

# Publication full list

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## Edition of books, journal issues, ... (10)

- [1] S. Destercke, D. Mercier, and F. Pichon, “Special issue from the 5th international conference on belief functions (belief 2018),” *International Journal of Approximate Reasoning*, vol. 117, pp. 50 – 51, 2020.
- [2] A. Antonucci, G. Corani, I. Couso, and S. Destercke, “Isipta 2017 conference special issue,” *Int. J. of Approximate Reasoning*, vol. 111, 2019.
- [3] S. Destercke, T. Denoeux, M. A. Gil, P. Grzegorzewski, and O. Hryniewicz, eds., *Uncertainty Modelling in Data Science, SMPS 2018, Compiègne, France, 17-21 September 2018*, vol. 832 of *Advances in Intelligent Systems and Computing*, Springer, 2019.
- [4] S. Destercke, T. Denoeux, F. Cuzzolin, and A. Martin, eds., *Belief Functions: Theory and Applications - 5th International Conference, BELIEF 2018, Compiègne, France, September 17-21, 2018, Proceedings*, vol. 11069 of *Lecture Notes in Computer Science*, Springer, 2018.
- [5] A. Antonucci, G. Corani, I. Couso, and S. Destercke, eds., *Proceedings of the Tenth International Symposium on Imprecise Probability: Theories and Applications, Lugano, Switzerland, 10-14 July 2017*, vol. 62 of *Proceedings of Machine Learning Research*, PMLR, 2017.
- [6] S. Destercke, “Ecsqaru 2015 conference special issue,” *Int. J. of Approximate Reasoning*, vol. 80, 2015.
- [7] S. Destercke and T. Denoeux, eds., *Symbolic and Quantitative Approaches to Reasoning with Uncertainty - 13th European Conference, ECSQARU 2015, Compiègne, France, July 15-17, 2015. Proceedings*, vol. 9161 of *Lecture Notes in Computer Science*, Springer, 2015.
- [8] C. Fabio, S. Destercke, and S. Teddy, “Isipta 2013 conference special issue,” *Int. J. of Approximate Reasoning*, vol. 56, 2015.
- [9] F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, eds., *ISIPTA’13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications*, (Compiègne), SIPTA, 2013.

- [10] S. Destercke, M. Masson, and B. Quost, “Belief 2012 conference special issue,” *Int. J. of Approximate Reasoning*, vol. 55, 2014.

### **Books and book chapters (3)**

- [11] S. Destercke and D. Dubois, *An introduction to Imprecise Probabilities*, ch. Special cases. Wiley, 2014.
- [12] S. Destercke and D. Dubois, *An introduction to Imprecise Probabilities*, ch. Other uncertainty theories based on capacities. Wiley, 2014.
- [13] P. Buche, S. Destercke, V. Guillard, O. Haemmerlé, R. Thomopoulos, *et al.*, “Springer series ’studies in computational intelligence,” vol. 497, 2014.

### **Invited intervention (7)**

- [14] S. Destercke, “Imprecise inferences over boolean functions made easy.” Invited talk at International Conference on Uncertainty Quantification & Optimisation 2020 (UQOP 2020), Bruxelles, Belgium.
- [15] S. Destercke, “Belief functions and boolean inference: basics, computational challenges and applications.” Invited lecture at Belief Function Spring School 2019, Siena, Italy.
- [16] S. Destercke, “Possibility theory: from basics to statistical learning.” Invited lecture at European Summer School on Fuzzy Logic and Applications 2018, Bari, Italy.
- [17] S. Destercke, “Belief functions.” Invited lecture at SIPTA Summer school 2018, Spain.
- [18] S. Destercke, “Epistemic uncertainty propagation in risk/reliability analysis.” Invited lecture at Frédéric Joliot & Otto Hahn summer school 2017, Germany.
- [19] S. Destercke, “Belief functions and uncertainty theories.” Invited lecture at Belief Function Spring School 2017, France.
- [20] S. Destercke, “Uncertainty theories: an introduction.” Invited tutorial to EC-SQARU 2013, Utrecht, Netherlands.
- [21] S. Destercke, “Uncertainty theories: an introduction.” Invited tutorial to SUM 2012, Marburg, Germany.

## Peer reviewed journals (35) - Q1 Scimago

- [22] S. Messoudi, S. Destercke, and S. Rousseau, “Copula-based conformal prediction for multi-target regression,” *Pattern Recognition*, p. 108101, 2021.
- [23] Y. C. C. Alarcón and S. Destercke, “Imprecise gaussian discriminant classification,” *Pattern Recognition*, vol. 112, p. 107739, 2021.
- [24] K. Shinde, P. Feissel, and S. Destercke, “Dealing with inconsistent measurements in inverse problems: set-based approach,” *International Journal for Uncertainty Quantification*, vol. 11, no. 3, 2021.
- [25] M.-H. Masson, B. Quost, and S. Destercke, “Cautious relational clustering: A thresholding approach,” *Expert Systems with Applications*, vol. 139, p. 112837, 2020.
- [26] I. Montes, E. Miranda, and S. Destercke, “Pari-mutuel probabilities as an uncertainty model,” *Inf. Sci.*, vol. 481, pp. 550–573, 2019.
- [27] B. Quost and S. Destercke, “Classification by pairwise coupling of imprecise probabilities,” *Pattern Recognition*, vol. 77, pp. 412–425, 2018.
- [28] I. Montes and S. Destercke, “Comonotonicity for sets of probabilities,” *Fuzzy Sets and Systems*, 2017.
- [29] N. B. Abdallah, S. Destercke, and M. Sallak, “Easy and optimal queries to reduce set uncertainty,” *European Journal of Operational Research*, vol. 256, no. 2, pp. 592–604, 2017.
- [30] G. Yang, S. Destercke, and M.-H. Masson, “The costs of indeterminacy: How to determine them?,” *IEEE Transactions on Cybernetics*, 2017.
- [31] S. Destercke, “On the median in imprecise ordinal problems,” *Annals of Operations Research*, vol. 256, no. 2, pp. 375–392, 2017.
- [32] C. Baudrit, S. Destercke, and P. Wuillemin, “Unifying parameter learning and modelling complex systems with epistemic uncertainty using probability interval,” *Inf. Sci.*, vol. 367-368, pp. 630–647, 2016.
- [33] C. Lousteau-Cazalet, A. Barakat, J. P. Belaud, P. Buche, G. Busset, B. Charnomordic, S. Dervaux, S. Destercke, J. Dibie, C. Sablayrolles, and C. Vialle, “A decision support system for eco-efficient biorefinery process comparison using a semantic approach,” *Computers and Electronics in Agriculture*, vol. 127, pp. 351–367, 2016.
- [34] A. M. Palacios, L. Sánchez, I. Couso, and S. Destercke, “An extension of the FURIA classification algorithm to low quality data through fuzzy rankings and its application to the early diagnosis of dyslexia,” *Neurocomputing*, vol. 176, pp. 60–71, 2016.

- [35] L. Ma, S. Destercke, and Y. Wang, “Online active learning of decision trees with evidential data,” *Pattern Recognition*, vol. 52, pp. 33–45, 2016.
- [36] V. Guillard, P. Buche, S. Destercke, N. Tamani, M. Croitoru, L. Menut, C. Guillaume, and N. Gontard, “A decision support system to design modified atmosphere packaging for fresh produce based on a bipolar flexible querying approach,” *Computers and Electronics in Agriculture*, vol. 111, pp. 131–139, 2015.
- [37] S. Destercke, M. Masson, and M. Poss, “Cautious label ranking with label-wise decomposition,” *European Journal of Operational Research*, vol. 246, no. 3, pp. 927–935, 2015.
- [38] S. Destercke, “Multilabel predictions with sets of probabilities: The hamming and ranking loss cases,” *Pattern Recognition*, vol. 48, no. 11, pp. 3757–3765, 2015.
- [39] E. Miranda, M. C. Troffaes, and S. Destercke, “A geometric and game-theoretic study of the conjunction of possibility measures,” *Information Sciences*, vol. 298, pp. 373–389, 2015.
- [40] F. Pichon, S. Destercke, and T. Burger, “A consistency-specificity trade-off to select source behavior in information fusion,” *IEEE Trans. on Syst. ,Men and Cyb.*, vol. 45, no. 4, pp. 598–609, 2015.
- [41] E. Miranda and S. Destercke, “Extreme points of the credal sets generated by comparative probabilities,” *Journal of Mathematical Psychology*, vol. 64, pp. 44–57, 2015.
- [42] S. Destercke and I. Couso, “Ranking of fuzzy intervals seen through the imprecise probabilistic lens,” *Fuzzy Sets and Systems*, vol. 278, pp. 20–39, 2015.
- [43] R. Thomopoulos, S. Destercke, B. Charnomordic, I. Johnson, and J. Abécassis, “An iterative approach to build relevant ontology-aware data-driven models,” *Information Sciences*, vol. 221, pp. 452–472, 2013.
- [44] M. Troffaes, E. Miranda, and S. Destercke, “On the connection between probability boxes and possibility measures,” *Information Sciences*, vol. 224, pp. 88–108, 2013.
- [45] S. Destercke, P. Buche, and B. Charnomordic, “Evaluating Data Reliability: An Evidential Answer with Application to a Web-Enabled Data Warehouse,” *IEEE Transactions on Knowledge and Data Engineering*, vol. 25, no. 1, pp. 92–105, 2013.
- [46] S. Destercke and M. Sallak, “An extension of Universal Generating Function in Multi-State Systems considering epistemic uncertainties.,” *IEEE Transactions on Reliability*, vol. 62, pp. 504–514, 2013.

- [47] S. Destercke and T. Burger, “Toward an Axiomatic Definition of Conflict Between Belief Functions.,” *IEEE trans. on systems, man, and cybernetics. Part B*, vol. 43, pp. 585–596, 2013.
- [48] V. Guillard, C. Guillaume, and S. Destercke, “Parameter uncertainties and error propagation in modified atmosphere packaging modelling,” *Postharvest Biology and Technology*, vol. 67, pp. 154–166, 2012.
- [49] S. Destercke and V. Guillard, “Interval analysis on non-linear monotonic systems as an efficient tool to optimise fresh food packaging,” *Computers and Electronics in Agriculture*, vol. 79, no. 2, pp. 116–124, 2011.
- [50] S. Destercke and D. Dubois, “Idempotent conjunctive combination of belief functions: Extending the minimum rule of possibility theory,” *Information Sciences*, vol. 181, no. 18, pp. 3925–3945, 2011.
- [51] S. Destercke, “Handling bipolar knowledge with imprecise probabilities,” *International Journal of Intelligent Systems*, vol. 26, no. 5, pp. 426–443, 2011.
- [52] S. Destercke, P. Buche, and V. Guillard, “A flexible bipolar querying approach with imprecise data and guaranteed results,” *Fuzzy Sets and Systems*, vol. 169, no. 1, pp. 51–64, 2011.
- [53] S. Destercke, D. Dubois, and E. Chojnacki, “Possibilistic information fusion using maximal coherent subsets,” *IEEE Trans. on Fuzzy Systems*, vol. 17, no. 1, pp. 79–92, 2008.
- [54] S. Destercke and E. Chojnacki, “Methods for the evaluation and synthesis of multiple sources of information applied to nuclear computer codes,” *Nuclear Engineering and Design*, vol. 238, no. 9, pp. 2484–2493, 2008.
- [55] S. Destercke, S. Guillaume, and B. Charnomordic, “Building an interpretable fuzzy rule base from data using Orthogonal Least Squares: Application to a depollution problem,” *Fuzzy Sets and Systems*, vol. 158, no. 18, pp. 2078–2094, 2007.

### **Peer reviewed journals (23) - Q2 Scimago**

- [56] J.-P. Belaud, N. Prioux, C. Vialle, P. Buche, S. Destercke, A. Barakat, and C. Sablayrolles, “Intensive data and knowledge-driven approach for sustainability analysis: Application to lignocellulosic waste valorization processes,” *Waste and Biomass Valorization*, pp. 1–16, 2021.
- [57] V.-L. Nguyen, S. Destercke, M.-H. Masson, and R. Ghassani, “Racing trees to query partial data,” *Soft Computing*, pp. 1–21, 2021.

- [58] I. Montes, E. Miranda, and S. Destercke, “Unifying neighbourhood and distortion models: part I - new results on old models,” *Int. J. Gen. Syst.*, vol. 49, no. 6, pp. 602–635, 2020.
- [59] I. Montes, E. Miranda, and S. Destercke, “Unifying neighbourhood and distortion models: part II - new models and synthesis,” *Int. J. Gen. Syst.*, vol. 49, no. 6, pp. 636–674, 2020.
- [60] S. Destercke, F. Pichon, and J. Klein, “From set relations to belief function relations,” *International Journal of Approximate Reasoning*, vol. 110, pp. 46–63, 2019.
- [61] V. Nguyen, S. Destercke, and M. Masson, “Partial data querying through racing algorithms,” *Int. J. Approx. Reasoning*, vol. 96, pp. 36–55, 2018.
- [62] S. Destercke, “A generic framework to include belief functions in preference handling and multi-criteria decision,” *Int. J. Approx. Reasoning*, vol. 98, pp. 62–77, 2018.
- [63] J. Klein, S. Destercke, and O. Colot, “Idempotent conjunctive and disjunctive combination of belief functions by distance minimization,” *Int. J. Approx. Reasoning*, vol. 92, pp. 32–48, 2018.
- [64] I. Montes and S. Destercke, “On extreme points of p-boxes and belief functions,” *Annals of Mathematics and Artificial Intelligence*, 2017.
- [65] G. Yang, S. Destercke, and M.-H. Masson, “Cautious classification with nested dichotomies and imprecise probabilities,” *Soft Computing*, pp. 1–16, 2016.
- [66] J. Klein, S. Destercke, and O. Colot, “Interpreting evidential distances by connecting them to partial orders: Application to belief function approximation,” *Int. J. Approx. Reasoning*, vol. 71, pp. 15–33, 2016.
- [67] M.-H. Masson, S. Destercke, and T. Denoeux, “Modelling and predicting partial orders from pairwise belief functions,” *Soft Computing*, vol. 20, no. 3, pp. 939–950, 2016.
- [68] S. Destercke, “Comments on "a distance-based statistical analysis of fuzzy number-valued data" by the {SMIRE} research group,” *International Journal of Approximate Reasoning*, vol. 55, no. 7, pp. 1575 – 1577, 2014.
- [69] S. Destercke, “Comments on "learning from imprecise and fuzzy observations: Data disambiguation through generalized loss minimization" by eyke hüllermeier,” *International Journal of Approximate Reasoning*, vol. 55, no. 7, pp. 1588 – 1590, 2014.

- [70] F. Aguirre, S. Destercke, D. Dubois, M. Sallak, and C. Jacob, “Inclusion-exclusion principle for belief functions,” *International Journal of Approximate Reasoning*, vol. 55, no. 8, pp. 1708 – 1727, 2014.
- [71] S. Destercke, “Independence and 2-Monotonicity: Nice to Have, Hard to Keep.,” *International Journal of Approximate Reasoning*, vol. 54, no. 4, pp. 478–490, 2013.
- [72] S. Destercke and O. Strauss, “Filtering with clouds,” *Soft Computing*, vol. 16, no. 5, pp. 821–831, 2012.
- [73] S. Destercke, “A K-nearest neighbours method based on imprecise probabilities,” *Soft Computing*, vol. 16, no. 5, pp. 833–844, 2012.
- [74] M. Troffaes and S. Destercke, “Probability boxes on totally preordered spaces for multivariate modelling,” *International Journal of Approximate Reasoning*, vol. 52, no. 6, pp. 767–791, 2011.
- [75] E. Chojnacki, J. Baccou, and S. Destercke, “Numerical sensitivity and efficiency in the treatment of epistemic and aleatory uncertainty,” *Int. J. of General Systems*, vol. 39, no. 7, pp. 683–704, 2010.
- [76] L. Utkin and S. Destercke, “Computing expectations with continuous p-boxes: Univariate case,” *International Journal of Approximate Reasoning*, vol. 50, no. 5, pp. 778–798, 2009.
- [77] S. Destercke, D. Dubois, and E. Chojnacki, “Unifying practical uncertainty representations: I generalized p-boxes,” *Int. J. of Approximate Reasoning*, vol. 49, no. 3, pp. 649–663, 2008.
- [78] S. Destercke, D. Dubois, and E. Chojnacki, “Unifying practical uncertainty representations: II clouds,” *Int. J. of Approximate Reasoning*, vol. 49, no. 3, pp. 664–677, 2008.

### **Peer reviewed journals (3) - Autres**

- [79] M.-H. Masson, S. Destercke, and V. Cherfaoui, “Inference and decision in credal occupancy grids: Use case on trajectory planning,” *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, vol. 29, no. 04, pp. 537–557, 2021.
- [80] T. Burger and S. Destercke, “How to randomly generate mass functions.,” *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, vol. 21, pp. 645–673, 2013.
- [81] S. Destercke, D. Dubois, and E. Chojnacki, “A consonant approximation of the product of independent consonant random sets,” *International Journal of*

*Uncertainty, Fuzziness and Knowledge-Based Systems*, vol. 17, no. 6, p. 773, 2009.

**Peer reviewed international conferences (highly selective, <30% acceptance rate - 8)**

- [82] L. Adam and S. Destercke, “Possibilistic preference elicitation by minimax regret,” in *Conference on Uncertainty in Artificial Intelligence (UAI)*, PMLR, In press.
- [83] C. Labreuche and S. Destercke, “How to handle missing values in multi-criteria decision aiding?,” in *Proceedings of the 28th International Joint Conference on Artificial Intelligence*, pp. 1756–1763, AAAI Press, 2019.
- [84] V. Nguyen, S. Destercke, M. Masson, and E. Hüllermeier, “Reliable multi-class classification based on pairwise epistemic and aleatoric uncertainty,” in *Proceedings of the Twenty-Seventh International Joint Conference on Artificial Intelligence, IJCAI 2018, July 13-19, 2018, Stockholm, Sweden.*, pp. 5089–5095, 2018.
- [85] V.-L. Nguyen, S. Destercke, and M.-H. Masson, “Querying partially labelled data to improve a k-nn classifier,” in *Thirty-First AAAI Conference on Artificial Intelligence*, 2017.
- [86] N. B. Abdallah and S. Destercke, “Optimal expert elicitation to reduce interval uncertainty,” in *Proceedings of the Thirty-First Conference on Uncertainty in Artificial Intelligence, UAI 2015, July 12-16, 2015, Amsterdam, The Netherlands*, pp. 12–21, 2015.
- [87] S. Destercke and G. Yang, “Cautious ordinal classification by binary decomposition,” in *Machine Learning and Knowledge Discovery in Databases - European Conference, ECML PKDD 2014, Nancy, France, September 15-19, 2014. Proceedings, Part I*, pp. 323–337, 2014.
- [88] G. Yang, S. Destercke, and M.-H. Masson, “Nested dichotomies with probability sets for multi-class classification,” in *Proceedings of ECAI 2014*, pp. 363–368, 2014.
- [89] S. Destercke, “A pairwise label ranking method with imprecise scores and partial predictions,” in *ECML/PKDD*, pp. 112–127, 2013.

**Peer reviewed international conferences (selective, between 30% et 60% acceptance rate - 7)**

- [90] S. Destercke, “A generic framework to include belief functions in preference handling for multi-criteria decision,” in *European Conference on Symbolic*



and *Quantitative Approaches to Reasoning and Uncertainty*, pp. 179–189, Springer, 2017.

- [91] C. Labreuche, S. Destercke, and B. Mayag, “Elicitation of a utility from uncertainty equivalent without standard gambles,” in *Symbolic and Quantitative Approaches to Reasoning with Uncertainty - 13th European Conference, ECSQARU 2015, Compiègne, France, July 15-17, 2015. Proceedings*, pp. 25–35, 2015.
- [92] F. Pichon, S. Destercke, and T. Burger, “Selecting source behavior in information fusion on the basis of consistency and specificity,” in *ECSQARU*, pp. 473–484, 2013.
- [93] E. Miranda and S. Destercke, “Extreme points of the credal sets generated by elementary comparative probabilities,” in *ECSQARU*, pp. 424–435, 2013.
- [94] S. Destercke, “Independence and 2-monotonicity: nice to have, hard to keep,” in *Symbolic and Quantitative Approaches to Reasoning with Uncertainty*, pp. 263–274, Springer, 2011.
- [95] S. Destercke and D. Dubois, “Can the Minimum Rule of Possibility Theory Be Extended to Belief Functions?,” in *Symbolic and Quantitative Approaches to Reasoning with Uncertainty*, pp. 299–310, Springer, 2009.
- [96] S. Destercke, D. Dubois, and E. Chojnacki, “Cautious conjunctive merging of belief functions,” in *Symbolic and Quantitative Approaches to Reasoning with Uncertainty*, pp. 332–343, Springer, 2007.

## **Peer reviewed international conferences (72)**

- [97] Y. C. C. Alarcón and S. Destercke, “Distributionally robust, skeptical binary inferences in multi-label problems,” in *International Symposium on Imprecise Probability: Theories and Applications*, pp. 51–60, PMLR, 2021.
- [98] S. Destercke, I. Montes, and E. Miranda, “Processing multiple distortion models: a comparative study,” in *International Symposium on Imprecise Probability: Theories and Applications*, pp. 122–131, PMLR, 2021.
- [99] S. Messoudi, S. Destercke, and S. Rousseau, “Conformal multi-target regression using neural networks,” in *Conformal and Probabilistic Prediction and Applications, COPA 2020, 9-11 September 2020, Virtual Event, Verona, Italy*, vol. 128 of *Proceedings of Machine Learning Research*, pp. 65–83, PMLR, 2020.
- [100] L. Jacquin, A. Imoussaten, S. Destercke, F. Trouset, J. Montmain, and D. Perrin, “Manipulating focal sets on the unit simplex: Application to

- plastic sorting,” in *29th IEEE International Conference on Fuzzy Systems, FUZZ-IEEE 2020, Glasgow, UK, July 19-24, 2020*, pp. 1–7, IEEE, 2020.
- [101] S. Messoudi, S. Rousseau, and S. Destercke, “Deep conformal prediction for robust models,” in *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, pp. 528–540, Springer, 2020.
- [102] K. Shinde, P. Feissel, and S. Destercke, “Dealing with inconsistent measurements in inverse problems: An approach based on sets and intervals,” in *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, pp. 449–462, Springer, 2020.
- [103] L. Jacquin, A. Imoussaten, and S. Destercke, “Handling mixture optimisation problem using cautious predictions and belief functions,” in *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, pp. 394–407, Springer, 2020.
- [104] S. Destercke, A. Rico, and O. Strauss, “Approximating general kernels by extended fuzzy measures: Application to filtering,” in *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, pp. 112–123, Springer, 2020.
- [105] Y.-C. Carranza-Alarcon, S. Messoudi, and S. Destercke, “Cautious label-wise ranking with constraint satisfaction,” in *International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*, pp. 96–111, Springer, 2020.
- [106] L. Adam, A. Van Camp, S. Destercke, and B. Quost, “Inferring from an imprecise plackett-luce model: application to label ranking,” in *International Conference on Scalable Uncertainty Management*, pp. 98–112, Springer, 2020.
- [107] J. Ortholand, S. Destercke, and K. Belahcene, “Equity in learning problems: an owa approach,” in *International Conference on Scalable Uncertainty Management*, pp. 187–199, Springer, 2020.
- [108] B. Quost, M.-H. Masson, and S. Destercke, “Dealing with atypical instances in evidential decision-making,” in *International Conference on Scalable Uncertainty Management*, pp. 217–225, Springer, 2020.
- [109] S. Destercke and S. Lagrue, “On cautiousness and expressiveness in interval-valued logic,” in *Scalable Uncertainty Management - 13th International Conference, SUM 2019, Compiègne, France, December 16-18, 2019, Proceedings*, pp. 280–288, 2019.

- [110] P. Guillot and S. Destercke, “Preference elicitation with uncertainty: Extending regret based methods with belief functions,” in *Scalable Uncertainty Management - 13th International Conference, SUM 2019, Compiègne, France, December 16-18, 2019, Proceedings*, pp. 289–309, 2019.
- [111] E. Hüllermeier, S. Destercke, and I. Couso, “Learning from imprecise data: Adjustments of optimistic and pessimistic variants,” in *Scalable Uncertainty Management - 13th International Conference, SUM 2019, Compiègne, France, December 16-18, 2019, Proceedings*, pp. 266–279, 2019.
- [112] V. Nguyen, S. Destercke, and E. Hüllermeier, “Epistemic uncertainty sampling,” in *Discovery Science - 22nd International Conference, DS 2019, Split, Croatia, October 28-30, 2019, Proceedings*, pp. 72–86, 2019.
- [113] Y. C. C. Alarcon and S. Destercke, “Imprecise gaussian discriminant classification,” in *International Symposium on Imprecise Probabilities: Theories and Applications, ISIPTA 2019, 3-6 July 2019, Thagaste, Ghent, Belgium*, pp. 59–67.
- [114] E. Miranda, I. Montes, and S. Destercke, “A unifying frame for neighbourhood and distortion models,” in *International Symposium on Imprecise Probabilities: Theories and Applications*, pp. 304–313, 2019.
- [115] S. Destercke, F. Pichon, and J. Klein, “From relations between sets to relations between belief functions,” in *Belief Functions: Theory and Applications - 5th International Conference, BELIEF 2018, Compiègne, France, September 17-21, 2018, Proceedings*, pp. 65–72, 2018.
- [116] G. Dendievel, S. Destercke, and P. Wachalski, “Density estimation with imprecise kernels: Application to classification,” in *Uncertainty Modelling in Data Science, SMPS 2018, Compiègne, France, 17-21 September 2018.*, pp. 59–67, 2018.
- [117] V. Nguyen, S. Destercke, and M. Masson, “K-nearest neighbour classification for interval-valued data,” in *Scalable Uncertainty Management - 11th International Conference, SUM 2017, Granada, Spain, October 4-6, 2017, Proceedings*, pp. 93–106, 2017.
- [118] O. Cailloux and S. Destercke, “Reasons and means to model preferences as incomplete,” in *Scalable Uncertainty Management - 11th International Conference, SUM 2017, Granada, Spain, October 4-6, 2017, Proceedings*, pp. 17–30, 2017.
- [119] I. Montes, E. Miranda, and S. Destercke, “A study of the pari-mutuel model from the point of view of imprecise probabilities,” in *Proceedings of the Tenth International Symposium on Imprecise Probability: Theories and Applications*, pp. 229–240, 2017.

- [120] V.-L. Nguyen, S. Destercke, and M.-H. Masson, “Partial data querying through racing algorithms,” in *International Symposium on Integrated Uncertainty in Knowledge Modelling and Decision Making*, pp. 163–174, 2016.
- [121] Y. Soullard, A. Antonucci, and S. Destercke, “Technical gestures recognition by set-valued hidden markov models with prior knowledge,” in *Soft Methods for Data Science (proceedings of SMPS 2016)*, pp. 455–462, Springer, 2016.
- [122] I. Montes and S. Destercke, “On extreme points of p-boxes and belief functions,” in *Soft Methods for Data Science (proceedings of SMPS 2016)*, pp. 363–371, Springer, 2016.
- [123] Y. Soullard, S. Destercke, and I. Thouvenin, “Co-training with credal models,” in *Artificial Neural Networks in Pattern Recognition - 7th IAPR TC3 Workshop, ANNPR 2016, Ulm, Germany, September 28-30, 2016, Proceedings*, pp. 92–104, 2016.
- [124] J. Klein, S. Destercke, and O. Colot, “Idempotent conjunctive combination of belief functions by distance minimization,” in *Belief Functions: Theory and Applications - 4th International Conference, BELIEF 2016, Prague, Czech Republic, September 21-23, 2016, Proceedings*, pp. 156–163, 2016.
- [125] L. Yu, S. Destercke, M. Sallak, and W. Schön, “Comparing system reliabilities with ill-known probabilities,” in *Information Processing and Management of Uncertainty in Knowledge-Based Systems - 16th International Conference, IPMU 2016, Eindhoven, The Netherlands, June 20-24, 2016, Proceedings, Part II*, pp. 619–629, 2016.
- [126] M. Sallak, S. Destercke, W. Schön, F. Vanderhaegen, D. Berdjag, and C. Simon, “Uncertainty, elicitation of experts’ opinion, and human failures: Challenges for RAM analysis of ERTMS sos,” in *10th System of Systems Engineering Conference, SoSE 2015, San Antonio, TX, USA, May 17-20, 2015*, pp. 88–93, 2015.
- [127] L. Ma, S. Destercke, and Y. Wang, “Evidential likelihood flatness as a way to measure data quality: the multinomial case,” in *2015 Conference of the International Fuzzy Systems Association and the European Society for Fuzzy Logic and Technology (IFSA-EUSFLAT-15), Gijón, Spain., June 30, 2015.*, 2015.
- [128] M. C. M. Troffaes, F. P. A. Coolen, and S. Destercke, “A note on learning dependence under severe uncertainty,” in *IPMU*, pp. 498–507, 2014.
- [129] S. Destercke, “Multilabel prediction with probability sets: The hamming loss case,” in *IPMU*, pp. 496–505, 2014.

- [130] S. Destercke and O. Strauss, “Kolmogorov-smirnov test for interval data,” in *IPMU*, pp. 416–425, 2014.
- [131] N. Sutton-Charani, S. Destercke, and T. Denoeux, “Application of e2m decision trees to rubber quality prediction,” in *IPMU*, pp. 107–116, 2014.
- [132] S. Destercke, M. Sallak, and M. Poss, “Reliability analysis with ill-known probabilities and dependencies,” in *Proceedings of ICVRAM 2014*, pp. 1–10, 2014.
- [133] F. Aguirre, C. Jacob, S. Destercke, D. Dubois, and M. Sallak, “Inclusion/exclusion principle for belief functions,” in *ISIPTA’13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications* (F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, eds.), (Compiègne), pp. 3–11, SIPTA, 2013.
- [134] M. Hourbracq, C. Baudrit, P.-H. Wuillemin, and S. Destercke, “Dynamic credal networks: introduction and use in robustness analysis,” in *ISIPTA’13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications* (F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, eds.), (Compiègne), pp. 159–168, SIPTA, 2013.
- [135] S. Destercke, P. Buche, B. Charnomordic, and V. Guillard, “Decision support system using flexible query and reliability assessment - application to biodegradable and biosourced packaging design,” in *FUZZ-IEEE 2013, IEEE International Conference on Fuzzy Systems, Hyderabad, India, 7-10 July, 2013, Proceedings*, 2013.
- [136] N. Sutton-charani, S. Destercke, and T. Denoeux, “Classification trees based on belief functions,” in *BELIEF 2012*, pp. 77–84, 2012.
- [137] T. Burger and S. Destercke, “Random generation of mass functions : A short howto,” in *BELIEF 2012*, pp. 145–152, 2012.
- [138] S. Destercke and T. Burger, “Revisiting the notion of conflicting belief functions,” in *BELIEF 2012* (T. Denoeux and M.-H. Masson, eds.), vol. 164, pp. 153–160, 2012.
- [139] S. Destercke and B. Quost, “Correcting Binary Imprecise Classifiers: Local vs Global Approach,” in *Scalable Uncertainty Management* (E. Hüllermeier, S. Link, T. Fober, and B. Seeger, eds.), vol. 7520 of *Lecture Notes in Computer Science*, (Berlin, Heidelberg), pp. 299–310, Springer Berlin Heidelberg, 2012.
- [140] Y. Mazigh, B. B. Yaghlane, and S. Destercke, “Evaluation of the naive evidential classifier (nec): A comparison between its two variants based on a real agronomic application,” in *SUM*, pp. 619–624, 2012.

- [141] S. Destercke and V. Antoine, “Combining Imprecise Probability Masses with Maximal Coherent Subsets: Application to Ensemble Classification,” in *Synergies of Soft Computing and Statistics for Intelligent Data Analysis*, vol. 190 of *Advances in Intelligent Systems and Computing*, (Berlin, Heidelberg), pp. 1–8, Springer Berlin Heidelberg, 2012.
- [142] M. C. M. Troffaes and S. Destercke, “A Nested Approach to Multivariate Modelling Using Lower Previsions,” in *Proceedings of PSAM 11 & ESREL*, 2012.
- [143] I. Johnson, J. Abécassis, B. Charnomordic, S. Destercke, and R. Thomopoulos, “Making ontology-based knowledge and decision trees interact: an approach to enrich knowledge and increase expert confidence in data-driven models,” in *Knowledge Science, Engineering and Management*, pp. 304–316, Springer, 2011.
- [144] O. Strauss and S. Destercke, “F-boxes for filtering,” in *European Society for Fuzzy Logic and Technology - EUSFLAT*, 2011.
- [145] M. Troffaes, E. Miranda, and S. Destercke, “On the connection between probability boxes and possibility measures,” in *Proceedings of the 7th conference of the European Society for Fuzzy Logic and Technology (EUSFLAT-2011)*, Atlantis Press, 2011.
- [146] M. Troffaes and S. Destercke, “Probability boxes on totally preordered spaces for multivariate modelling,” in *ISIPTA’11: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications*, 2011.
- [147] S. Destercke, P. Buche, and B. Charnomordic, “Data reliability assessment in a data warehouse opened on the Web,” in *Flexible Query Answering*, 2011.
- [148] S. Destercke and B. Quost, “Combining binary classifiers with imprecise probabilities,” in *Integrated Uncertainty in Knowledge Modelling and Decision Making*, pp. 219–230, Springer, 2011.
- [149] S. Destercke, “A k-nearest neighbours method based on lower previsions,” in *Computational Intelligence for Knowledge-Based Systems Design*, pp. 129–138, Springer, 2010.
- [150] S. Destercke, “A new contextual discounting rule for lower probabilities,” in *Information Processing and Management of Uncertainty in Knowledge-Based Systems. Applications*, pp. 198–207, Springer, 2010.
- [151] S. Destercke and O. Strauss, “Using Cloudy Kernels for Imprecise Linear Filtering,” in *Computational Intelligence for Knowledge-Based Systems Design* (E. Hüllermeier, R. Kruse, and F. Hoffmann, eds.), vol. 6178 of *Lecture*

*Notes in Computer Science*, (Berlin, Heidelberg), pp. 198–207, Springer Berlin Heidelberg, 2010.

- [152] S. Destercke, “Evaluating trust from past assessments with imprecise probabilities: comparing two approaches,” in *Scalable Uncertainty Management*, pp. 151–162, Springer, 2010.
- [153] F. Saïs, R. Thomopoulos, and S. Destercke, “Ontology-driven possibilistic reference fusion,” in *On the Move to Meaningful Internet Systems, OTM 2010*, pp. 1079–1096, Springer, 2010.
- [154] S. Destercke, “A Decision Rule for Imprecise Probabilities Based on Pair-Wise Comparison of Expectation Bounds,” in *Combining Soft Computing and Statistical Methods in Data Analysis*, pp. 189–197, Springer-Verlag Berlin, 2010.
- [155] S. Destercke, “Handling Bipolar Knowledge with Credal Sets,” in *Combining Soft Computing and Statistical Methods in Data Analysis*, pp. 199–207, Springer, 2010.
- [156] S. Destercke, “Fuzzy belief structures viewed as classical belief structures: A practical viewpoint,” in *Fuzzy Systems (FUZZ), 2010 IEEE International Conference on*, pp. 1–8, IEEE, 2010.
- [157] S. Destercke and D. Dubois, “The role of generalised p-boxes in imprecise probability models,” in *Proc. of the 6th Int. Symp. on Imprecise Probability: Theories and Applications*, no. 1, pp. 179–188, 2009.
- [158] S. Destercke, D. Dubois, and E. Chojnacki, “Computing with generalized p-boxes: preliminary results,” in *Proc. Information Processing and Management of Uncertainty*, 2008.
- [159] E. Miranda, M. Troffaes, and S. Destercke, “Generalised p-boxes on totally ordered spaces,” in *Soft Methods for Handling Variability and Imprecision*, pp. 1–8, 2008.
- [160] S. Destercke and G. de Cooman, “Relating epistemic irrelevance to event trees,” in *Soft Methods for Handling Variability and Imprecision*, pp. 66–73, Springer, 2008.
- [161] E. Miranda, M. Troffaes, and S. Destercke, “Generalised p-boxes on totally ordered spaces,” in *Soft Methods for Handling Variability and Imprecision*, pp. 235–242, Springer, 2008.
- [162] S. Destercke, S. Guillaume, and B. Charnomordic, “Using the OLS algorithm to build interpretable rule bases: an application to a depollution problem,” in *FUZZ-IEEE*, 2007.

- [163] L. Utkin and S. Destercke, “Computing expectations with p-boxes: two views of the same problem,” in *5th International Symposium on Imprecise Probability: Theories and Applications*, 2007.
- [164] S. Destercke, D. Dubois, and E. Chojnacki, “Relating practical representations of imprecise probabilities,” in *Proceedings of the 5th International Symposium on Imprecise Probability: Theories and Applications*, 2007.
- [165] S. Destercke and E. Chojnacki, “Evaluation, analysis and synthesis of multiple source information: an application to nuclear computer codes.,” in *European Safety and Reliability Conference*, 2007.
- [166] S. Destercke and E. Chojnacki, “Handling dependencies between variables with imprecise probabilistic models.,” in *European Safety and Reliability Conference*, 2007.
- [167] S. Destercke, D. Dubois, and E. Chojnacki, “Transforming probability intervals into other uncertainty models,” in *European Society for Fuzzy Logic and Technology - EUSFLAT*, pp. 367–373, 2007.
- [168] S. Destercke and D. Dubois, “A unified view of some representations of imprecise probabilities,” in *Soft Methods for Integrated Uncertainty Modelling*, pp. 249–257, Springer, 2006.

### **Peer-reviewed national conferences (14)**

- [169] S. Messoudi, S. Rousseau, and S. Destercke, “Prédiction conformelle profonde pour des modèles robustes,” in *Extraction et Gestion des Connaissances, EGC 2020, Brussels, Belgium, January 27-31, 2020*, vol. E-36, pp. 301–308, 2020.
- [170] K. Shinde, P. Feissel, and S. Destercke, “Material parameter identification using set-valued inverse problem and detection of outliers in the noisy measurements,” in *14ème Colloque national en calcul des structures*, 2019.
- [171] S. Destercke, M.-H. Masson, and B. Quost, “Clustering prudent : une approche relationnelle par seuillage,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA), Ales (France)*, 2019.
- [172] S. Destercke, V. Cherfaoui, M.-H. Masson, H. Mouhagir, and S. Fakh, “Inférences prudentes dans des grilles d’occupation : planification de trajectoires de véhicules dans l’incertain,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA), Arras (France)*, 2018.
- [173] Y.-C. Carranza-Alarcon and S. Destercke, “Analyse Discriminante Imprecise basée sur l’inférence Bayésienne robuste,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA), Arras (France)*, 2018.



- [174] S. Destercke, “Un cadre évidentiel générique pour apprendre des préférences multi-critères,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Amiens (France), 2017.
- [175] g. Yang, S. Destercke, and M.-H. Masson, “Quantifier le coût de l’imprécision,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Cargese (France), 2016.
- [176] R. Kallel, S. Destercke, and B. Ben Yaghlane, “Prédictions multilabel partielles: une première étude utilisant les KNN évidentiels,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Reims (France), 2013.
- [177] R. Nassif, S. Destercke, and M.-H. Masson, “Classification multi-label par fonctions de croyance,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Reims (France), 2013.
- [178] N. Sutton-Charani, S. Destercke, and T. Denoeux, “Arbres de classification construits à partir de fonctions de croyance,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Compiègne (France), 2012.
- [179] S. Destercke, P. Buche, and B. Charnomordic, “Mes données sont-elles fiables? Ver une réponse évidentielle,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Lannion (France), 2010.
- [180] S. Destercke, F. Saïs, and R. Thomopoulos, “Fusion évidentielle de références et interrogation flexible,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Annecy (France), 2009.
- [181] S. Destercke, D. Dubois, and E. Chojnacki, “Une approximation possibiliste de la combinaison d’ensembles aléatoires consonants et indépendants,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Lens (France), 2008.
- [182] S. Destercke, D. Dubois, and E. Chojnacki, “Une méthode de fusion possibiliste basée sur les sous-ensembles maximaux cohérents,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Nîmes (France), 2007.
- [183] S. Destercke, D. Dubois, and E. Chojnacki, “Fusion d’opinions d’experts et théories de l’incertain,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Toulouse, France, , 2006.
- [184] S. Destercke, S. Guillaume, and B. Charnomordic, “Amélioration de l’interprétabilité d’un algorithme classique d’induction de règles floues,” in *Rencontres Francophones sur la Logique Floue et ses Applications (LFA)*, Nantes, France, 2004.