Citation Index for Robot Learning

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REFERENCES

[1] Pieter Abbeel and Andrew Y Ng. Apprenticeship learning via inverse reinforcement learning. In *Proceedings of the 21st International Conference on Machine Learning (ICML)*, pages 1–8, 2004.

[2] E.W. Aboaf, C.G. Atkeson, and D.J. Reinkensmeyer. Task-level robot learning. *Proceedings. 1988 IEEE International Conference on Robotics and Automation*, 1988.

[3] J. Aleotti and S. Caselli. Robust trajectory learning and approximation for robot programming by demonstration. *Robotics and Autonomous Systems*, 54(5):409–413, 2006.

[4] Brenna D. Argall, Brenna D. Argall, Sonia Chernova, Sonia Chernova, Manuela Veloso, Manuela Veloso, Brett Browning, and Brett Browning. A survey of robot learning from demonstration. *Robotics and Autonomous Systems*, 57(5):469–483, 2009.

[5] Brenna D Argall, Sonia Chernova, Manuela Veloso, and B Browning. A survey of robot learning from demonstration. *Robotics and Autonomous Systems*, 57(5):469–483, 2009.

[6] Brenna D. Argall, Sonia Chernova, Manuela Veloso, and Brett Browning. A survey of robot learning from demonstration. *Robotics and Autonomous Systems*, 57(5):469–483, 2009.

[7] A.M. Arsenic. Developmental learning on a humanoid robot. *2004 IEEE International Joint Conference on Neural Networks (IEEE Cat. No.04CH37541)*, 4, 2004.

[8] C. Atkeson and J. McIntyre. Robot trajectory learning through practice. *Proceedings. 1986 IEEE International Conference on Robotics and Automation*, 3, 1986.

[9] C. G. Atkeson and S. Schaal. Memory-based neural networks for robot learning, 1995.

[10] Christopher G Atkeson and Stefan Schaal. Robot learning from demonstration. *Learning*, (1994):12–20, 1997.

[11] Christopher G. Atkeson and Stefan Schaal. Robot learning from demonstration. *14th International Conference on Machine Learning*, pages 12–20, 1997.

[12] Peter Augustsson, Krister Wolff, and Peter Nordin. Creation of a learning, flying robot by means of evolution. *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2002), volume*, pages 1279–1285, 2002.

[13] T. D. Barfoot, E. J P Earon, and G. M T D'Eleuterio. Experiments in learning distributed control for a hexapod robot. *Robotics and Autonomous Systems*, 54(10):864–872, 2006.

[14] Aude Billard and Roland Siegwart. Robot learning from demonstration. In *Robotics and Autonomous Systems*, volume 47, pages 65–67, 2004.

[15] Botond Bocsi, Lehel Csato, and Jan Peters. Alignment-based transfer learning for robot models. In *Proceedings of the International Joint Conference on Neural Networks*, 2013.

[16] Michael Bowling and Manuela Veloso. Simultaneous adversarial multi-robot learning. In *IJCAI International Joint Conference on Artificial Intelligence*, pages 699–704, 2003.

[17] Maya Cakmak, Nick Depalma, Rosa I. Arriaga, and Andrea L. Thomaz. Exploiting social partners in robot learning. *Autonomous Robots*, 29(3-4):309–329, 2010.

[18] Maya Cakmak, Nick DePalma, Andrea L. Thomaz, and Rosa Arriaga. Effects of social exploration mechanisms on robot learning. In *Proceedings - IEEE International Workshop on Robot and Human Interactive Communication*, pages 128–134, 2009.

[19] Maya Cakmak and Andrea L Thomaz. Designing robot learners that ask good questions. In *Proceedings of the seventh annual ACM/IEEE international conference on Human-Robot Interaction - HRI '12*, page 17, 2012.

[20] Sylvain Calinon and Aude Billard. Incremental learning of gestures by imitation in a humanoid robot. In *International conference on Human-robot interaction*, page 255, 2007.

[21] Sylvain Calinon, Florent Guenter, and Aude Billard. On learning, representing, and generalizing a task in a humanoid robot. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 37(2):286–298, 2007.

[22] Sylvain Calinon, Irene Sardellitti, and Darwin G. Caldwell. Learning-based control strategy for safe human-robot interaction exploiting task and robot redundancies. In *IEEE/RSJ 2010 International Conference on Intelligent Robots and Systems, IROS 2010 - Conference Proceedings*, pages 249–254, 2010.

[23] Rehj Cantrell, Paul Schermerhorn, and Matthias Scheutz. Learning actions from human-robot dialogues. In *Proceedings - IEEE International Workshop on Robot and Human Interactive Communication*, pages 125–130, 2011.

[24] H. Casarrubias-Vargas, A. Petrilli-Barceló, and E. Bayro-Corrochano. EKF-SLAM and machine learning techniques for visual robot navigation. In *Proceedings - International Conference on Pattern Recognition*, pages 396–399, 2010.

[25] Sotirios P. Chatzis, Dimitrios Korkinof, and Yiannis Demiris. A nonparametric Bayesian approach toward robot learning by demonstration. *Robotics and Autonomous Systems*, 60(6):789–802, 2012.

[26] Jonathan H Connell and Sridhar Mahadevan. Introduction to Robot Learning. In *Robot Learning*, volume 233, pages 1–17. 1993.

[27] Christopher Crick, Sarah Osentoski, Graylin Jay, and Odest Chadwicke O.C. Jenkins. Human and robot perception in large-scale learning from demonstration. In *Proceedings of the 6th international conference on Human-robot interaction - HRI '11*, pages 339–346, 2011.

[28] Joachim De Greeff, Frédéric Delaunay, and Tony Belpaeme. Active robot learning with human tutelage. In *2012 IEEE International Conference on Development and Learning and Epigenetic Robotics, ICDL 2012*, 2012.

[29] Rüdiger Dillmann. Teaching and learning of robot tasks via observation of human performance. In *Robotics and Autonomous Systems*, volume 47, pages 109–116, 2004.

[30] A. D'Souza, S. Vijayakumar, and S. Schaal. Learning inverse kinematics. *Proceedings 2001 IEEE/RSJ International Conference on Intelligent Robots and Systems. Expanding the Societal Role of Robotics in the the Next Millennium (Cat. No.01CH37180)*, 1, 2001.

[31] S.P. Engelson and D.V. McDermott. Error correction in mobile robot map learning. *Proceedings 1992 IEEE International Conference on Robotics and Automation*, 1992.

[32] Mustafa Suphi Erden and Kemal LeblebicioÇğlu. Free gait generation with reinforcement learning for a six-legged robot. *Robotics and Autonomous Systems*, 56(3):199–212, 2008.

[33] W. Ertel, M. Schneider, R. Cubek, and M. Tokicy. The Teaching-Box: A universal robot learning framework. *2009 International Conference on Advanced Robotics*, 2009.

[34] Fernando Fernández, Daniel Borrajo, and Lynne E. Parker. A reinforcement learning algorithm in cooperative multi-robot domains. *Journal of Intelligent and Robotic Systems: Theory and Applications*, 43(2-4):161–174, 2005.

[35] M O Franz, B Schölkopf, H A Mallot, and H H Bülthoff. Learning view graphs for robot navigation. *Autonomous Robots*, 5(1):111–125, 1998.

[36] S. C. Gadanho and J. Hallam. Robot Learning Driven by Emotions, 2001.

[37] Arati Gopalakrishnan, Sheldon Greene, and Ali Sekmen. Vision-based mobile robot learning and navigation. In *Proceedings - IEEE International Workshop on Robot and Human Interactive Communication*, volume 2005, pages 48–53, 2005.

[38] Daniel H. Grollman and Odest Chadwicke Jenkins. Learning robot soccer skills from demonstration. In *2007 IEEE 6th International Conference on Development and Learning, ICDL*, pages 276–281, 2007.

[39] Daniel H Grollman and Odest Chadwicke Jenkins. Sparse incremental learning for interactive robot control policy estimation. In *2008 IEEE International Conference on Robotics and Automation*, pages 3315–3320, 2008.

[40] Ye Gu, Anand Thobbi, and Weihua Sheng. Human-robot collaborative manipulation through imitation and reinforcement learning. In *2011 IEEE International Conference on Information and Automation, ICIA 2011*, pages 151–156, 2011.

[41] Jeonghye Han and Dongho Kim. r-Learning services for elementary school students with a teaching assistant robot. *Proceedings of the 4th ACM/IEEE international conference on Human robot interaction - HRI '09*, page 255, 2009.

[42] F. Hara. Artificial emotion of face robot through learning in communicative interactions with human. *RO-MAN 2004. 13th IEEE International Workshop on Robot and Human Interactive Communication (IEEE Catalog No.04TH8759)*, 2004.

[43] Micha Hersch, Florent Guenter, Sylvain Calinon, and Aude Billard. Dynamical system modulation for robot learning via kinesthetic demonstrations. *IEEE Transactions on Robotics*, 24(6):1463–1467, 2008.

[44] Todd Hester, Michael Quinlan, and Peter Stone. Generalized Model Learning for Reinforcement Learning on a Humanoid Robot. *East*, (May):2369–2374, 2010.

[45] Shuhei Ikemoto, Heni Ben Amor, Takashi Minato, Bernhard Jung, and Hiroshi Ishiguro. Physical human-robot interaction: Mutual learning and adaptation. *IEEE Robotics and Automation Magazine*, 19(4):24–35, 2012.

[46] Uri Kartoun, Helman Stern, and Yael Edan. A human-robot collaborative reinforcement learning algorithm. *Journal of Intelligent and Robotic Systems: Theory and Applications*, 60(2):217–239, 2010.

[47] Michael Kasper, Gernot Fricke, Katja Steuernagel, and Ewald Von Puttkamer. Behavior-based mobile robot architecture for Learning from Demonstration. *Robotics and Autonomous Systems*, 34(2-3):153–164, 2001.

[48] Zsolt Kira. Inter-Robot Transfer Learning for Perceptual Classification. In *Proceedings of the 9th International Conference on Autonomous Agents and Multiagent Systems: volume 1 - Volume 1*, pages 13–20, 2010.

[49] Alexandra Kirsch. Robot learning language - Integrating programming and learning for cognitive systems. *Robotics and Autonomous Systems*, 57(9):943–954, 2009.

[50] Jens Kober, Erhan Oztop, and Jan Peters. Reinforcement learning to adjust robot movements to new situations. In *IJCAI International Joint Conference on Artificial Intelligence*, pages 2650–2655, 2011.

[51] Nathan Koenig, Leila Takayama, and Maja Matarić. Communication and knowledge sharing in human-robot interaction and learning from demonstration. *Neural networks : the official journal of the International Neural Network Society*, 23(8-9):1104–12, 2010.

[52] Petar Kormushev, Sylvain Calinon, and Darwin G. Caldwell. Robot motor skill coordination with EM-based reinforcement learning. In *IEEE/RSJ 2010 International Conference on Intelligent Robots and Systems, IROS 2010 - Conference Proceedings*, pages 3232–3237, 2010.

[53] O. B. Kroemer, R. Detry, J. Piater, and J. Peters. Combining active learning and reactive control for robot grasping. *Robotics and Autonomous Systems*, 58(9):1105–1116, 2010.

[54] Yasuo Kuniyoshi, P Bakker, P Bakker, and Y Kuniyoshi. Robot see, robot do: An overview of robot imitation. *Proceedings of the AISB96 Workshop on Learning in Robots and Animals*, pages 3–11, 1996.

[55] Dongheui Lee, Christian Ott, Yoshihiko Nakamura, and Gerd Hirzinger. Physical Human Robot Interaction in Imitation Learning. *Robotics*, pages 3439–3440, 2011.

[56] A. Lockerd and C. Breazeal. Tutelage and socially guided robot learning. *2004 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (IEEE Cat. No.04CH37566)*, 4, 2004.

[57] I. Lutkebohle, J. Peltason, L. Schillingmann, B. Wrede, S. Wachsmuth, C. Elbrechter, and R. Haschke. The curious robot - Structuring interactive robot learning. *2009 IEEE International Conference on Robotics and Automation*, 2009.

[58] Maja J Matari, Complex Systems, and M.J. Matarić. Reinforcement learning in the multi-robot domain. *Autonomous Robots*, 4:73–83, 1997.

[59] Maja J. Matarić. Learning in behavior-based multi-robot systems: policies, models, and other agents, 2001.

[60] Yasser Mohammad, Toyoaki Nishida, and Shogo Okada. Unsupervised simultaneous learning of gestures, actions and their associations for human-robot interaction. In *2009 IEEE/RSJ International Conference on Intelligent Robots and Systems, IROS 2009*, pages 2537–2544, 2009.

[61] Andrew W Moore. *Efficient Memory-based Learning for Robot Control*. PhD thesis, 1990.

[62] J. Morimoto and K. Doya. Acquisition of stand-up behavior by a real robot using hierarchical reinforcement learning. *Robotics and Autonomous Systems*, 36(1):37–51, 2001.

[63] Katharina Mülling, Jens Kober, Oliver Kroemer, and Jan Peters. Learning to select and generalize striking movements in robot table tennis. *The International Journal of Robotics Research*, 32(3):263–279, 2013.

[64] Yukie Nagai and Katharina J. Rohlfing. Computational analysis of motionese toward scaffolding robot action learning. *IEEE Transactions on Autonomous Mental Development*, 1(1):44–54, 2009.

[65] Lorenzo Natale, Francesco Nori, Giulio Sandini, and Giorgio Metta. Learning precise 3D reaching in a humanoid robot. In *2007 IEEE 6th International Conference on Development and Learning, ICDL*, pages 324–329, 2007.

[66] Dan Nguyen-Tuong and Jan Peters. Model Learning for Robot Control: A Survey. *Cognitive Processing*, 12:319–340, 2011.

[67] Duy Nguyen-Tuong and Jan Peters. Model learning for robot control: A survey, 2011.

[68] M N Nicolescu and M J Mataric. Task learning through imitation and human-robot interaction. *Models and Mechanisms of Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions*, pages 407–424, 2006.

[69] M.N. Nicolescu and M.J. Mataric. Experience-based representation construction: learning from human and robot teachers. *Proceedings 2001 IEEE/RSJ International Conference on Intelligent Robots and Systems. Expanding the Societal Role of Robotics in the the Next Millennium (Cat. No.01CH37180)*, 2, 2001.

[70] M.N. Nicolescu and M.J. Mataric. Learning and interacting in human-robot domains. *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, 31(5), 2001.

[71] Monica N. Nicolescu and Maja J. Mataric. Natural methods for robot task learning. In *Proceedings of the Second International Joint Conference on Autonomous Agents and Multiagent systems - AAMAS '03*, page 241, 2003.

[72] E. Oztop. Human sensorimotor learning for robot skill synthesis. *RO-MAN, 2010 IEEE*, 2010.

[73] Kui Hong Park, Yong Jae Kim, and Jong Hwan Kim. Modular Q-learning based multi-agent cooperation for robot soccer. *Robotics and Autonomous Systems*, 35(2):109–122, 2001.

[74] Lynne E Parker, Claude Touzet, and Fernando Fernandez. Techniques for Learning in Multi-Robot Teams. In *Robot Teams: From Diversity to Polymorphism. AK Peters*, pages 191–236. 2002.

[75] Jim Pugh and Alcherio Martinoli. Multi-robot learning with particle swarm optimization. In *AAMAS '06 Proceedings of the fifth international joint conference on Autonomous agents and multiagent systems*, pages 441–448, 2006.

[76] Jim Pugh and Alcherio Martinoli. Distributed scalable multi-robot learning using particle swarm optimization. *Swarm Intelligence*, 3(3):203–222, 2009.

[77] Austin Reiter, Andrea Bajo, Konstantinos Iliopoulos, Nabil Simaan, and Peter K. Allen. Learning-based configuration estimation of a multi-segment continuum robot. In *Proceedings of the IEEE RAS and EMBS International Conference on Biomedical Robotics and Biomechatronics*, pages 829–834, 2012.

[78] Martin Riedmiller, Thomas Gabel, Roland Hafner, and Sascha Lange. Reinforcement learning for robot soccer. *Autonomous Robots*, 27(1):55–73, 2009.

[79] P. Rouanet, P.-Y. Oudeyer, and D. Filliat. A study of three interfaces allowing non-expert users to teach new visual objects to a robot and their impact on learning efficiency. *Human-Robot Interaction (HRI), 2010 5th ACM/IEEE International Conference on*, 2010.

[80] Leonel Rozo, Pablo Jim, and Institut De Rob. Robot Learning from Demonstration in the Force Domain. *Communications*, pages 1–6, 2011.

[81] Tamie Salter, Kerstin Dautenhahn, and René Te Boekhorst. Learning about natural human-robot interaction styles. In *Robotics and Autonomous Systems*, volume 54, pages 127–134, 2006.

[82] G Saponaro and A Bernardino. Generation of meaningful robot expressions with active learning. In *Human-Robot Interaction (HRI), 2011 6th ACM/IEEE International Conference on*, pages 243–244, 2011.

[83] S. Schaal, C.G. Atkeson, and S. Vijayakumar. Real-time robot learning with locally weighted statistical learning. *Proceedings 2000 ICRA. Millennium Conference. IEEE International Conference on Robotics and Automation. Symposia Proceedings (Cat. No.00CH37065)*, 1, 2000.

[84] Stefan Schaal. Robot learning from demonstration. *Advances in Neural Information Processing Systems*, (9):1040–1046, 1997.

[85] Stefan Schaal. Learning Robot Control. *Learning*, 2:983–987, 2002.

[86] Stefan Schaal and Christopher G. Atkeson. Robot juggling: implementation of memory-based learning. *IEEE Control Systems Magazine*, 14(1):57–71, 1994.

[87] Stefan Schaal and Christopher G. Atkeson. Learning control in robotics. *IEEE Robotics and Automation Magazine*, 17(2):20–29, 2010.

[88] Stefan Schaal, Christopher G. Atkeson, and Sethu Vijayakumar. Scalable techniques from nonparametric statistics for real time robot learning. *Applied Intelligence*, 17(1):49–60, 2002.

[89] Siang Kok Sim Siang Kok Sim, Kai Wei Ong Kai Wei Ong, and G. Seet. A Foundation for Robot Learning. *2003 4th International Conference on Control and Automation Proceedings*, 2003.

[90] J. J. Steil, F. RÌÍLothling, R. Haschke, and H. Ritter. Situated robot learning for multi-modal instruction and imitation of grasping. In *Robotics and Autonomous Systems*, volume 47, pages 129–141, 2004.

[91] Jun Tani and Jun Yamamoto. On the dynamics of robot exploration learning. *Cognitive Systems Research*, 3(3):459–470, 2002.

[92] Andrea L Thomaz. Interactive Robot Task Learning. *Learning*, pages 3037–3040, 2010.

[93] Andrea L. Thomaz and Cynthia Breazeal. Robot learning via socially guided exploration. In *2007 IEEE 6th International Conference on Development and Learning, ICDL*, pages 82–87, 2007.

[94] Sebastian Thrun. Learning metric-topological maps for indoor mobile robot navigation, 1998.

[95] Sebastian Thrun and Tom M. Mitchell. Lifelong robot learning, 1995.

[96] Kartoun Uri, Stern Helman, and Edan Yael. Human-robot collaborative learning system for inspection. In *Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics*, volume 5, pages 4249–4255, 2007.

[97] Nikos Vlassis, Marc Toussaint, Georgios Kontes, and Savas Piperidis. Learning Model-free robot control by a Monte Carlo em algorithm. *Autonomous Robots*, 27(2):123–130, 2009.

[98] Ying Wang and Clarence W. de Silva. A machine-learning approach to multi-robot coordination. *Engineering Applications of Artificial Intelligence*, 21(3):470–484, 2008.

[99] S. Wermter, C. Weber, M. Elshaw, C. Panchev, H. Erwin, and F. PulvermÌĹuller. Towards multimodal neural robot learning. In *Robotics and Autonomous Systems*, volume 47, pages 171–175, 2004.

[100] Erfu Yang and Dongbing Gu. Multiagent reinforcement learning for multi-robot systems: A survey. *University of Essex Technical Report CSM-404, ...*, pages 1–23, 2004.