "Reinforcement Learning and Neural Reinforcement Learning," *ESANN 94*, Bruxelles, April 1994.
33. C. TOUZET, "Apprentissage par renforcement neuronal : avantages et limitations", *Second European Congress on Systems Sciences*, Prague, October 1993.
34. A. BRONS, G. RABATEL, F. ROS, F. SEVILA & C. TOUZET, "Multi-layer neural networks and statistical methods for quality control", *Neuro-Nîmes 93*, Nîmes.
35. C. TOUZET, N. GIAMBIASI, "The Connectionist Sequential Machine: a General Model of Sequential Networks", *Australian Conf. on Neural Networks*, in Canberra, P. Leong & M. Jabri Eds. Sydney University Electrical Engineering, NSW 2006, Australia, February 1992.
36. A. BRONS, G. RABATEL, F. SEVILLA, C. TOUZET, "Evaluation de la qualité des plantes en pots par un réseau multicouche, assisté par des méthodes statistiques," *Neuro-Nîmes 91*, Nîmes, France, novembre 1991.
37. O. SARZEAUD, Y. STEPHAN, C. TOUZET, "Finite Element Meshing using Kohonen's Self-Organizing Maps", *ICANN'91*, Helsinki, Finland, juin 1991.
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39. C. TOUZET, N. GIAMBIASI, "Connectionist finite-state machines", *IJCNN'90*, Washington DC, 15-19 janvier 1990.
40. N. GIAMBIASI, R. LBATH et C. TOUZET, "Une approche connexionniste pour calculer l'implication floue dans les systèmes à base de règles", *Neuro-Nîmes 89*, Nîmes, novembre 1989.
41. C. TOUZET, N. GIAMBIASI, "Neuromimetic Sequential Machines", *IASTED expert systems*, Zurich, Suisse, June 1989.
42. C. TOUZET, N. GIAMBIASI, "Reconnaissance de séquences par des réseaux de neurones", *Neuro-Nîmes 88*, Nîmes, France, novembre 1988.

### Conférences ationales avec comité de lecture

1. Touzet C., "Modèles cognitifs de l'attention visuelle", *Ecole Recherche Multimodale d'Information - ERMITES 2010, MODELES DE PERCEPTION & CATEGORISATION VISUELLES*, 28, 29 et 30 septembre 2010 sur la presqu'île de Giens.
2. C. Herrera, Touzet, C., Cerveau, M., Chambon, C., Paban, V, Michel, B., & Alescio-Lautier (2007). « Vieillesse des fonctions mnésiques et attentionnelles chez la personne âgée saine et pathologique : Effet de la rééducation », *Colloque de l'école doctorale Neurosciences*, Aix-Marseille Universités, Marseille, F.
3. S. Dufau, B. Lété, C. Touzet, H. Glotin, J. Ziegler & J. Grainger, "Modélisation et simulation par carte auto-organisatrice de l'effet de fréquence des mots chez l'apprenti lecteur", *1ère conférence Francophone de Neurosciences Computationnelles*, Pont-à-Mousson, France, Septembre 2006.
4. C. TOUZET et S. SEHAD, "Apprentissage par renforcement neuronal pour l'acquisition d'un comportement d'évitement d'obstacle," *NSI'96*, Marly-le-Roi, mai 1996.
5. C. TOUZET, "KHEPERA : un outil pour l'étude du hasard et des contraintes dans la genèse des formes collectives," *Journées de Rochebrune*, AFCET Cognition, Janvier 1995.
6. S. SEHAD et C. TOUZET, "Apprentissage par renforcement pour l'acquisition de comportements en robotique," *NSI'94*, Chamonix, mai 1994.
7. P. COUTURIER, A. JOHANNET, I. SARDA & C. TOUZET, "Robot hexapode : réalisation et apprentissage de la marche," *NSI'94*, Chamonix, mai 1994.
8. C. TOUZET, "Apprentissage par renforcement neuronal d'un comportement d'évitement d'obstacles pour le mini-robot Khepera", *Journées de Rochebrune*, AFCET Cognition, Janvier 1994.
9. C. TOUZET et F. MONDADA, "Quelques comportements adaptatifs pour le robot miniature Khepera", *Annales du Groupe CARNAC*, n° 6, EPFL (Suisse), Décembre 1993.
10. C. TOUZET, N. GIAMBIASI, "L'émergence de comportements intelligents dans le domaine du connexionnisme : réflexion sur la taille", *Émergence dans les modèles de la cognition*, ENST, Paris, 15-16 avril 1992.
11. C. TOUZET, O. SARZEAUD, "Application d'un algorithme d'apprentissage par pénalité/récompense à la génération de formes locomotrices hexapodes", *Journées de Rochebrune*, AFCET Intelligence Artificielle, 20-24 janvier 1992.
12. C. TOUZET, N. GIAMBIASI, "Quelques approches neuromimétiques pour le traitement des séquences", *NSI 90*, Centre Paul Langevin, Aussois, 7-10 mai 1990.

## **Brevets**

1. C. Touzet et B. Alescio-Lautier, Système de mesure et de stimulation de l'activité neurologique, brevet INPI n°2902917 du 28 décembre 2007.
2. F. Lemann et C. Touzet, Procédé d'analyse comportementale, brevet INPI FR2875040 du 10/03/2006. Extension PCT n° 40808.

## **DVD/CD-Rom**

1. H. Glotin, Touzet C. and Kermorvant C., *The cognilego project: from pixels to semantics*, video (16 minutes), available online at [www.a2ialab.com/doku.php?id=public:cognilego](http://www.a2ialab.com/doku.php?id=public:cognilego)
2. B. Alescio-Lautier et C. Touzet (2010) *Atelier memo-Technik : boite à outils logicielle pour la stimulation cognitive (Professionnels)*, Mind Autonomy Research éd.
3. B. Alescio-Lautier et C. Touzet (2009) *memo-Technik 1 : programme d'entraînement de la mémoire et de l'attention (40 ans et +)*, Mind Autonomy Research éd.

## **Editeur invité**

1. C. Touzet and F. Mondada guests editors, Robot Behavior Modeling and Simulation, *Special issue of International Journal of Advanced Robotic Systems*, July 2006.
2. C. TOUZET and I. CLOETE (Eds), Applications of Artificial Neural Networks, *Special Issue of Neurocomputing* (Elsevier), Vol. 28, No. 1/3, September 1999.
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