Acknowledgments

I would like to thank my advisor, Dr. Christof Koch, for his guidance and patience throughout the work that led to this thesis. He and the other members of my advisory committee, Dr. Pietro Perona, Dr. Laurent Itti, Dr. Shinsuke Shimojo, and Dr. Richard Andersen, helped me to stay focused when I was about to embark on yet another project.

It was an honor and pleasure to collaborate with Ueli Rutishauser and Dr. Fei-Fei Li at Caltech; Thomas Serre, Dr. Maximilian Riesenhuber, and Dr. Tomaso Poggio at MIT; and Dr. Duane Edgington, Danelle Cline, and Karen Salamy at MBARI. I would also like to acknowledge contributions by two SURF students, Chuck Yee and Lisa Fukui.

Financial support for this work was provided by NSF, NIH, the Keck Foundation, the David and Lucile Packard Foundation, the Studienstiftung des deutschen Volkes, a Sloan-Swartz Predoctoral Fellowship, a Milton E. Mohr Graduate Fellowship, and the Institute for Neuromorphic Engineering.

I am grateful for the continuous support from friends and family, in particular from Karen, Kerstin, Leo, Johannes, Birgit, Tracy, Pat, Nathan, David, Ann-Marie, Silvio, Fei-Fei, and my parents. I would also like to thank the members of the Koch Lab for inspiration and feedback and for a great balloon inflation party.