

# Publications of Kim Steenstrup Pedersen

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## Ph.D. thesis:

- **Kim S. Pedersen**. Statistics of Natural Image Geometry. Ph.D. Thesis, Department of Computer Science, University of Copenhagen, Denmark, January 2003. Published as DIKU tech. report no. 2003/04.

## Scientific journal papers: (14)

- J. Rasmussen, J. Nielsen, J. C. Streibig, J. E. Jensen, **K. S. Pedersen**, S. I. Olsen. Pre-harvest weed mapping of *Cirsium arvense* in wheat and barley with off-the-shelf UAVs. *Precision Agriculture*, pp. 1 – 17, 2019.
- Jan Kremer, Kristoffer Stensbo-Smidt, Fabian Gieseke, **Kim Steenstrup Pedersen**, Christian Igel. Big universe, big data: Machine learning and image analysis for astronomy. *IEEE Intelligent Systems*, 32(2): 16–22, 2017.
- K. Stensbo-Smidt, F. Gieseke, C. Igel, A. Zirm, **K. S. Pedersen**. Sacrificing information for the greater good: How to select photometric bands for optimal accuracy. *Monthly Notices of the Royal Astronomical Society*, 464 (3): 2577–2596, 2017.
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- \*Ann B. Lee, **Kim S. Pedersen** and David Mumford. The Nonlinear Statistics of High-Contrast Patches in Natural Images. In *International Journal of Computer Vision*, 54 (1 / 2): 83-103, August / September 2003.
- **Kim S. Pedersen** and Mads Nielsen: The Hausdorff Dimension and Scale-Space Normalisation of Natural Images. In *Journal of Visual Communication and Image Representation*, 11(2):266–277, 2000.

## Peer reviewed conference papers: (35)

- Georgios Karagiannis, Søren Ingvar Olsen, **Kim Steenstrup Pedersen**. Deep Learning for Detection of Railway Signs and Signals. In Advances in Computer Vision - Proceedings of the 2019 Computer Vision Conference, CVC 2019, Las Vegas, Nevada, USA, 25-26 April 2019.
- Wouter M. Kouw, Silas N. Ørting, Jens Petersen **Kim S. Pedersen**, and Marleen de Bruijne. A Cross-Center Smoothness Prior for Variational Bayesian Brain Tissue Segmentation. In Proceedings of International Conference on Information Processing in Medical Imaging — IPMI 2019: Information Processing in Medical Imaging. Springer, LNCS 11492, pp. 360–371, 2019.
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- **\*Kim Steenstrup Pedersen**, Kristoffer Stensbo-Smidt, Andrew Zirm, and Christian Igel. Shape Index Descriptors Applied to Texture-Based Galaxy Analysis. In Proceedings of International Conference on Computer Vision (ICCV 2013), 2013.
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- Cristina Manfredotti, **Kim Steenstrup Pedersen**, Howard J. Hamilton, and Sandra Zilles. Learning Models of Activities Involving Interacting Objects. In Advances in Intelligent Data Analysis XII, 12th International Symposium, IDA 2013, London, UK, October 17-19, 2013, Proceedings (IDA 2013), volume 8207 of Lecture Notes in Computer Science, 2013.
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- David Gustavsson, **Kim S. Pedersen**, and Mads Nielsen. Image Inpainting by Cooling and Heating. *15th Scandinavian Conference on Image Analysis*, Springer LNCS 4522, p. 591–600, 2007.
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- **Kim Steenstrup Pedersen**, Rasmus Reinhold Paulsen. Special section on 19th Scandinavian conference on image analysis (SCIA 2015). Pattern Recognition Letters, Vol. 80, pages 238, September 2016.
- Rasmus Reinhold Paulsen, **Kim Steenstrup Pedersen** (Eds.). Image analysis : 19th Scandinavian Conference, SCIA 2015, Copenhagen, Denmark, June 15-17, 2015. Proceedings. Springer, 2015.
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## Non peer reviewed conference publications and abstracts: (10)

- J. Rasmussen, J. Nielsen, S. I. Olsen, **K. S. Pedersen**, J. E. Jensen, R. Horfarer. From image acquisition with unmanned aerial vehicles (UAV) to patch spraying in farmer's fields. European Weed Research Society Symposium, 2018.
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## Technical Reports: (6)

- J. Rasmussen, J. Nielsen, J. C. Streibig, S. I. Olsen, **K. S. Pedersen**, and J. E. Jensen: Droner til monitoring af flerårigt ukrudt i korn. Miljøstyrelsen, 2016.
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- Ann B. Lee, **Kim S. Pedersen** and David Mumford: The Nonlinear Statistics of High-Contrast Patches in Natural Images. *APPTS Report #01-3*, Division of Applied Mathematics Technical Reports on Applied Probability, Pattern Theory, and Statistics, Brown University, USA. June 2001. Revised December 2001.
- **Kim S. Pedersen**: Turbulence in Optical Flow Fields. *Technical Report DIKU-00-3*, DIKU, Department of Computer Science, University of Copenhagen, Universitetsparken 1, DK-2100 Copenhagen, Denmark. January 2001.
- **Kim S. Pedersen**: Normalisering af billedafledte i skalarum ved hjælp af den fraktale dimension. *Technical Report DIKU-99-2*, Department of Computer Science, University of Copenhagen, Universitetsparken 1, DK-2100 Copenhagen, Denmark, January 1999.