

# Publications

- Vizioli, L., De Martino, F., Petro, L. S., Kersten, D., Ugurbil, K., Yacoub, E., & Muckli, L. (2019). Multivoxel pattern of blood oxygen level dependent activity can be sensitive to stimulus specific fine scale responses. *bioRxiv*. <https://doi.org/10.1101/798306>
- Peterson, L. M., Kersten, D. J., & Mannion, D. J. (2018). Surface curvature from kinetic depth can affect lightness. *Journal of Experimental Psychology: Human Perception and Performance*, 44(12), 1856. <https://doi.org/10.1037/xhp0000575>
- Morgenstern, Y., & Kersten, D. J. (2017). The perceptual dimensions of natural dynamic flow. *Journal of Vision*, 17(12), 7–7. <https://doi.org/10.1167/17.12.7>
- Thompson, W. B., Legge, G. E., Kersten, D. J., Shakespeare, R. A., & Lei, Q. (2017). Simulating visibility under reduced acuity and contrast sensitivity. *JOSA A*, 34(4), 583–593. <https://doi.org/10.1364/josaa.34.000583>
- Fan, X., Wang, L., Shao, H., Kersten, D., & He, S. (2016). Temporally flexible feedback signal to foveal cortex for peripheral object recognition. *Proceedings of the National Academy of Sciences*, 113(41), 11627–11632. <https://doi.org/10.1073/pnas.1606137113>
- Kersten, D., & Mamassian, P. (2016). Cast shadow illusion. In A. G. Shapiro & D. Todorovic (Eds.), *The oxford compendium of visual illusions* (pp. 214–220). <https://doi.org/10.1093/acprof:oso/9780199794607.003.0020>
- Qiu, C., Burton, P. C., Kersten, D., & Olman, C. A. (2016). Responses in early visual areas to contour integration are context dependent. *Journal of Vision*, 16(8), 19–19. <https://doi.org/10.1167/16.8.19>
- Yuille, A., & Kersten, D. (2016). Early vision. In M. A. Arbib & J. J. Bonaiuto (Eds.), *From neuron to cognition via computational neuroscience* (pp. 345–408). MIT Press.

- Green, C. S., Kattner, F., Siegel, M. H., Kersten, D., & Schrater, P. R. (2015). Differences in perceptual learning transfer as a function of training task. *Journal of Vision*, 15(10), 5–5. <https://doi.org/10.1167/15.10.5>
- Kam, T.-E., Mannion, D. J., Lee, S.-W., Doerschner, K., & Kersten, D. J. (2015). Human visual cortical responses to specular and matte motion flows. *Frontiers in Human Neuroscience*, 9, 579. <https://doi.org/10.3389/fnhum.2015.00579>
- Mannion, D. J., Kersten, D. J., & Olman, C. A. (2015). Scene coherence can affect the local response to natural images in human v1. *European Journal of Neuroscience*, 42(11), 2895–2903. <https://doi.org/10.1111/ejn.13082>
- Akin, B., Ozdem, C., Eroglu, S., Keskin, D. T., Fang, F., Doerschner, K., ... Boyaci, H. (2014). Attention modulates neuronal correlates of interhemispheric integration and global motion perception. *Journal of Vision*, 14(12), 30–30. <https://doi.org/10.1167/14.12.30>
- Kersten, D., & Yuille, A. (2014a). Inferential models of the visual cortical hierarchy. In M. S. Gazzaniga & G. R. Mangun (Eds.), *The cognitive neurosciences* (Fifth Edition, pp. 398–404). The MIT Press.
- Kersten, D., & Yuille, A. (2014b). Vision: Bayesian inference and beyond. In J. S. Werner & L. M. Chalupa (Eds.), *The new visual neurosciences* (pp. 1263–1278). The MIT Press.
- Mannion, D. J., Kersten, D. J., & Olman, C. A. (2014). Regions of mid-level human visual cortex sensitive to the global coherence of local image patches. *Journal of Cognitive Neuroscience*, 26(8), 1764–1774. [https://doi.org/10.1162/jocn\\_a\\_00588](https://doi.org/10.1162/jocn_a_00588)
- Kersten, D., Shakespeare, R., & Thompson, W. (2013). Predicting visibility in designs of public spaces. *University of Utah Technical Reports, UUCS 13-001*.
- Mannion, D. J., Kersten, D., & Olman, C. A. (2013). Consequences of polar form coherence for fMRI responses in human visual cortex. *NeuroImage*, 78, 152–158. <https://doi.org/10.1016/j.neuroimage.2013.04.036>

- McMenamin, B. W., Radue, J., Trask, J., Huskamp, K., Kersten, D., & Marsolek, C. J. (2013). The diagnosticity of color for emotional objects. *Motivation and Emotion*, 37(3), 609–622. <https://doi.org/10.1007/s11031-012-9319-0>
- Qiu, C., Kersten, D., & Olman, C. A. (2013). Segmentation decreases the magnitude of the tilt illusion. *Journal of Vision*, 13(13), 19–19. <https://doi.org/10.1167/13.13.19>
- Hauffen, K., Bart, E., Brady, M., Kersten, D., & Hegdé, J. (2012). Creating objects and object categories for studying perception and perceptual learning. *JoVE (Journal of Visualized Experiments)*, (69), e3358. <https://doi.org/10.3791/3358>
- He, D., Kersten, D., & Fang, F. (2012). Opposite modulation of high-and low-level visual aftereffects by perceptual grouping. *Current Biology*, 22(11), 1040–1045. <https://doi.org/10.1016/j.cub.2012.04.026>
- Hegd , J., Thompson, S. K., Brady, M., & Kersten, D. (2012). Object recognition in clutter: Cortical responses depend on the type of learning. *Frontiers in Human Neuroscience*, 6, 170. <https://doi.org/10.3389/fnhum.2012.00170>
- Battaglia, P. W., Kersten, D., & Schrater, P. R. (2011a). How haptic size sensations improve distance perception. *PLoS Computational Biology*, 7(6). <https://doi.org/10.1371/journal.pcbi.1002080>
- Battaglia, P. W., Kersten, D., & Schrater, P. R. (2011b). The role of generative knowledge in object perception. In J. Trommershauser, K. Kording, & M. S. Landy (Eds.), *Sensory cue integration* (pp. 46–62). <https://doi.org/10.1093/acprof:oso/9780195387247.003.0003>
- Doerschner, K., Fleming, R. W., Yilmaz, O., Schrater, P. R., Hartung, B., & Kersten, D. (2011). Visual motion and the perception of surface material. *Current Biology*, 21(23), 2010–2016. <https://doi.org/10.1016/j.cub.2011.10.036>
- Doerschner, K., Kersten, D., & Schrater, P. R. (2011). Rapid classification of specular and diffuse reflection from image velocities. *Pattern Recognition*, 44(9), 1874–1884. <https://doi.org/10.1016/j.patcog.2010.09.007>

- Battaglia, P. W., Di Luca, M., Ernst, M. O., Schrater, P. R., Machulla, T., & Kersten, D. (2010). Within-and cross-modal distance information disambiguate visual size-change perception. *PLoS Computational Biology*, 6(3). <https://doi.org/10.1371/journal.pcbi.1000697>
- Boyaci, H., Fang, F., Murray, S. O., & Kersten, D. (2010). Perceptual grouping-dependent lightness processing in human early visual cortex. *Journal of Vision*, 10(9), 4–4. <https://doi.org/10.1167/10.9.4>
- Green, C., Benson, C., Kersten, D., & Schrater, P. (2010). Alterations in choice behavior by manipulations of world model. *Proceedings of the National Academy of Sciences*, 107(37), 16401–16406. <https://doi.org/10.1073/pnas.1001709107>
- Hegd , J., & Kersten, D. (2010). A link between visual disambiguation and visual memory. *Journal of Neuroscience*, 30(45), 15124–15133. <https://doi.org/10.1523/jneurosci.4415-09.2010>
- Kersten, D., & Murray, S. O. (2010). Vision: When does looking bigger mean seeing better? *Current Biology*, 20(9), R398–R399. <https://doi.org/10.1016/j.cub.2010.03.021>
- Doerschner, K., Kersten, D., & Schrater, P. (2009). Rapid classification of surface reflectance from image velocities. *International conference on computer analysis of images and patterns*, 856–864. [https://doi.org/10.1007/978-3-642-03767-2\\_104](https://doi.org/10.1007/978-3-642-03767-2_104)
- Fang, F., Boyaci, H., & Kersten, D. (2009). Border ownership selectivity in human early visual cortex and its modulation by attention. *Journal of Neuroscience*, 29(2), 460–465. <https://doi.org/10.1523/jneurosci.4628-08.2009>
- Gold, J. M., Abbey, C., Tjan, B. S., & Kersten, D. (2009). Ideal observers and efficiency: Commemorating 50 years of tanner and birdsall: Introduction. *JOSA A*, 26(11), IO1–IO2. <https://doi.org/10.1364/josaa.26.000io1>
- Kersten, D., & Mamassian, P. (2009). Ideal observer theory. In L. R. Squire, N. Dronkers, & J. Baldo (Eds.), *Encyclopedia of neuroscience* (pp. 89–95). <https://doi.org/10.1016/b978-008045046-9.01435-2>

- Fang, F., Boyaci, H., Kersten, D., & Murray, S. O. (2008a). Attention-dependent representation of a size illusion in human v1. *Current Biology*, 18(21), 1707–1712. <https://doi.org/10.1016/j.cub.2008.09.025>
- Fang, F., Kersten, D., & Murray, S. O. (2008b). Perceptual grouping and inverse fMRI activity patterns in human visual cortex. *Journal of Vision*, 8(7), 2–2. <https://doi.org/10.1167/8.7.2>
- Hegd , J., Bart, E., & Kersten, D. (2008a). Fragment-based learning of visual object categories. *Current Biology*, 18(8), 597–601. <https://doi.org/10.1016/j.cub.2008.03.058>
- Hegd , J., Fang, F., Murray, S. O., & Kersten, D. (2008b). Preferential responses to occluded objects in the human visual cortex. *Journal of Vision*, 8(4), 16–16. <https://doi.org/10.1167/8.4.16>
- Boyaci, H., Fang, F., Murray, S. O., & Kersten, D. (2007). Responses to lightness variations in early human visual cortex. *Current Biology*, 17(11), 989–993. <https://doi.org/10.1016/j.cub.2007.05.005>
- Murray, S. O., Boyaci, H., & Kersten, D. (2006a). The representation of perceived angular size in human primary visual cortex. *Nature Neuroscience*, 9(3), 429–434. <https://doi.org/10.1038/nn1641>
- Murray, S. O., Olman, C. A., & Kersten, D. (2006b). Spatially specific fMRI repetition effects in human visual cortex. *Journal of Neurophysiology*, 95(4), 2439–2445. <https://doi.org/10.1152/jn.01236.2005>
- Yuille, A., & Kersten, D. (2006). Vision as bayesian inference: Analysis by synthesis? *Trends in Cognitive Sciences*, 10(7), 301–308. <https://doi.org/10.1016/j.tics.2006.05.002>
- Battaglia, P. W., Schrater, P. R., & Kersten, D. (2005). Auxiliary object knowledge influences visually-guided interception behavior. *Proceedings of the 2<sup>nd</sup> symposium on applied perception in graphics and visualization*, 145–152. <https://doi.org/10.1145/1080402.1080430>

- Fang, F., Murray, S. O., Kersten, D., & He, S. (2005). Orientation-tuned fMRI adaptation in human visual cortex. *Journal of Neurophysiology*, 94(6), 4188–4195. <https://doi.org/10.1152/jn.00378.2005>
- Hartung, B., Schrater, P. R., Bülthoff, H. H., Kersten, D., & Franz, V. H. (2005). Is prior knowledge of object geometry used in visually guided reaching? *Journal of Vision*, 5(6), 2–2. <https://doi.org/10.1167/5.6.2>
- Fang, F., Kersten, D., Schrater, P. R., & Yuille, A. L. (2004). Human and ideal observers for detecting image curves. *Advances in neural information processing systems*, 1459–1466.
- Kersten, D., Mamassian, P., & Yuille, A. (2004). Object perception as bayesian inference. *Annu. Rev. Psychol.*, 55, 271–304. <https://doi.org/10.1146/annurev.psych.55.090902.142005>
- Murray, S. O., Schrater, P., & Kersten, D. (2004). Perceptual grouping and the interactions between visual cortical areas. *Neural Networks*, 17(5-6), 695–705. <https://doi.org/10.1016/j.neunet.2004.03.010>
- Olman, C. A., Ugurbil, K., Schrater, P., & Kersten, D. (2004). BOLD fMRI and psychophysical measurements of contrast response to broadband images. *Vision Research*, 44(7), 669–683. <https://doi.org/10.1016/j.visres.2003.10.022>
- Olman, C., & Kersten, D. (2004). Classification objects, ideal observers & generative models. *Cognitive Science*, 28(2), 227–239. [https://doi.org/10.1207/s15516709cog2802\\_5](https://doi.org/10.1207/s15516709cog2802_5)
- Brady, M. J., & Kersten, D. (2003). Bootstrapped learning of novel objects. *Journal of Vision*, 3(6), 2–2. <https://doi.org/10.1167/3.6.2>
- Kersten, D., & Yuille, A. (2003). Bayesian models of object perception. *Current Opinion in Neurobiology*, 13(2), 150–158. [https://doi.org/10.1016/s0959-4388\(03\)00042-4](https://doi.org/10.1016/s0959-4388(03)00042-4)
- Liu, Z., & Kersten, D. (2003). Three-dimensional symmetric shapes are discriminated more efficiently than asymmetric ones. *JOSA A*, 20(7), 1331–1340. <https://doi.org/10.1364/josaa.20.001331>

- Naor-Raz, G., Tarr, M. J., & Kersten, D. (2003). Is color an intrinsic property of object representation? *Perception*, 32(6), 667–680. <https://doi.org/10.1068/p5050>
- Geisler, W. S., & Kersten, D. (2002). Illusions, perception and bayes. *Nature Neuroscience*, 5(6), 508. <https://doi.org/10.1038/nn0602-508>
- Kersten, D. (2002). Object perception: Generative image models and bayesian inference. *International workshop on biologically motivated computer vision*, 207–218. [https://doi.org/10.1007/3-540-36181-2\\_21](https://doi.org/10.1007/3-540-36181-2_21)
- Kersten, D., & Schrater, P. (2002). Pattern inference theory: A probabilistic approach to vision. In D. Heyer & R. Mausfeld (Eds.), *Perception and the physical world: Psychological and philosophical issues in perception*. <https://doi.org/10.1002/0470013427.ch7>
- Murray, S. O., Kersten, D., Olshausen, B. A., Schrater, P., & Woods, D. L. (2002). Shape perception reduces activity in human primary visual cortex. *Proceedings of the National Academy of Sciences*, 99(23), 15164–15169. <https://doi.org/10.1073/pnas.192579399>
- Schrater, P., & Kersten, D. (2002). Vision, psychophysics and bayes. In R. P. Rao, B. A. Olshausen, & M. S. Lewicki (Eds.), *Probabilistic models of the brain: Perception and neural function* (pp. 37–60). The MIT press.
- Madison, C., Thompson, W., Kersten, D., Shirley, P., & Smits, B. (2001). Use of interreflection and shadow for surface contact. *Perception & Psychophysics*, 63(2), 187–194. <https://doi.org/10.3758/bf03194461>
- Braje, W. L., Legge, G. E., & Kersten, D. (2000). Invariant recognition of natural objects in the presence of shadows. *Perception*, 29(4), 383–398. <https://doi.org/10.1068/p3051>
- Kersten, D. (2000). High-level vision as statistical inference. In M. Gazzaniga (Ed.), *The new cognitive neurosciences* (Second Edition, pp. 353–364). The MIT Press.



- Schrater, P. R., & Kersten, D. (2000). How optimal depth cue integration depends on the task. *International Journal of Computer Vision*, 40(1), 71–89. <https://doi.org/10.1023/A:1026557704054>
- Bloj, M., Kersten, D., & Hurlbert, A. (1999). 3D shape perception influences colour perception via mutual illumination. *Nature*, 402, 877–879.
- Liu, Z., Kersten, D., & Knill, D. C. (1999). Dissociating stimulus information from internal representation—a case study in object recognition. *Vision Research*, 39(3), 603–612. [https://doi.org/10.1016/s0042-6989\(98\)00167-9](https://doi.org/10.1016/s0042-6989(98)00167-9)
- Schrater, P. R., & Kersten, D. (1999). Statistical structure and task dependence in visual cue integration. *Workshop on statistical and computational theories of vision—modeling, learning, computing, and sampling, fort collins, colorado*.
- Troje, N. F., & Kersten, D. (1999). Viewpoint-dependent recognition of familiar faces. *Perception*, 28(4), 483–487. <https://doi.org/10.1068/p2901>
- Braje, W. L., Kersten, D., Tarr, M. J., & Troje, N. F. (1998). Illumination effects in face recognition. *Psychobiology*, 26(4), 371–380. <https://doi.org/10.3758/BF03330623>
- Liu, Z., & Kersten, D. (1998). 2D affine transformations cannot account for human 3D object recognition. *Sixth international conference on computer vision (ieee cat. No. 98CH36271)*, 549–554. IEEE.
- Mamassian, P., Knill, D. C., & Kersten, D. (1998). The perception of cast shadows. *Trends in Cognitive Sciences*, 2(8), 288–295. [https://doi.org/10.1016/s1364-6613\(98\)01204-2](https://doi.org/10.1016/s1364-6613(98)01204-2)
- Tarr, M. J., Kersten, D., & Bülthoff, H. H. (1998). Why the visual recognition system might encode the effects of illumination. *Vision Research*, 38(15-16), 2259–2275. [https://doi.org/10.1016/s0042-6989\(98\)00041-8](https://doi.org/10.1016/s0042-6989(98)00041-8)
- Thompson, W. B., Shirley, P., Smits, B., Kersten, D. J., & Madison, C. (1998). Visual glue. *University of Utah Technical Reports, UUCS-98-007*.
- Troje, N. F., & Kersten, D. (1998). *Viewer-centered recognition of familiar faces*.



- Kersten, D. (1997a). Inverse 3-d graphics: A metaphor for visual perception. *Behavior Research Methods, Instruments, & Computers*, 29(1), 37–46. <https://doi.org/10.3758/bf03200564>
- Kersten, D. (1997b). Perceptual categories for spatial layout. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 352(1358), 1155–1163. <https://doi.org/10.1098/rstb.1997.0099>
- Kersten, D., Mamassian, P., & Knill, D. C. (1997). Moving cast shadows induce apparent motion in depth. *Perception*, 26(2), 171–192. <https://doi.org/10.1068/p260171>
- Knill, D. C., Mamassian, P., & Kersten, D. (1997). Geometry of shadows. *JOSA A*, 14(12), 3216–3232. <https://doi.org/10.1364/josaa.14.003216>
- D'AVOSSA, G., & Kersten, D. (1996). Evidence in human subjects for independent coding of azimuth and elevation for direction of heading from optic flow. *Vision Research*, 36(18), 2915–2924. [https://doi.org/10.1016/0042-6989\(96\)00010-7](https://doi.org/10.1016/0042-6989(96)00010-7)
- Kersten, D. (1996). Commentary on: Pattern theory: A unifying perspective. In D. C. Knill & W. Richards (Eds.), *Perception as bayesian inference* (pp. 213–236). Cambridge University Press.
- Kersten, D., Knill, D. C., Mamassian, P., & Bühlhoff, I. (1996a). Illusory motion from shadows. *Nature*, 379(6560), 31. <https://doi.org/10.1038/379031a0>
- Kersten, D., Troje, N. F., & Bühlhoff, H. H. (1996b). Phenomenal competition for poses of the human head. *Perception*, 25(3), 367–368. <https://doi.org/10.1068/p250367>
- Knill, D. C., Kersten, D., & Yuille, A. (1996). Introduction: A bayesian formulation of visual perception. In D. C. Knill & W. Richards (Eds.), *Perception as bayesian inference* (pp. 1–21). <https://doi.org/10.1017/CBO9780511984037.002>
- Knill, D., Kersten, D., & Mamassian, P. (1996). The bayesian framework for visual information processing: Implications for psychophysics. In D. C.

- Knill & W. Richards (Eds.), *Perception as bayesian inference* (pp. 239–286).  
<https://doi.org/10.1017/CBO9780511984037.009>
- Mamassian, P., & Kersten, D. (1996). Illumination, shading and the perception of local orientation. *Vision Research*, 36(15), 2351–2367.  
[https://doi.org/10.1016/0042-6989\(95\)00286-3](https://doi.org/10.1016/0042-6989(95)00286-3)
- Mamassian, P., Kersten, D., & Knill, D. C. (1996). Categorical local-shape perception. *Perception*, 25(1), 95–107. <https://doi.org/10.1068/p250095>
- Liu, Z., Knill, D. C., & Kersten, D. (1995). Object classification for human and ideal observers. *Vision Research*, 35(4), 549–568. [https://doi.org/10.1016/0042-6989\(94\)00150-k](https://doi.org/10.1016/0042-6989(94)00150-k)
- Mamassian, P., Bülthoff, H., & Kersten, D. (1995). *Eye-hand coordination for 3-d oriented objects*.
- Tjan, B. S., Braje, W. L., Legge, G. E., & Kersten, D. (1995). Human efficiency for recognizing 3-d objects in luminance noise. *Vision Research*, 35(21), 3053–3069. [https://doi.org/10.1016/0042-6989\(95\)00070-g](https://doi.org/10.1016/0042-6989(95)00070-g)
- Kersten, D., Mamassian, P., & Knill, D. C. (1994). *Moving cast shadows and the perception of relative depth*.
- Kersten, D. J., & Madarasmí, S. (1993). The visual perception of surfaces, their properties and relationships. *Partitioning data sets*, 373–390.
- Madarasmí, S., Kersten, D., & Pong, T.-C. (1993a). Multi-layer surface segmentation using energy minimization. *Proceedings of ieee conference on computer vision and pattern recognition*, 774–775. IEEE.
- Madarasmí, S., Kersten, D., & Pong, T.-C. (1993b). The computation of stereo disparity for transparent and for opaque surfaces. *Advances in neural information processing systems*, 385–392.
- Kersten, D., Bülthoff, H. H., Schwartz, B. L., & Kurtz, K. J. (1992). Interaction between transparency and structure from motion. *Neural Computation*, 4(4), 573–589. <https://doi.org/10.1162/neco.1992.4.4.573>

- O'toole, A. J., & Kersten, D. J. (1992). Learning to see random-dot stereograms. *Perception*, 21(2), 227–243. <https://doi.org/10.1068/p210227>
- Thompson, W. B., Kersten, D., & Knecht, W. R. (1992). Structure-from-motion based on information at surface boundaries. *Biological Cybernetics*, 66(4), 327–333. <https://doi.org/10.1007/bf00203669>
- Kersten, D. (1991). Transparency and the cooperative computation of scene attributes. In M. S. Landy, J. A. Movshon, & others (Eds.), *Computational models of visual processing*. The MIT Press.
- Knill, D. C., & Kersten, D. (1991). Apparent surface curvature affects lightness perception. *Nature*, 351(6323), 228–230. <https://doi.org/10.1038/351228a0>
- Knill, D., & Kersten, D. (1991). Ideal perceptual observers for computation, psychophysics and neural networks. In R. J. Watt (Ed.), *Pattern recognition by man and machine (vision and visual dysfunction)*. McMillan.
- Kersten, D. (1990). Statistical limits to image understanding. In C. Blakemore, K. Adler, & M. Pointon (Eds.), *Vision: Coding and efficiency* (pp. 32–44). <https://doi.org/10.1017/cbo9780511626197.005>
- Knill, D. C., Field, D., & Kerstent, D. (1990). Human discrimination of fractal images. *JOSA A*, 7(6), 1113–1123. <https://doi.org/10.1364/josaa.7.001113>
- Knill, D. C., & Kersten, D. (1990). Learning a near-optimal estimator for surface shape from shading. *Computer Vision, Graphics, and Image Processing*, 50(1), 75–100. [https://doi.org/10.1016/0734-189x\(90\)90068-7](https://doi.org/10.1016/0734-189x(90)90068-7)
- Kersten, D., Hess, R., & Plant, G. (1988). Assessing contrast sensitivity behind cloudy media. *Clinical Vision Sciences*, 2(3), 143–158.
- Sereno, M., Kersten, D., & Anderson, J. A. (1988). A neural network model of an aspect of motion perception. *Science at the John von Neumann National Supercomputer Center*, 173–178.
- Kersten, D. (1987a). Predictability and redundancy of natural images. *JOSA A*, 4(12), 2395–2400. <https://doi.org/10.1364/josaa.4.002395>

- Kersten, D. (1987b). Statistical efficiency for the detection of visual noise. *Vision Research*, 27(6), 1029–1040. [https://doi.org/10.1016/0042-6989\(87\)90016-2](https://doi.org/10.1016/0042-6989(87)90016-2)
- Kersten, D., O'toole, A. J., Sereno, M. E., Knill, D. C., & Anderson, J. A. (1987). Associative learning of scene parameters from images. *Applied Optics*, 26(23), 4999–5006. <https://doi.org/10.1364/ao.26.004999>
- Legge, G. E., Kersten, D., & Burgess, A. E. (1987). Contrast discrimination in noise. *JOSA A*, 4(2), 391–404. <https://doi.org/10.1364/josaa.4.000391>
- Burkhardt, D. A., Gottesman, J., Kersten, D., & Legge, G. E. (1984). Symmetry and constancy in the perception of negative and positive luminance contrast. *JOSA A*, 1(3), 309–316. <https://doi.org/10.1364/josaa.1.000309>
- Kersten, D. (1984). Spatial summation in visual noise. *Vision Research*, 24(12), 1977–1990. [https://doi.org/10.1016/0042-6989\(84\)90033-6](https://doi.org/10.1016/0042-6989(84)90033-6)
- Kersten, D. (1983). *A comparison of human and ideal performance for the detection of visual pattern* (PhD thesis). University of Minnesota.
- Kersten, D., & Legge, G. E. (1983). Convergence accommodation. *JOSA*, 73(3), 332–338. <https://doi.org/10.1364/josa.73.000332>
- Legge, G. E., & Kersten, D. (1983). Light and dark bars; contrast discrimination. *Vision Research*, 23(5), 473–483. [https://doi.org/10.1016/0042-6989\(83\)90122-0](https://doi.org/10.1016/0042-6989(83)90122-0)