

Sébastien Destercke

CNRS Researcher

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Research profile

Most of my research focuses on reasoning under severe uncertainty, i.e., where available data and/or knowledge suffer from important imperfections: imprecision, scarcity, badly characterised noise... I have in particular investigated theories using probability sets rather than single probabilities as models of such uncertainty. My work is shared between theoretical issues and more applied considerations (mainly in the fields of reliability/risk analysis and life sciences), with a current focus on learning issues to handle preferences and structured data (graphs, binary vectors and matrices).

Education and diploma

- 2017 Research Advisor Diploma (Habilitation) at Université de Technologie de Compiègne.
Title Musings on imprecision in uncertainty
- 2005-2008 PhD in Computer Science at Université Paul-Sabatier, Toulouse. Prepared at Toulouse Institute of Computer Science Research, under the supervision of Didier Dubois and funded by the French Institute for Radiological Protection and Nuclear Safety.
Title Uncertainty representation and combination: new results with application to nuclear safety issues
- 1998-2004 **Engineering degree (Msc level) in computer science**, Polytechnic faculty of Mons (selective faculty with entry exam), Belgium

Employment

- 11/11 - Now **CNRS (main French research institute) researcher** in the joint research unit Heudiasyc (Université de Technologie de Compiègne), recognized as a laboratory of excellence by the French government.
- 02/09 - 11/11 **Research engineer** at the French agronomical research institute for developing countries, within the joint research unit IATE working on agropolymers and emerging technologies, Montpellier, France.
- 09/08 - 02/09 Teaching and research assistant in the mathematics and computer science department, Université Toulouse le mirail, France

Projects (Main recent ones)

UML-NET

- Details 3 years (2015-2018), **PI**, ANR national grant (~50K Euros)
Topic Network on uncertainty in Machine Learning
Partners Heudiasyc/CNRS (France), EDyP/CNRS (France), Oviedo University (Spain), Paderborn University (Germany), Belfast university (Ireland), IDSIA research center (switzerland)

KIVA

- Details 4 years (2013-2017), task leader on gesture recognition, Picardie Region Industrilab project
Topic Gesture training in 3D virtual environment
Partners Montupet (France), Heudiasyc/CNRS (France), Reviattech (France)

RECIF

Details 3 years (2014-2017), task leader on expert elicitation, ANR national grant (~150K Euros)
Topic Uncertainty modelling by belief functions for railway systems reliability assessment
Partners Heudiasyc/CNRS (France), LAMIH (France), CRAN (France)

Visiting positions

- 2014 **Grey College Fellow, Durham University**, 3 month visit the Mathematical science department funded by Grey College
- 2012 **Scientific excellence grant** funded by Oviedo University for a 3 month visit to the statistic department of Oviedo University
- 2007 **Paul Sabatier University grant** for a 3 month visit to Gert de Cooman in Ghent Systems laboratory

Awards

- 2016 Co-author of the best paper award at the BELIEF 2016 conference
- 2016 Co-author of the best young researcher paper award at the SMPS 2016 conference
- 2009 Best Ph.D. (gold prize) awarded by the International Society for Imprecise Probabilities: Theories and Applications
- 2008 Best paper award, $\lambda\mu$ conference, category "new industrial challenges"

Research management

Supervision of Graduate Students and post-doctoral fellows

- Master 11 master students on average at 50% supervision
- PhD 4 co-supervised, 1 as single supervisor (5 total)
- Post-doctoral 3 at 100 % supervision, 1 at 50% (4 total)

Institutional responsibilities

- 2013-Now **Directorial board** of the french laboratory of excellence **Labex MS2T** (control of technological systems of systems). **Scientific responsible** of axis 2, **Uncertainty management**. Labex counts 3 axes of equal importance, with a total 70 members and 6.5M€ budget

Involvement in scientific Societies

- pré-GDR IA** National research group on Formal Aspects and Algorithmic in Artificial Intelligence (\simeq 400 members). Member of scientific and organization committees. Specific tasks: autumn school organization, relations with other research groups (GDR).
- SIPTA** International Society for Imprecise Probabilities: Theories and Applications (\simeq 100 members). **Main society for promoting imprecise probabilistic approaches**. Successively Web editor (2011-2013,2015-2017) and Secretary (2013-2015), **currently president** (2017-2019)
- BFAS** International Belief function association (\simeq 100 members). **Main society for promoting belief functions**. Secretary (2010-2017)

Organisation of scientific meetings (major ones)

- 2018 **Joint conference on Soft Methods in Probabilities and Statistics, and International Conference on Belief Functions** (\simeq 100 expected participants), main conferences on approaches using belief functions and fuzzy approaches in statistic, role: **chair**
- 2015 **European Conference on Symbolic and Quantitive Approaches to Reasoning with Uncertainty (ECSQARU)** (\simeq 70 participants), selective conference (\simeq 50% acceptance) on qualitative and quantitative uncertainty reasoning methods, role: **co-chair**
- 2013 **International Symposium on Imprecise Probability Theories and Applications (ISIPTA)** (\simeq 60 participants), main conference on imprecise probabilistic approaches, role: **chair**

Commissions of trust (major ones)

- 2014-Now **Editorial board** of International Journal of Approximate Reasoning (IF:1.729), the main journal for imprecise probabilistic related papers, and of Artificial Intelligence Review
- 2008-Now **Program committee of major and selective conferences about artificial intelligence and uncertainty reasoning**, such as
- Uncertainty in Artificial Intelligence - UAI (2010-2018, $\simeq 25\%$ accep. rate),
 - European Conference on Artificial Intelligence - ECAI (2014-2016, $\simeq 25\%$ accep. rate),
 - International Joint Conference on Artificial Intelligence - IJCAI (2017,2018 as SPC, $\simeq 20\%$ accep. rate),
 - International Conference on Machine Learning - ICML (2018, $\simeq 20\%$ accep. rate)
 - AAAI Conference on Artificial Intelligence - AAAI (2018, $\simeq 20\%$ accep. rate),
 - Neural Information Processing Systems - NIPS (2017, $\simeq 20\%$ accep. rate),
 - European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty- ECSQARU (2011-2017, $\simeq 50\%$ accep. rate).
 - International Symposium on Imprecise Probabilities and Applications - ISIPTA (2011-2017, Steering committee in 2013, 2017)
- 2012-Now Expert for national research agencies (Switzerland - SNSF, Netherlands - (NWO), French (ANR))
- 2013-Now Reviewer for 2 thesis, Examiner for 8

Invited talks and seminars

I have been an invited lecturer in the main international schools related to the field of imprecise probabilities, as well as to conferences and events focusing on reasoning under uncertainty.

- 2018 Invited **lecturer** at the [8th SIPTA School on Imprecise Probabilities](#), the **main summer school on imprecise probability theory**: "Belief functions"
- 2018 Invited **lecturer** at the [10th French days of structure and material reliability](#): "Introduction to decision under uncertainty"
- 2017 Invited **lecturer** at the [Frédéric Joliot & Otto Hahn summer school 2017](#), focusing on uncertainty propagation for nuclear safety: "Epistemic uncertainty propagation in risk/reliability analysis"
- 2017 Invited **lecturer** at the [ETICS school 2017](#), focusing on uncertainty propagation in computer codes: "Imprecise probabilistic tools to propagate uncertainty"
- 2017 Invited **lecturer** at the [fourth School on belief functions and their applications](#) in China, the **main school on belief function theory**, a particular approach to deal with imprecise information: "Belief functions and uncertainty theories"
- 2016 Invited **lecturer** in an INRA researcher school: "An introduction to information fusion issues"
- 2015 Invited **lecturer** at the [third School on belief functions and their applications](#) in France: "On conflict and information combination"
- 2014 Invited **lecturer** at the [6th SIPTA School on Imprecise Probabilities](#), the **main summer school on imprecise probability theory**: "Introduction to imprecise probabilities"
- 2014 Invited to give a **plenary talk** at the **Dagstuhl seminar** on preference learning, organized by Eyke Hüllermeier, Johannes Furnkranz, Scott Sanner and Roman Slowinsky
- 2013 Invited By Linda Van der Gaag to give a **plenary tutorial talk** at the **European Conference on Symbolic and Quantitative Approaches to Reasoning with Uncertainty (ECSQARU 2013)**: "Some of the things you wanted to know about uncertainty (and were too busy to ask)"
- 2012 Invited by Eyke Hüllermeier to give a **plenary tutorial talk** at **Scalable Uncertainty Management** conference ([SUM 2012](#)): "Uncertainty handling and modelling: an introduction"

Software development

I am currently involved in the development of different software, as main contributor or as contributor to specific packages:

- Classifip** Open source Python library, of which I am the main developer, for machine learning with imprecise probabilities
- AgrUm** Open source library developed at Paris UPMC (first french university in Shanghai ranking) for manipulating graphical models, in which my contribution concerns credal networks
- @web** platform retrieving experimental data from electronic document, in which my main contribution concerns the evaluation of those data reliability

Publication summary and 5 recent publications

- Number of citations: 872 (source: [google scholar](#))
- h-index: 16, i10-index: 29 (source: [google scholar](#))

Publications

- [1] Sébastien Destercke. On the median in imprecise ordinal problems. *Annals of Operations Research*, 256(2):375–392, 2017.
- [2] Ignacio Montes and Sebastien Destercke. Comonotonicity for sets of probabilities. *Fuzzy Sets and Systems*, 2017.
- [3] Vu-Linh Nguyen, Sébastien Destercke, and Marie-Helene Masson. Querying partially labelled data to improve a k-nn classifier. In *Thirty-First AAAI Conference on Artificial Intelligence*, 2017.
- [4] Sébastien 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*, pages 179–189. Springer, 2017.
- [5] Nadia Ben Abdallah, Sébastien Destercke, and Mohamed Sallak. Easy and optimal queries to reduce set uncertainty. *European Journal of Operational Research*, 256(2):592–604, 2017.

Full list of publications

Edited journals, proceedings, books (6)

- [1] Alessandro Antonucci, Giorgio Corani, Inés Couso, and Sébastien Destercke, editors. *Proceedings of the Tenth International Symposium on Imprecise Probability: Theories and Applications, Lugano, Switzerland, 10-14 July 2017*, volume 62 of *Proceedings of Machine Learning Research*. PMLR, 2017.
- [2] Sébastien Destercke. Ecsqaru 2015 conference special issue. *Int. J. of Approximate Reasoning*, 80, 2015.
- [3] Sébastien Destercke and Thierry Denoeux, editors. *Symbolic and Quantitative Approaches to Reasoning with Uncertainty - 13th European Conference, ECSQARU 2015, Compiègne, France, July 15-17, 2015. Proceedings*, volume 9161 of *Lecture Notes in Computer Science*. Springer, 2015.
- [4] F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, editors. *ISIPTA'13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications*, Compiègne, 2013. SIPTA.
- [5] Sébastien Destercke, Mylène Masson, and Benjamin Quost. Belief 2012 conference special issue. *Int. J. of Approximate Reasoning*, 55, 2014.
- [6] Cozman Fabio, Sébastien Destercke, and Seidenfeld Teddy. Isipta 2013 conference special issue. *Int. J. of Approximate Reasoning*, 56, 2015.

Books and book chapters (3)

- [1] Sébastien Destercke and Didier Dubois. *An introduction to Imprecise Probabilities*, chapter Special cases. Wiley, 2014.
 - [2] Sébastien Destercke and Didier Dubois. *An introduction to Imprecise Probabilities*, chapter Other uncertainty theories based on capacities. Wiley, 2014.
 - [3] Patrice Buche, Sébastien Destercke, Valérie Guillard, Ollivier Haemmerlé, Rallou Thomopoulos, et al. Springer series 'studies in computational intelligence. 497, 2014.
- [Journal papers \(44\)](#)
- [1] Ignacio Montes and Sebastien Destercke. Comonotonicity for sets of probabilities. *Fuzzy Sets and Systems*, 2017.
 - [2] Ignacio Montes and Sebastien Destercke. On extreme points of p-boxes and belief functions. *Annals of Mathematics and Artificial Intelligence*, 2017.
 - [3] Gen Yang, Sébastien Destercke, and Marie-Hélène Masson. Cautious classification with nested dichotomies and imprecise probabilities. *Soft Computing*, pages 1–16, 2016.
 - [4] Sébastien Destercke. On the median in imprecise ordinal problems. *Annals of Operations Research*, 256(2):375–392, 2017.
 - [5] Gen Yang, Sebastien Destercke, and Marie-Hélène Masson. The costs of indeterminacy: How to determine them? *IEEE Transactions on Cybernetics*, 2017.
 - [6] Nadia Ben Abdallah, Sébastien Destercke, and Mohamed Sallak. Easy and optimal queries to reduce set uncertainty. *European Journal of Operational Research*, 256(2):592–604, 2017.
 - [7] Charlotte Lousteau-Cazalet, Abdellatif Barakat, Jean Pierre Belaud, Patrice Buche, Guillaume Busset, Brigitte Charnomordic, Stéphane Dervaux, Sébastien Destercke, Juliette Dibie, Caroline Sablayrolles, and Claire Vialle. A decision support system for eco-efficient biorefinery process comparison using a semantic approach. *Computers and Electronics in Agriculture*, 127:351–367, 2016.
 - [8] John Klein, Sébastien Destercke, and Olivier Colot. Interpreting evidential distances by connecting them to partial orders: Application to belief function approximation. *Int. J. Approx. Reasoning*, 71:15–33, 2016.
 - [9] Ana M. Palacios, Luciano Sánchez, Inés Couso, and Sébastien 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*, 176:60–71, 2016.
 - [10] Liyao Ma, Sébastien Destercke, and Yong Wang. Online active learning of decision trees with evidential data. *Pattern Recognition*, 52:33–45, 2016.
 - [11] Marie-Hélène Masson, Sébastien Destercke, and Thierry Denoeux. Modelling and predicting partial orders from pairwise belief functions. *Soft Computing*, 20(3):939–950, 2016.
 - [12] Valérie Guillard, Patrice Buche, Sébastien Destercke, Nouredine Tamani, Madalina Croitoru, Luc Menut, Carole Guillaume, and Nathalie 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*, 111:131–139, 2015.
 - [13] Sébastien Destercke, Marie-Hélène Masson, and Michael Poss. Cautious label ranking with label-wise decomposition. *European Journal of Operational Research*, 246(3):927–935, 2015.
 - [14] Sébastien Destercke. Multilabel predictions with sets of probabilities: The hamming and ranking loss cases. *Pattern Recognition*, 48(11):3757–3765, 2015.

- [15] Enrique Miranda, Matthias CM Troffaes, and Sébastien Destercke. A geometric and game-theoretic study of the conjunction of possibility measures. *Information Sciences*, 298:373–389, 2015.
- [16] Frédéric Pichon, Sébastien Destercke, and Thomas Burger. A consistency-specificity trade-off to select source behavior in information fusion. *IEEE Trans. on Syst., Men and Cyb.*, 45(4):598–609, 2015.
- [17] Sébastien Destercke and Inés Couso. Ranking of fuzzy intervals seen through the imprecise probabilistic lens. *Fuzzy Sets and Systems*, 278:20–39, 2015.
- [18] Enrique Miranda and Sébastien Destercke. Extreme points of the credal sets generated by comparative probabilities. *Journal of Mathematical Psychology*, 64:44–57, 2015.
- [19] F. Aguirre, S. Destercke, D. Dubois, M. Sallak, and C. Jacob. Inclusion-exclusion principle for belief functions. *International Journal of Approximate Reasoning*, 55(8):1708 – 1727, 2014.
- [20] S. Destercke. Comments on "learning from imprecise and fuzzy observations: Data disambiguation through generalized loss minimization" by eyke hüllermeier. *International Journal of Approximate Reasoning*, 55(7):1588 – 1590, 2014.
- [21] S. Destercke. Comments on "a distance-based statistical analysis of fuzzy number-valued data" by the {SMIRE} research group. *International Journal of Approximate Reasoning*, 55(7):1575 – 1577, 2014.
- [22] Rallou Thomopoulos, Sébastien Destercke, Brigitte Charnomordic, Iyan Johnson, and Joël Abécassis. An iterative approach to build relevant ontology-aware data-driven models. *Information Sciences*, 221:452–472, 2013.
- [23] Matthias Troffaes, Enrique Miranda, and Sébastien Destercke. On the connection between probability boxes and possibility measures. *Information Sciences*, 224:88–108, 2013.
- [24] Sébastien Destercke, Patrice Buche, and Brigitte Charnomordic. Evaluating Data Reliability: An Evidential Answer with Application to a Web-Enabled Data Warehouse. *IEEE Transactions on Knowledge and Data Engineering*, 25(1):92–105, 2013.
- [25] Sébastien Destercke and Mohamed Sallak. An extension of Universal Generating Function in Multi-State Systems considering epistemic uncertainties. *IEEE Transactions on Reliability*, 62:504–514, 2013.
- [26] Thomas Burger and Sébastien Destercke. How to randomly generate mass functions. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 21:645–673, 2013.
- [27] Sébastien Destercke. Independence and 2-Monotonicity: Nice to Have, Hard to Keep. *International Journal of Approximate Reasoning*, 54(4):478–490, 2013.
- [28] Sébastien Destercke and Thomas Burger. Toward an Axiomatic Definition of Conflict Between Belief Functions. *IEEE trans. on systems, man, and cybernetics. Part B*, 43:585–596, 2013.
- [29] Sébastien Destercke and Olivier Strauss. Filtering with clouds. *Soft Computing*, 16(5):821–831, 2012.
- [30] Sébastien Destercke. A K-nearest neighbours method based on imprecise probabilities. *Soft Computing*, 16(5):833–844, 2012.
- [31] Valérie Guillard, C. Guillaume, and Sébastien Destercke. Parameter uncertainties and error propagation in modified atmosphere packaging modelling. *Postharvest Biology and Technology*, 67:154–166, 2012.

- [32] Matthias Troffaes and Sébastien Destercke. Probability boxes on totally preordered spaces for multivariate modelling. *International Journal of Approximate Reasoning*, 52(6):767–791, 2011.
- [33] Sébastien Destercke and Valerie Guillard. Interval analysis on non-linear monotonic systems as an efficient tool to optimise fresh food packaging. *Computers and Electronics in Agriculture*, 79(2):116–124, 2011.
- [34] Sébastien Destercke and Didier Dubois. Idempotent conjunctive combination of belief functions: Extending the minimum rule of possibility theory. *Information Sciences*, 181(18):3925–3945, 2011.
- [35] Sébastien Destercke. Handling bipolar knowledge with imprecise probabilities. *International Journal of Intelligent Systems*, 26(5):426–443, 2011.
- [36] Sébastien Destercke, Patrice Buche, and Valérie Guillard. A flexible bipolar querying approach with imprecise data and guaranteed results. *Fuzzy Sets and Systems*, 169(1):51–64, 2011.
- [37] E. Chojnacki, J. Baccou, and S. Destercke. Numerical sensitivity and efficiency in the treatment of epistemic and aleatory uncertainty. *Int. J. of General Systems*, 39(7):683–704, 2010.
- [38] Lev Utkin and Sébastien Destercke. Computing expectations with continuous p-boxes: Univariate case. *International Journal of Approximate Reasoning*, 50(5):778–798, 2009.
- [39] Sébastien Destercke, Didier Dubois, and Eric Chojnacki. A consonant approximation of the product of independent consonant random sets. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 17(6):773, 2009.
- [40] S. Destercke, D. Dubois, and E. Chojnacki. Unifying practical uncertainty representations: I generalized p-boxes. *Int. J. of Approximate Reasoning*, 49(3):649–663, 2008.
- [41] S. Destercke, D. Dubois, and E. Chojnacki. Unifying practical uncertainty representations: II clouds. *Int. J. of Approximate Reasoning*, 49(3):664–677, 2008.
- [42] S. Destercke, D. Dubois, and E. Chojnacki. Possibilistic information fusion using maximal coherent subsets. *IEEE Trans. on Fuzzy Systems*, 17(1):79–92, 2008.
- [43] Sébastien Destercke and Eric Chojnacki. Methods for the evaluation and synthesis of multiple sources of information applied to nuclear computer codes. *Nuclear Engineering and Design*, 238(9):2484–2493, 2008.
- [44] Sébastien Destercke, Serge Guillaume, and Brigitte Charnomordic. Building an interpretable fuzzy rule base from data using Orthogonal Least Squares: Application to a depollution problem. *Fuzzy Sets and Systems*, 158(18):2078–2094, 2007.

Selective conferences with peer reviewing, less than 30% acc. rate (5)

- [1] Vu-Linh Nguyen, Sébastien Destercke, and Marie-Helene Masson. Querying partially labelled data to improve a k-nn classifier. In *Thirty-First AAAI Conference on Artificial Intelligence*, 2017.
- [2] Nadia Ben Abdallah and Sébastien 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*, pages 12–21, 2015.
- [3] Sébastien Destercke and Gen 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*, pages 323–337, 2014.
- [4] Gen Yang, Sébastien Destercke, and Marie-Hélène Masson. Nested dichotomies with probability sets for multi-class classification. In *Proceedings of ECAI 2014*, pages 363–368, 2014.

- [5] Sébastien Destercke. A pairwise label ranking method with imprecise scores and partial predictions. In *ECML/PKDD*, pages 112–127, 2013.
- [International conferences with peer reviewing \(58\)](#)
- [1] Olivier Cailloux and Sébastien 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*, pages 17–30, 2017.
- [2] Vu-Linh Nguyen, Sébastien Destercke, and Marie-Hélène 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*, pages 93–106, 2017.
- [3] Sébastien 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*, pages 179–189. Springer, 2017.
- [4] Ignacio Montes, Enrique Miranda, and Sébastien 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*, pages 229–240, 2017.
- [5] Vu-Linh Nguyen, Sebastien Destercke, and Marie-Hélène Masson. Partial data querying through racing algorithms. In *International Symposium on Integrated Uncertainty in Knowledge Modelling and Decision Making*, pages 163–174, 2016.
- [6] Ignacio Montes and Sebastien Destercke. On extreme points of p-boxes and belief functions. In *Soft Methods for Data Science (proceedings of SMPS 2016)*, pages 363–371. Springer, 2016.
- [7] Yann Soullard, Alessandro Antonucci, and Sébastien Destercke. Technical gestures recognition by set-valued hidden markov models with prior knowledge. In *Soft Methods for Data Science (proceedings of SMPS 2016)*, pages 455–462. Springer, 2016.
- [8] Yann Soullard, Sébastien Destercke, and Indira 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*, pages 92–104, 2016.
- [9] John Klein, Sébastien Destercke, and Olivier 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*, pages 156–163, 2016.
- [10] Lanting Yu, Sébastien Destercke, Mohamed Sallak, and Walter 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*, pages 619–629, 2016.
- [11] Mohamed Sallak, Sébastien Destercke, Walter Schön, Frédéric Vanderhaegen, Denis Berdjag, and Christophe 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*, pages 88–93, 2015.
- [12] Liyao Ma, Sébastien Destercke, and Yong 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.
- [13] Christophe Labreuche, Sébastien Destercke, and Brice 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*, pages 25–35, 2015.

- [14] Nicolas Sutton-Charani, Sébastien Destercke, and Thierry Denoeux. Application of e2m decision trees to rubber quality prediction. In *IPMU*, pages 107–116, 2014.
- [15] Sébastien Destercke and Olivier Strauss. Kolmogorov-smirnov test for interval data. In *IPMU*, pages 416–425, 2014.
- [16] Sébastien Destercke. Multilabel prediction with probability sets: The hamming loss case. In *IPMU*, pages 496–505, 2014.
- [17] Matthias C. M. Troffaes, Frank P. A. Coolen, and Sébastien Destercke. A note on learning dependence under severe uncertainty. In *IPMU*, pages 498–507, 2014.
- [18] Sébastien Destercke, Mohamed Sallak, and Michaël Poss. Reliability analysis with ill-known probabilities and dependencies. In *Proceedings of ICVRAM 2014*, pages 1–10, 2014.
- [19] Felipe Aguirre, Christelle Jacob, Sébastien Destercke, Didier Dubois, and Mohamed Sallak. Inclusion/exclusion principle for belief functions. In F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, editors, *ISIPTA'13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications*, pages 3–11, Compiègne, 2013. SIPTA.
- [20] Matthieu Hourbracq, Cédric Baudrit, Pierre-Henri Wuillemin, and Sébastien Destercke. Dynamic credal networks: introduction and use in robustness analysis. In F. Cozman, T. Denœux, S. Destercke, and T. Seidenfeld, editors, *ISIPTA'13: Proceedings of the Seventh International Symposium on Imprecise Probability: Theories and Applications*, pages 159–168, Compiègne, 2013. SIPTA.
- [21] Frédéric Pichon, Sébastien Destercke, and Thomas Burger. Selecting source behavior in information fusion on the basis of consistency and specificity. In *ECSQARU*, pages 473–484, 2013.
- [22] Enrique Miranda and Sébastien Destercke. Extreme points of the credal sets generated by elementary comparative probabilities. In *ECSQARU*, pages 424–435, 2013.
- [23] Nicolas Sutton-charani, Sébastien Destercke, and T. Denoeux. Classification trees based on belief functions. In *BELIEF 2012*, pages 77–84, 2012.
- [24] Thomas Burger and Sébastien Destercke. Random generation of mass functions : A short howto. In *BELIEF 2012*, pages 145–152, 2012.
- [25] Sébastien Destercke and Thomas Burger. Revisiting the notion of conflicting belief functions. In Thierry Denoeux and Marie-Hélène Masson, editors, *BELIEF 2012*, volume 164, pages 153–160, 2012.
- [26] Sébastien Destercke and Benjamin Quost. Correcting Binary Imprecise Classifiers: Local vs Global Approach. In Eyke Hüllermeier, Sebastian Link, Thomas Fober, and Bernhard Seeger, editors, *Scalable Uncertainty Management*, volume 7520 of *Lecture Notes in Computer Science*, pages 299–310, Berlin, Heidelberg, 2012. Springer Berlin Heidelberg.
- [27] Yosra Mazigh, Boutheina Ben Yaghlane, and Sébastien Destercke. Evaluation of the naive evidential classifier (nec): A comparison between its two variants based on a real agronomic application. In *SUM*, pages 619–624, 2012.
- [28] Sébastien Destercke and Violaine Antoine. Combining Imprecise Probability Masses with Maximal Coherent Subsets: Application to Ensemble Classification. In *Synergies of Soft Computing and Statistics for Intelligent Data Analysis*, volume 190 of *Advances in Intelligent Systems and Computing*, pages 1–8, Berlin, Heidelberg, 2012. Springer Berlin Heidelberg.

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