

1 Probabilistic models of cognition (31)

1.1 Rational analysis (3)

- Marr, D. (1971). The Philosophy and the Approach. In *Vision* (Chap. 1). Retrieved from http://web.stanford.edu/class/psych209a/ReadingsByDate/01_07/Marr82Philosophy.pdf.
- Anderson, J. R. (1990). Introduction. In *The adaptive character of thought* (Chap. 1, pp. 1–40). Lawrence Erlbaum Associates.
- Chater, N. & Oaksford, M. (1999). Ten years of the rational analysis of cognition. *Trends in Cognitive Science*, 3(2), 57–65. doi:[10.1016/S1364-6613\(98\)01273-X](https://doi.org/10.1016/S1364-6613(98)01273-X).

1.2 Bayesian models of cognition (7)

- Tenenbaum, J. B. & Griffiths, T. L. (2001). Generalization, similarity, and Bayesian inference. *The Behavioral and Brain Sciences*, 24, 629–640, discussion 652–791. doi:[10.1017/S0140525X01000061](https://doi.org/10.1017/S0140525X01000061).
- Griffiths, T. L. & Tenenbaum, J. B. (2006). Optimal predictions in everyday cognition. *Psychological Science*, 17(9), 767–773. doi:[10.1111/j.1467-9280.2006.01780.x](https://doi.org/10.1111/j.1467-9280.2006.01780.x).
- Kemp, C. & Tenenbaum, J. B. (2008). The discovery of structural form. *Proceedings of the National Academy of Sciences of the United States of America*, 105(31), 10687–92. doi:[10.1073/pnas.0802631105](https://doi.org/10.1073/pnas.0802631105).
- Griffiths, T. L., Chater, N., Kemp, C., Perfors, A., & Tenenbaum, J. B. (2010). Probabilistic models of cognition: exploring representations and inductive biases. *Trends in Cognitive Sciences*, 14(8), 357–364. doi:[10.1016/j.tics.2010.05.004](https://doi.org/10.1016/j.tics.2010.05.004).
- Tenenbaum, J. B., Kemp, C., Griffiths, T. L., & Goodman, N. D. (2011). How to grow a mind: statistics, structure, and abstraction. *Science*, 331(6022), 1279–85. doi:[10.1126/science.1192788](https://doi.org/10.1126/science.1192788).
- Teglas, E., Vul, E., Girotto, V., Gonzalez, M., Tenenbaum, J. B., & Bonatti, L. L. (2011). Pure reasoning in 12-month-old infants as probabilistic inference. *Science*, 332(6033), 1054–9. doi:[10.1126/science.1196404](https://doi.org/10.1126/science.1196404).
- Jacobs, R. A. & Kruschke, J. K. (2011). Bayesian learning theory applied to human cognition. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2(1), 8–21. doi:[10.1002/wcs.80](https://doi.org/10.1002/wcs.80).

1.3 Probabilistic models of perception (3)

- Weiss, Y., Simoncelli, E. P., & Adelson, E. H. (2002). Motion illusions as optimal percepts. *Nature Neuroscience*, 5(6), 598–604. doi:[10.1038/nn858](https://doi.org/10.1038/nn858).
- Ernst, M. O. & Banks, M. S. (2002). Humans integrate visual and haptic information in a statistically optimal fashion. *Nature*, 415(6870), 429–433. doi:[10.1038/415429a](https://doi.org/10.1038/415429a).
- Körding, K. P. & Wolpert, D. M. (2004). Bayesian integration in sensorimotor learning. *Nature*, 427(6971), 244–247. doi:[10.1038/nature02169](https://doi.org/10.1038/nature02169).

1.4 Generative models (4)

- Yuille, A. L. & Kersten, D. (2006). Vision as Bayesian inference: analysis by synthesis? *Trends in Cognitive Sciences*, 10(7), 301–308. doi:[10.1016/j.tics.2006.05.002](https://doi.org/10.1016/j.tics.2006.05.002).
- Bever, T. G. & Poeppel, D. (2010). Analysis by Synthesis: A (Re-)Emerging Program of Research for Language and Vision. *Biolinguistics*, 43(2), 174–200. Retrieved from <http://www.psych.nyu.edu/clash/dp-papers/bever.poeppel.pdf>.
- Battaglia, P. W., Kersten, D., & Schrater, P. R. (2012). The Role of Generative Knowledge in Object Perception. In J. Trommershauser, K. P. Körding, & M. S. Landy (Eds.), *Sensory cue integration*. Oxford University Press.
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *The Behavioral and Brain Sciences*, 36(3), 181–204. doi:[10.1017/S0140525X12000477](https://doi.org/10.1017/S0140525X12000477).

1.5 Theory learning (4)

- Kemp, C., Perfors, A., & Tenenbaum, J. B. (2007). Learning overhypotheses with hierarchical Bayesian models. *Developmental Science*, 10(3), 307–321. doi:[10.1111/j.1467-7687.2007.00585.x](https://doi.org/10.1111/j.1467-7687.2007.00585.x).
- Griffiths, T. L. & Tenenbaum, J. B. (2009). Theory-based causal induction. *Psychological Review*, 116(4), 661–716. doi:[10.1037/a0017201](https://doi.org/10.1037/a0017201).
- Kemp, C., Tenenbaum, J. B., Niyogi, S., & Griffiths, T. L. (2010). A probabilistic model of theory formation. *Cognition*, 114(2), 165–196. doi:[10.1016/j.cognition.2009.09.003](https://doi.org/10.1016/j.cognition.2009.09.003).
- Ullman, T. D., Goodman, N. D., & Tenenbaum, J. B. (2012). Theory learning as stochastic search in the language of thought. *Cognitive Development*, 27(4). doi:[10.1016/j.cogdev.2012.07.005](https://doi.org/10.1016/j.cogdev.2012.07.005).

1.6 Rational process models (4)

- Hay, N. J., Russell, S. J., Tolpin, D., & Shimony, S. E. (2012). Selecting Computations: Theory and Applications. *arXiv preprint arXiv:1207.5878v1 [cs.AI]*. arXiv: [1207.5879](https://arxiv.org/abs/1207.5879). Retrieved from <http://arxiv.org/abs/1207.5879>.
- Lieder, F., Griffiths, T. L., & Goodman, N. D. (2012). Burn-in, bias, and the rationality of anchoring. *Advances in Neural Information Processing Systems*, 25. Retrieved from <http://papers.nips.cc/paper/4719-burn-in-bias-and-the-rationality-of-anchoring>.
- Vul, E., Goodman, N. D., Griffiths, T. L., & Tenenbaum, J. B. (2014). One and Done? Optimal Decisions From Very Few Samples. *Cognitive Science*, 38(4), 599–637. doi:[10.1111/cogs.12101](https://doi.org/10.1111/cogs.12101).
- Griffiths, T. L., Lieder, F., & Goodman, N. D. (2015). Rational Use of Cognitive Resources: Levels of Analysis Between the Computational and the Algorithmic. *Topics in Cognitive Science*, 7(2), 217–229. doi:[10.1111/tops.12142](https://doi.org/10.1111/tops.12142).

1.7 Challenges for probabilistic models of cognition (6)

- Kahneman, D. & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80(4), 237–251. doi:[10.1037/h0034747](https://doi.org/10.1037/h0034747).
- Tversky, A. & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, 185(4157), 1124–1131. doi:[10.1126/science.185.4157.1124](https://doi.org/10.1126/science.185.4157.1124).
- Mozer, M. C., Pashler, H., & Homaei, H. (2008). Optimal predictions in everyday cognition: the wisdom of individuals or crowds? *Cognitive Science*, 32(7), 1133–1147. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1080/03640210802353016/abstract>.
- Jones, M. & Love, B. C. (2011). Bayesian fundamentalism or enlightenment? On the explanatory status and theoretical contributions of Bayesian models of cognition. *The Behavioral and Brain Sciences*, 34(4), 169–188. doi:[10.1017/S0140525X10003134](https://doi.org/10.1017/S0140525X10003134).
- Marcus, G. F. & Davis, E. (2013). How Robust Are Probabilistic Models of Higher-Level Cognition? *Psychological Science*, 24(12), 2351–2360. doi:[10.1177/0956797613495418](https://doi.org/10.1177/0956797613495418).
- Jones, M. & Dzhamfarov, E. N. (2014). Unfalsifiability and Mutual Translatability of Major Modeling Schemes for Choice Reaction Time. *Psychological Review*, 121(1), 1–32. doi:[10.1037/a0034190](https://doi.org/10.1037/a0034190).

2 Aspects of simulation in cognitive science (37)

2.1 Mental imagery (6)

- Shepard, R. N. & Metzler, J. (1971). Mental Rotation of Three-Dimensional Objects. *Science*, 171(3972), 701–703. doi:[10.1126/science.171.3972.701](https://doi.org/10.1126/science.171.3972.701).
- Just, M. A. & Carpenter, P. A. (1976). Eye fixations and cognitive processes. *Cognitive Psychology*, 8, 441–480. doi:[10.1016/0010-0285\(76\)90015-3](https://doi.org/10.1016/0010-0285(76)90015-3).
- Kosslyn, S. M. (1988). Aspect of a Cognitive Neuroscience of Mental Imagery. *Science*, 240(4859), 1621–1626. Retrieved from <http://www.jstor.org/stable/1701012>.
- Finke, R. A. & Slayton, K. (1988). Explorations of creative visual synthesis in mental imagery. *Memory & Cognition*, 16(3), 252–257. doi:[10.3758/BF03197758](https://doi.org/10.3758/BF03197758).
- Grush, R. (2004). The emulation theory of representation: motor control, imagery, and perception. *The Behavioral and Brain Sciences*, 27(3), 377–96, discussion 396–442. doi:[10.1017/S0140525X04000093](https://doi.org/10.1017/S0140525X04000093).
- Flusberg, S. J. & Boroditsky, L. (2011). Are things that are hard to physically move also hard to imagine moving? *Psychonomic Bulletin & Review*, 18(1), 158–164. doi:[10.3758/s13423-010-0024-2](https://doi.org/10.3758/s13423-010-0024-2).

2.2 Embodied language (3)

- Matlock, T. (2004). Fictive motion as cognitive simulation. *Memory & Cognition*, 32(8), 1389–1400. doi:[10.3758/BF03206329](https://doi.org/10.3758/BF03206329).
- Bergen, B. K., Lindsay, S., Matlock, T., & Narayanan, S. (2007). Spatial and linguistic aspects of visual imagery in sentence comprehension. *Cognitive Science*, 31(5), 733–64. doi:[10.1080/03640210701530748](https://doi.org/10.1080/03640210701530748).
- Fischer, M. H. & Zwaan, R. A. (2008). Embodied language: a review of the role of the motor system in language comprehension. *Quarterly Journal of Experimental Psychology*, 61(6), 825–850. doi:[10.1080/17470210701623605](https://doi.org/10.1080/17470210701623605).

2.3 Mental models (5)

- Gentner, D. & Stevens, A. (Eds.). (1983). *Mental Models*. Lawrence Erlbaum Associates. Retrieved from <http://amzn.com/0898592429>.
- Kuipers, B. (1986). Qualitative Simulation. *Artificial Intelligence*, 29(3), 289–338. doi:[10.1016/0004-3702\(86\)90073-1](https://doi.org/10.1016/0004-3702(86)90073-1).
- Forbus, K. D. (2011). Qualitative modeling. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2(4), 374–391. doi:[10.1002/wcs.115](https://doi.org/10.1002/wcs.115).
- Johnson-Laird, P. N. (2012). Inference with Mental Models. In *The oxford handbook of thinking and reasoning* (pp. 134–145). doi:[10.1093/oxfordhb/9780199734689.001.0001](https://doi.org/10.1093/oxfordhb/9780199734689.001.0001).
- Khemlani, S. S., Mackiewicz, R., Bucciarelli, M., & Johnson-Laird, P. N. (2013). Kinematic mental simulations in abduction and deduction. *Proceedings of the National Academy of Sciences of the United States of America*, 110(42), 16766–71. doi:[10.1073/pnas.1316275110](https://doi.org/10.1073/pnas.1316275110).

2.4 Motor control and action (4)

- Parsons, L. M. (1994). Temporal and kinematic properties of motor behavior reflected in mentally simulated action. *Journal of Experimental Psychology: Human Perception and Performance*, 20(4), 709–730. doi:[10.1037/0096-1523.20.4.709](https://doi.org/10.1037/0096-1523.20.4.709).
- Kawato, M. (1999). Internal models for motor control and trajectory planning. *Current Opinions in Neurobiology*, 9(6), 718–727. doi:[10.1016/S0959-4388\(99\)00028-8](https://doi.org/10.1016/S0959-4388(99)00028-8).
- Flanagan, R. R., Vetter, P., Johansson, R. S., & Wolpert, D. M. (2003). Prediction precedes control in motor learning. *Current Biology*, 13(2), 146–150. doi:[10.1016/S0960-9822\(03\)00007-1](https://doi.org/10.1016/S0960-9822(03)00007-1).
- White, P. A. (2012a). The experience of force: The role of haptic experience of forces in visual perception of object motion and interactions, mental simulation, and motion-related judgments. *Psychological Bulletin*, 138(4), 589–615. doi:[10.1037/a0025587](https://doi.org/10.1037/a0025587).

2.5 Physical reasoning (5)

- Freyd, J. J., Pantzer, T. M., & Cheng, J. L. (1988). Representing Statics as Forces in Equilibrium. *Journal of Experimental Psychology: General*, 117, 395–407. doi:[dx.doi.org/10.1037/0096-3445.117.4.395](https://doi.org/10.1037/0096-3445.117.4.395).
- Schwartz, D. L. (1999). Physical imagery: kinematic versus dynamic models. *Cognitive Psychology*, 38(3), 433–464. doi:[10.1006/cogp.1998.0702](https://doi.org/10.1006/cogp.1998.0702).
- Hegarty, M. (2004). Mechanical reasoning by mental simulation. *Trends in Cognitive Sciences*, 8(6), 280–285. doi:[10.1016/j.tics.2004.04.001](https://doi.org/10.1016/j.tics.2004.04.001).
- Zago, M. & Lacquaniti, F. (2005). Visual perception and interception of falling objects: a review of evidence for an internal model of gravity. *Journal of Neural Engineering*, 2(3), S198–208. doi:[10.1088/1741-2560/2/3/S04](https://doi.org/10.1088/1741-2560/2/3/S04).
- Davis, E. & Marcus, G. F. (2014). The Scope and Limits of Simulation in Cognitive Models. *arXiv:1506.04956 [cs.AI]*. arXiv: [1506.04956](https://arxiv.org/abs/1506.04956). Retrieved from <http://arxiv.org/abs/1506.04956>.

2.6 Representational momentum (3)

- Freyd, J. J. & Finke, R. A. (1984). Representational Momentum. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 10(1), 126–132. doi:[10.1037/0278-7393.10.1.126](https://doi.org/10.1037/0278-7393.10.1.126).
- Hubbard, T. L. (2005). Representational momentum and related displacements in spatial memory: A review of the findings. *Psychonomic Bulletin & Review*, 12(5), 822–851. doi:[10.3758/BF03196775](https://doi.org/10.3758/BF03196775).
- White, P. A. (2012b). The impetus theory in judgments about object motion: A new perspective. *Psychonomic Bulletin & Review*. doi:[10.3758/s13423-012-0302-2](https://doi.org/10.3758/s13423-012-0302-2).

2.7 Theory of mind (6)

- Goldman, A. I. (1992). In Defense of the Simulation Theory. *Mind & Language*, 7(1-2), 104–119. doi:[10.1111/j.1468-0017.1992.tb00200.x](https://doi.org/10.1111/j.1468-0017.1992.tb00200.x).
- Stich, S. P. & Nichols, S. (1992). Folk Psychology: Simulation or Tacit Theory? *Mind & Language*, 7(1-2), 35–71. doi:[10.1111/j.1468-0017.1992.tb00196.x](https://doi.org/10.1111/j.1468-0017.1992.tb00196.x).
- Gopnik, A. & Wellman, H. M. (1992). Why the Child’s Theory of Mind Really Is a Theory. *Mind & Language*, 7(1-2), 145–171. doi:[10.1111/j.1468-0017.1992.tb00202.x](https://doi.org/10.1111/j.1468-0017.1992.tb00202.x).
- Gordon, R. M. (1992). The Simulation theory: Objections and misconceptions. *Mind & Language*, 7(1-2), 11–34. doi:[10.1111/j.1468-0017.1992.tb00195.x](https://doi.org/10.1111/j.1468-0017.1992.tb00195.x).
- Gallese, V. & Goldman, A. I. (1998). Mirror neurons and the simulation theory of mind-reading. *Trends in Cognitive Sciences*, 2(12), 493–501. doi:[10.1016/S1364-6613\(98\)01262-5](https://doi.org/10.1016/S1364-6613(98)01262-5).
- Saxe, R. (2005). Against simulation: the argument from error. *Trends in Cognitive Sciences*, 9(4), 174–179. doi:[10.1016/j.tics.2005.01.012](https://doi.org/10.1016/j.tics.2005.01.012).

2.8 Thought experiments (5)

- Kahneman, D. & Tversky, A. (1981). *The simulation heuristic*. Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA099504>.
- Gendler, T. S. (1998). Galileo and the Indispensability of Scientific Thought Experiment. *The British Journal for the Philosophy of Science*, 49(3), 397–424.
- Trickett, S. B. & Trafton, J. G. (2007). "What if...": The Use of Conceptual Simulations in Scientific Reasoning. *Cognitive Science*, 31(5), 843–875. doi:[10.1080/03640210701530771](https://doi.org/10.1080/03640210701530771).
- Clement, J. J. (2009). The Role of Imagistic Simulation in Scientific Thought Experiments. *Topics in Cognitive Science*, 1(4), 686–710. doi:[10.1111/j.1756-8765.2009.01031.x](https://doi.org/10.1111/j.1756-8765.2009.01031.x).
- Brown, J. R. & Fehige, Y. (2014). Thought Experiments. In E. N. Zalta (Ed.), *The stanford encyclopedia of philosophy* (Fall 2014). Retrieved from <http://plato.stanford.edu/archives/fall2014/entries/thought-experiment/>.

3 Simulation and physical reasoning in computer science and robotics (32)

3.1 Inverse kinematics (3)

- Courty, N. & Arnaud, E. (2008). Inverse Kinematics Using Sequential Monte Carlo Methods. *Proceedings of the 5th Conference on Articulated Motion and Deformable Objects*. doi:[10.1007/978-3-540-70517-8_1](https://doi.org/10.1007/978-3-540-70517-8_1).
- Bócsi, B., Nguyen-Tuong, D., Csató, L., Schölkopf, B., & Peters, J. (2011). Learning inverse kinematics with structured prediction. *Proceedings of the IEEE/RSJ Conference on Intelligent Robots and Systems*. doi:[10.1109/IROS.2011.6094666](https://doi.org/10.1109/IROS.2011.6094666).
- Geoffroy, P., Mansard, N., Raison, M., Achiche, S., Tassa, Y., & Todorov, E. (2014). From Inverse Kinematics to Optimal Control. In *Advances in robot kinematics* (pp. 409–418). Springer. doi:[10.1007/978-3-319-06698-1](https://doi.org/10.1007/978-3-319-06698-1).

3.2 Planning under uncertain dynamics (3)

- Bertuccelli, L. F., Bethke, B., & How, J. P. (2012). Robust adaptive Markov decision processes: Planning with model uncertainty. *IEEE Control Systems Magazine*. doi:[10.1109/MCS.2012.2205478](https://doi.org/10.1109/MCS.2012.2205478).
- Aoude, G. S., Luders, B. D., Joseph, J. M., Roy, N., & How, J. P. (2013). Probabilistically safe motion planning to avoid dynamic obstacles with uncertain motion patterns. *Autonomous Robots*, 35(1), 51–76. doi:[10.1007/s10514-013-9334-3](https://doi.org/10.1007/s10514-013-9334-3).
- Han, W., Levine, S., & Abbeel, P. (2015). Learning Compound Multi-Step Controllers under Unknown Dynamics. *Proceedings of the 28th IEEE/RSJ International Conference on Intelligent Robots and Systems*. Retrieved from http://rll.berkeley.edu/reset_controller/reset_controller.pdf.

3.3 Physical reasoning with dynamics models (8)

- Brand, M., Cooper, P., & Birnbaum, L. (1995). Seeing Physics, or: Physics is for Prediction. *Proceedings of the Workshop on Physics Based Modelling in Computer Vision*. doi:[10.1109/PBMCV.1995.514679](https://doi.org/10.1109/PBMCV.1995.514679).
- Mordatch, I., de Lasa, M., & Hertzmann, A. (2010). Robust physics-based locomotion using low-dimensional planning. *ACM Transactions on Graphics*, 29(4). doi:[10.1145/1778765.1778808](https://doi.org/10.1145/1778765.1778808).
- Nguyen-Tuong, D. & Peters, J. (2011). Model Learning for Robot Control: A Survey. *Cognitive Processing*, 12, 319–340. doi:[10.1007/s10339-011-0404-1](https://doi.org/10.1007/s10339-011-0404-1).
- Schulman, J., Lee, A. X., Ho, J., & Abbeel, P. (2013). Tracking deformable objects with point clouds. *Proceedings of the IEEE International Conference on Robotics and Automation*. doi:[10.1109/ICRA.2013.6630714](https://doi.org/10.1109/ICRA.2013.6630714).
- Zheng, B., Zhao, Y., Yu, J. C., Ikeuchi, K., & Zhu, S.-C. (2014). Detecting Potential Falling Objects by Inferring Human Action and Natural Disturbance. *Proceedings of the IEEE International Conference on Robotics and Automation*. doi:[10.1109/ICRA.2014.6907351](https://doi.org/10.1109/ICRA.2014.6907351).
- Kitaev, N. & Abbeel, P. (2015). Physics-Based Trajectory Optimization for Grasping in Cluttered Environments. *Proceedings of the IEEE International Conference on Robotics and Automation*. Retrieved from <http://www.eecs.berkeley.edu/~pabbeel/papers/2015-ICRA-clutter.pdf>.
- Xie, C., Patil, S., Moldovan, T., Levine, S., & Abbeel, P. (2015). Model-based Reinforcement Learning with Parametrized Physical Models and Optimism-Driven Exploration. *arXiv preprint arXiv:1509.06824v1 [cs.LG]*. arXiv: [1509.06824](https://arxiv.org/abs/1509.06824). Retrieved from <http://arxiv.org/abs/1509.06824>.
- Davis, E. & Marcus, G. F. (n.d.). The Scope and Limits of Simulation in Automated Reasoning. *Artificial Intelligence*. Retrieved from <http://www.cs.nyu.edu/faculty/davise/papers/SimulationSubmitAIJ.pdf>.

3.4 Physical reasoning without dynamics models (5)

- Schulman, J., Ho, J., Lee, C., & Abbeel, P. (2013). Learning from Demonstrations Through the Use of Non-Rigid Registration. *Proceedings of the 16th International Symposium on Robotics Research*. Retrieved from http://www.cs.berkeley.edu/~pabbeel/papers/SchulmanHoLeeAbbeel_ISRR2013.pdf.
- Lee, A. X., Lu, H., Gupta, A., Levine, S., & Abbeel, P. (2015). Learning Force-Based Manipulation of Deformable Objects from Multiple Demonstrations. *Proceedings of the IEEE International Conference on Robotics and Automation*. doi:10.1109/ICRA.2015.7138997.
- Veiga, F., van Hoof, H., Peters, J., & Hermans, T. (2015). Stabilizing Novel Objects by Learning to Predict Tactile Slip. *Proceedings of the IEEE/RSJ Conference on Intelligent Robots and Systems*. Retrieved from <http://www.ausy.tu-darmstadt.de/uploads/Site/EditPublication/IROS2015veiga.pdf>.
- Paraschos, A., Rueckert, E., Peters, J., & Neumann, G. (2015). Model-Free Probabilistic Movement Primitives for Physical Interaction. *Proceedings of the IEEE/RSJ Conference on Intelligent Robots and Systems*. Retrieved from http://www.ausy.tu-darmstadt.de/uploads/Team/PubAlexParaschos/Paraschos_IROS_2015.pdf.
- Levine, S., Wagener, N., & Abbeel, P. (2015). Learning Contact-Rich Manipulation Skills with Guided Policy Search. *Proceedings of the IEEE International Conference on Robotics and Automation*. arXiv: 1501.05611v1. Retrieved from <http://arxiv.org/abs/1501.05611v1>.

3.5 Physically-based animation (8)

- Baraff, D. (1997). Rigid body simulation: unconstrained rigid body dynamics. *ACM SIGGRAPH 1997 Course Notes for "An Introduction to Physically Based Modeling"*. Retrieved from <http://www.cs.cmu.edu/~baraff/pbm/rigid1.pdf>.
- Stam, J. (1999). Stable Fluids. *Proceedings of the 26th Annual Conference on Computer Graphics and Interactive Techniques*. doi:10.1145/311535.311548.
- Müller, M., Dorsey, J., & McMillan, L. (2002). Stable Real-time Deformations. *Proceedings of the ACM SIGGRAPH/Eurographics Symposium on Computer Animation*. doi:10.1145/545261.545269.
- Guendelman, E., Bridson, R., & Fedkiw, R. (2003). Nonconvex Rigid Bodies with Stacking. *ACM Transactions on Graphics*, 22(3). doi:10.1145/882262.882358.
- Bridson, R., Marino, S., & Fedkiw, R. (2003). Simulation of clothing with folds and wrinkles. *ACM SIGGRAPH 2005 Courses*, 21, 28–36. doi:10.1145/1198555.1198573.
- Müller, M., Charypar, D., & Gross, M. (2003). Particle-Based Fluid Simulation for Interactive Applications. *Proceedings of the ACM SIGGRAPH/Eurographics Symposium on Computer Animation*, (5). Retrieved from <http://dl.acm.org/citation.cfm?id=846298>.
- Nealen, A., Müller, M., Keiser, R., Boxerman, E., & Carlson, M. (2006). Physically based deformable models in computer graphics. *Computer Graphics Forum*, 25(4), 809–836. doi:10.1111/j.1467-8659.2006.01000.x.
- Boeing, A. & Bräunl, T. (2007). Evaluation of real-time physics simulation systems. *Proceedings of the 5th International Conference on Computer Graphics and Interactive Techniques in Australia and Southeast Asia*, 1(212). doi:10.1145/1321261.1321312.

3.6 Probabilistic simulation (5)

- Chib, S. & Greenberg, E. (1995). Understanding the Metropolis-Hastings algorithm. *The American Statistician*, 49, 327–335. doi:10.1080/00031305.1995.10476177.
- Van Der Merwe, R., Doucet, A., De Freitas, N., & Wan, E. (2000). The Unscented Particle Filter. *Advances in Neural Information Processing Systems*, 13. Retrieved from <http://papers.nips.cc/paper/1818-the-unscented-particle-filter.pdf>.
- Ng, A. Y. & Jordan, M. I. (2002). On Discriminative vs. Generative classifiers: A comparison of logistic regression and naive Bayes. *Advances in Neural Information Processing Systems*, 14.
- Neal, R. M. (2003). Slice Sampling. *The Annals of Statistics*, 31(3), 705–767. Retrieved from <http://www.jstor.org/stable/3448413>.
- Neal, R. M. (2011). MCMC using Hamiltonian dynamics. In S. Brooks, A. Gelman, G. Jones, & X.-L. Meng (Eds.), *Handbook of markov chain monte carlo* (Chap. 5). Chapman & Hall. arXiv: 1206.1901. Retrieved from <http://arxiv.org/abs/1206.1901>.