

## PUBLICATIONS OF RONALD MEESTER

### Articles International

1. *Likelihood ratio uncertainty and the interpretation of the posterior likelihood ratio distribution* (with Klaas Slooten), submitted (2019).
2. *The limits of Bayesian thinking in court*, to appear in *Topics in Cognitive Science* (2019).
3. *Finding persons with special characteristics without prior information - an application of belief functions* (with Timber Kerkvliet), submitted (2019).
4. *Calculating the posterior odds from a single-match DNA database search under various scenarios with minimal assumptions* (with Klaas Slooten), to appear in *Law, Probability, and Risk* (2019).
5. *DNA database matches: A  $p$  versus  $np$  problem* (with Klaas Slooten), submitted (2019).
6. *Reply to Lucas & Henneberg; Are human faces unique?* (with Sylvia Wenmackers and Bart Preneel), *Forensic Science International* **297**, 217 - 220 (2019).
7. *Ne bis in idem - a commentary on "Calculating the Posterior Odds from a Single-Match DNA Database Search"* (with Klaas Slooten), *Law, Probability, and Risk* DOI: 10.1093/lpr/mgz004 (2019).
8. *A new look at conditional belief functions* (with Timber Kerkvliet), *Statistica Neerlandica*: 2019; 1 - 18; <https://doi.org/10.1111/stan.12169> (2019).

9. *The infinite regress problem has no unique solution* (with Timber Kerkvliet), submitted (2019).
10. *A behavioral interpretation of belief functions* (with Timber Kerkvliet), The Journal of Theoretical Probability DOI 10.1007/s10959-017-0776-y (2017).
11. *A probabilistic approach on residual strength and damage buildup of high performance fibers* (with Henk Knoester and Joost Hulshof), Journal of Materials Sciences **52**, 1898 - 1910 (2017).
12. *The asymptotics of group Russian roulette* (with Tim van de Brug and Wouter Kager), Markov Processes and Related Fields **23**, 35 - 66 (2017).
13. *Evaluating evidence in crime linkage scenarios with multiple offenders* (with Jacob de Zoete and Marjan Sjerps), Crime & Justice (2017).
14. *Phase transition and uniqueness in levelset percolation* (with Erik Broman), The Journal of Statistical Physics **167**, 1376 - 1400 (2017).
15. *Modeling failure of high performance fibers: on the prediction of long-term time-to-failure* (with Henk Knoester and Joost Hulshof), Journal of Materials Science **50**, 6277 - 6290 (2016).
16. *Stochastic SIR epidemics in a population with households and schools* (with Tanneke Ouboter and Pieter Trapman), Journal of Mathematical Biology **72**, 1177 - 1193 (2016).
17. *Assessing forensic evidence by computing belief functions* (with Timber Kerkvliet), Law, Probability and Risk **15**, 127 - 153 (2016).

18. *Familial searching* (with Klaas Slooten), Wiley Encyclopedia of Forensic Science fsa 1112 (2016).
19. *Uniquely determined uniform probability on the natural numbers* (with Timber Kerkvliet), Journal of Theoretical Probability **29**, 797-825 (2016).
20. *Critical densities in sandpile models with quenched or annealed disorder* (with Anne Fey), Markov Processes and Related Fields **21**, 57-84 (2015).
21. *P-values should not be used for evaluating the strength of DNA evidence* (with Maarten Kruijver and Klaas Slooten), Forensic Science International: Genetics **16**, 226 - 231 (2015).
22. *The VICI project "Long range stochastic dynamics"*, Nieuw Archief Wiskunde **15**, 198-207 (2014).
23. *Het gebruik van schakelbewijs; juridische en kanstheoretische gezichtspunten* (with Jacob de Zoete, Koen Vriend, Menno Dolman and Marjan Sjerps), Expertise en Recht **5**, 153-167 (2014).
24. *Optimal strategies for familial searching* (with Maarten Kruijver and Klaas Slooten), Forensic Science International: Genetics **13**, 90 -103 (2014).
25. *Infinite epistemic regress and internalism* (with René van Woudenberg), Metaphilosophy **45**, 221 - 231 (2014).
26. *The combined evidential value of autosomal and Y-chromosomal DNA profiles obtained from the same sample* (with Jacob de Zoete, Marjan

- Sjerps and Eric Cator), *The International Journal of Legal Medicine* **128**, 897-904 (2014).
27. *The signed loop approach to the Ising model: foundations and critical point* (with Wouter Kager and Marcin Lis), *Journal of Statistical Physics* **152**, 353-387 (2013).
  28. *Dimension (in)equalities and Hölder continuous curves in fractal percolation* (with Erik Broman, Federico Camia and Matthijs Joosten), *The Journal of Theoretical probability* **26**, 836-855 (2013).
  29. *Probabilistic strategies for familial DNA searching* (with Klaas Slooten), *Journal of the Royal Statistical Society* DOI: 10.1111/rssc.12035 (2013).
  30. *Stochastic domination and weak convergence of conditioned Bernoulli random vectors* (with Erik Broman, Tim van de Brug and Wouter Kager), *Latin American Journal of Probability and Mathematical Statistics* **9**, 403-434 (2012).
  31. *Fat fractal percolation and  $k$ -fractal percolation* (with Erik Broman, Tim van de Brug, Federico Camia and Matthijs Joosten), *Latin American Journal of Probability and Mathematical Statistics* **9**, 279-300 (2012).
  32. *Rigorous self-organised criticality in the modified Bak-Sneppen model* (with Anish Sarkar), *Journal of Statistical Physics* **149**, 964-968 (2012).
  33. *Long range percolation on the hierarchical lattice* (with Slavik Koval and Pieter Trapman), *Electronic Journal of Probability* **17**, 1-21 (2012).

34. *Forensic identification: the Island Problem and its generalisations* (with Klaas Slooten), *Statistica Neerlandica* **65**, 202 - 237 (2011).
35. *Statistical aspects of familial searching* (with Klaas Slooten), *Forensic Science International: Genetics Supplement Series* **3**, e617-e619 (2011).
36. *Bounding basic characteristics of spatial epidemics with a new percolation model* (with Pieter Trapman), *Advances in Applied Probability* **43**, 335-347 (2011).
37. *DNA Databases - The significance of unique hits and the database controversy*, *Wiley Encyclopedia of Forensic Science*, item FS1036 (2011).
38. *Existence and uniqueness of the stationary measure in a continuous sandpile* (with Haiyan Liu and Wouter Kager), *Markov Processes and Related Fields* **16**, 185-204 (2010).
39. *The high temperature Ising model is a critical percolation model* (with Andras Balint and Federico Camia), *Journal of Statistical Physics* **139**, 122-138 (2010).
40. *Selection effects and database screening in forensic science* (with Marjan Sjerps), *Forensic Science International* **192**, 56-61 (2009).
41. *Uniqueness of the stationary distribution and stabilizability in Zhang's sandpile model* (with Anne Fey-den Boer and Haiyan Liu), *Electronic Journal of Probability* **14**, 895-911 (2009).
42. *Simulation of biological evolution and the no free lunch theorems*, *Biology and Philosophy* **24**, 461-472 (2009).

43. *Geometric properties of two-dimensional near-critical percolation* (with Federico Camia and Matthijs Joosten), Journal of Statistical Physics **137**, 57-69 (2009).
44. *Sharp phase transitions and critical behaviour in 2D divide and colour models* (with Andras Balint and Federico Camia), Stochastic Processes and their Applications **119**, 937-965 (2009).
45. *Stabilizability and percolation in the infinite volume sandpile model* (with Anne Fey-den Boer and Frank Redig), The Annals of Probability **37**, 654-675 (2009).
46. *A probabilistic approach to Zhang's sandpile model* (with Anne Fey, Frank Redig and Corrie Quant), Communications in Mathematical Physics **280**, 351 - 388 (2008).
47. *Survival of inhomogeneous Galton-Watson processes* (with Erik Broman), Advances of Applied Probability **40**, 798-814 (2008).
48. *On the (ab)use of statistics in the legal case against the nurse Lucia de B.* (with Richard Gill, Marieke Collins and Michiel van Lambalgen), Law, Probability and Risk doi: 10.1093/lpr/mgm003 (2007).
49. *The local threshold for geographical spread of infectious diseases between farms* (with Gert-Jan Boender, Mart de Jong and Edo Gies), Preventive Veterinary Medicine **82**, 90-101 (2007).
50. *Generating stationary random graphs on  $Z$  with prescribed i.i.d. degrees* (with Maria Deijfen), Advances in Applied Probability **38**, 287-298 (2006).

51. *Bounds for critical values of the Bak-Sneppen model on transitive graphs* (with Alexis Gillett and Misja Nuyens), *Markov Processes and Related Fields* **12**, 679 - 694 (2006).
52. *Percolation in the signal to noise interference ratio graph* (with Olivier Dousse, Massimo Franceschetti, Nicolas Macris and Patrick Thiran), *Journal of Applied Probability* **43**, 552 - 562 (2006).
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54. *The size of components in continuum nearest-neighbour graphs*, (with Iva Kozakova and Seema Nanda), *The Annals of Probability* **34**, 528-538 (2006).
55. *Estimation in branching processes with restricted observations*, (with Pieter Trapman), *Advances of Applied Probability* **38**, 1098-1115 (2006).
56. *Critical nodes lifetimes in random networks via the Chen-Stein method* (with Massimo Franceschetti), *IEEE Transactions of Information Theory* **52**, 2831-2837 (2006).
57. *Maximal avalanches in the Bak-Sneppen model*, (with Alexis Gillett and Peter van der Wal), *Journal of Applied Probability* **43**, 840 - 851 (2006).
58. *Navigation in small world networks, a scale-free continuum approach*, (with Massimo Franceschetti), *Journal of Applied Probability* **43**, 1173-1180 (2006).

59. *Connections between ‘self organised’ and ‘classical’ criticality*, (with Corrie Quant), (Invited paper), *Markov Processes and Related Fields* **11**, 355-370 (2005).
60. *On central limit theorems in the random connection model*, (with Tim van de Brug), *Physica A* **332**, 263-278 (2004).
61. *Continuum percolation with unreliable and spread-out connections*, (with Lorna Booth, Matthew Cook, Massimo Francheschetti and Jehoshua Bruck), *Journal of Statistical Physics* **118**, 719-732 (2004).
62. *A branching model for the spread of infectious animal diseases in varying environments*, (with Pieter Trapman en Hans Heesterbeek), *Journal of Mathematical Biology* **49**, 553-576 (2004).
63. *Critical thresholds and the limit distribution in the Bak-Sneppen model*, (with Dmitri Znamenski), *Communications in Mathematical Physics* **246**, 63-86 (2004).
64. *Why the effect of prior odds should accompany the likelihood ratio when reporting DNA evidence* (with Marjan Sjerps), (Invited paper), *Law, Probability and Risk* **3**, 51-62. (2004).
65. *Response to Dawid, Balding, Triggs and Buckleton* (with Marjan Sjerps) *Law, Probability and Risk* **3**, 83-86. (2004).
66. *Random entropy and recurrence* (with Karma Dajani), *International Journal of Mathematical Sciences* **47**, 2977-2988 (2003).
67. *A theory waiting for an experiment: pair-state formation in a nanocrystal* (with Freek Suyver, J. Kelly and A. Meijerink), *Journal of Lumi-*



- nescence **102-103**, 182-188 (2003).
68. *On a long range particle system with unbounded flip rates* (with Corrie Quant), *Markov Processes and Related Fields* **9** nr. 1, 59-84 (2003).
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  70. *The evidential value in the DNA database search controversy and the two-stain problem* (with Marjan Sjerps), *Biometrics* **59**, 727-732 (2003).
  71. *Covering algorithms, continuum percolation and the geometry of wireless networks* (with Lorna Booth, Jehoshua Bruck and Massimo Franceschetti), *The Annals of Applied Probability* **13**, 722-741 (2003).
  72. *Modelling and prediction of classical swine fever epidemics*, (with Jan de Koning, Mart de Jong and Odo Diekmann), *Biometrics* **58** nr. 1, 178-184 (2002).
  73. *Non-triviality of a discrete Bak-Sneppen evolution model* (with Dmitri Znamenski), *Journal of Statistical Physics* **109**, 987-1004 (2002).
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  75. *Infinite paths with bounded or recurrent partial sums* (with Lorna Booth), *Probability Theory and Related Fields* **120**, 118-142 (2001).
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77. *Pair-state formation in a nanocrystal: a theoretical perspective* (with J.F. Suyver, J.J. Kelly and A. Meijerink), Mat. Res. Soc. Symp. Proc. **676**, Y6.8.1 - Y6.8.6 (2001).
78. *Higher-dimensional subshifts of finite type, factor maps and measures of maximal entropy* (with Jeffrey Steif), Pacific Journal of Mathematics **200**, nr. 2, 497-510 (2001).
79. *100% kans - de zin en onzin van de waarschijnlijkheidsrekening*, VU uitgeverij, ISBN 90 - 5383 - 703 - 5 (2000).
80. *A simple proof of the exponential convergence of the modified Jacobi-Perron algorithm*, Ergodic Theory and Dynamical Systems **19**, 1077-1083 (1999).
81. *Extremal points of infinite clusters in stationary percolation*, Statistics and Probability Letters **42**, 361-365 (1999).
82. *Convergence of continued fraction type algorithms and generators* (with Cor Kraaikamp), Monatshefte für Mathematik **125**, 1-14 (1998).
83. *Consistent estimation of percolation quantities* (with Jeffrey Steif), Statistica Neerlandica **52**, 226-238 (1998).
84. *Entropy for random group actions* (with Robert Burton and Karma Dajani), Ergodic Theory and Dynamical Systems **18**, 109-124 (1998).
85. *Dynamic Boolean models* (with Rob v.d. Berg and Damien White), Stochastic Processes and their Applications **69**, 247-257 (1997).
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87. *The random connection model in high dimensions* (with Mathew Penrose and Anish Sarkar), *Statistics and Probability Letters* **35**, 145-153 (1997).
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90. *On the continuity of the critical value for long range percolation in the exponential case* (with Jeffrey Steif), *Communications in Mathematical Physics* **180**, 483-504 (1996).
91. *Nearest neighbour and hard sphere models in continuum percolation* (with Olle Häggström), *Random Structures and Algorithms* **9**, 295-315 (1996).
92. *Stationary straight-line representations of stationary random graphs* (with Robert Burton and In-Kyeong Choi), *Indagationes Mathematicae* **6**, 267-277 (1995).
93. *Ergodic properties of a dynamical system arising from percolation theory* (with Cor Kraaikamp), *Ergodic Theory and Dynamical Systems* **15**, 653-661 (1995).
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104. *Infinite clusters and critical values in two-dimensional circle percolation* (with Thomas Nowicki), *Israel Journal of Mathematics* **68**, 63-81 (1989).

#### Articles in Dutch

1. *Waarom p-waardes niet gebruikt mogen worden als statistisch bewijs*, NAW, juni 2019.
2. *Reactie op Alkemades weerwoord* (with Henry Prakken), *Expertise en Recht* **1**, 41-43 (2018).
3. *Kansrekening en forensisch DNA-verwantschapsonderzoek* (with Klaas Slooten), *Pythagoras* november 2017, 24 - 27 (2017).
4. *Bayesiaanse analyses van complexe strafzaken door getuige-deskundigen. Betrouwbaar en zo ja: nuttig?* (with Henry Prakken), *Expertise en recht* **5**, 185 - 197 (2017).
5. *De Malosz en de Abendroth: over wiskundig onderzoek in een roman*, NAW 5/18, 142-143 (2017).
6. *Waarom onzekerheid in het recht beter met belief functies dan met klassieke kansrekening benaderd kan worden: theorie en praktijk* (with Timber Kerkvliet), *Expertise & Recht* 2017-2, 52-61 (2017).
7. *Wanneer je echt moet rekenen: belief functies als oplossing van enkele problemen met de regel van Bayes* (with Timber Kerkvliet), *TREMA* **40**, 5-9 (2017).
8. *Gedoe om twee enveloppen*, *Pythagoras* januari 2017, 16-19 (2017)

9. *Wanneer is een spel een kansspel?*, Sophie **6** nr. 5, 10-13 (2016).
10. *Kwantificeren van onzekerheid met belieffuncties* (with Timber Kerkvliet), StatOr (2016).
11. *When you have a hammer, everything looks like a nail*, TREMA **38**, 355-359 (2015).
12. *Belangrijke beperkingen van de gerechtelijke onderzoeksmethode* (with Anton Loonen and Peter van Panhuis), Nederlands Juristen Blad **14**, 902 - 908 (2014).
13. *Zoeken naar familie van misdadigers via DNA*, Kennislink (2012).
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18. *Lucia de B. en de statistiek*, Euclides **83**, 160-163 (2008).
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25. *Boekbespreking; kansrekening en statistiek*, Nieuwe Wiskrant **19**, nr. 3, 20-21 (2000).
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28. *De kinderen van Ruud*, Pythagoras **39**, nr. 6, 18-20 (2000).
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## Books mathematics

1. *Theory and Philosophy of Statistical Evidence in Forensic Science* (with Klaas Slooten), Cambridge University Press (2020).
2. *Wiskunde in je vingers* (with Joost Hulshof), VU University Press (2015).
3. *Random networks for communication* (with Massimo Franceschetti), Cambridge University Press (2007).
4. *A Natural Introduction to Probability Theory*, Birkhäuser (2003).
5. *Continuum percolation* (with Rahul Roy), Cambridge Tracts in Mathematics **119**, Cambridge University Press, (1996).

### Books philosophy of life and science (in dutch)

1. *Arrogant - waarom wetenschappers vaak minder weten dan ze zeggen*, Ten Have (2014).
2. *De man die God kende - christelijke spiritualiteit voor niet-ongelovigen*, Ten Have Baarn (2007).
3. *En God beschikte een worm* (with Cees Dekker and Rene van Woudenberg, eds.), Ten Have Baarn (2006).
4. *Schitterend ongeluk of sporen van ontwerp?* (with Cees Dekker and Rene van Woudenberg, eds.), Ten Have Baarn (2005).
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### Articles philosophy of life and science (mostly in dutch)

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4. *Boedelscheiding tussen religie en wetenschap is onzinnig en vervlakkend*, in 'Ongekend nieuwsgierig' (Bart Voorsluis red.), Meinema (2005).
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