Curriculum Vitae
Prof. Dr. Álvaro Torralba

Aalborg University
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Current position

Associate Professor at Aalborg University (AAU), Distributed, Embedded and Intelligent Systems Group, Department of Computer Science, Aalborg, Denmark.

Areas of specialization

Artificial Intelligence, Automated Planning, Heuristic Search

Selected Publications

- D. Fišer, Á. Torralba and J. Hoffmann, *Operator-Potential Heuristics for Symbolic Search*, Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI'22).

- Á. Torralba, *On the Optimal Efficiency of A^* with Dominance Pruning*, Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI'21).

- Á. Torralba, V. Alcázar, P. Kissmann, S. Edelkamp, *Efficient Symbolic Search for Cost-Optimal Planning*, Artificial Intelligence Journal, 2017.

- Á. Torralba, *From Qualitative to Quantitative Dominance Pruning for Optimal Planning*, Proc. of the 26th International Joint Conference on Artificial Intelligence (IJCAI'17).

- Á. Torralba, C. Linares López, D. Borrajo *Symbolic Perimeter Abstraction Heuristics for Cost-Optimal Planning*, Artificial Intelligence Journal, 2018.

- J. Daum, Á. Torralba, J. Hoffmann, P. Haslum, and I. Weber, *Practical Undoability Checking via Contingent Planning*, Proc. of the 26th International Conference on Automated Planning and Scheduling (ICAPS'16). Outstanding Student Paper Award.

- Á. Torralba and P. Kissmann, *Focusing on What Really Matters: Irrelevance Pruning in Merge-and-Shrink*, Proc. of the 8th Symposium on Combinatorial Search (SOCS'15). Best Paper Award

- Á. Torralba and J. Hoffmann, *Simulation-Based Admissible Dominance Pruning*, Proc. of the 24th International Joint Conference on Artificial Intelligence (IJCAI'15).

- Á. Torralba, V. Alcázar *Constrained Symbolic Search: On Mutexes, BDD Minimization and More*, Proc. of the 6th Symposium on Combinatorial Search (SOCS'13). Best Paper Award

Positions

2020 – now   Associate Professor at Aalborg University (AAU), Aalborg, Denmark.

2019 – 2020   Post-doc researcher at Helmholtz Center for Information Security (CISPA), Saarland Informatics Campus, Saarbrücken, Germany.

2014 – 2019   Post-doc researcher at Saarland University, Saarland Informatics Campus, Saarbrücken, Germany.

2010 – 2014   P.h.D. student, funded member of graduate school at Universidad Carlos III de Madrid.

2009 – 2010   Technical support for research at Universidad Carlos III de Madrid.

Qualifications

2015   Promotion to Dr. at Universidad Carlos III de Madrid, Spain.
"Symbolic Search and Abstraction Heuristics for Cost-Optimal Planning".
Supervisors: Prof. Daniel Borrajo and Prof. Carlos Linares López.
Final grade: "cum laude" (maximum grade in Spanish grading system).

2010   Master in Computer Science and Technology.
Universidad Carlos III de Madrid

2009   Diploma in Computer Science Engineering.
Universidad Carlos III de Madrid

Awards

2023   **Winner of the International Planning Competition (Agile track)**: with the "planner": "DecStar-2023", developed with Daniel Gnad and Alexander Shleyfman at International Planning Competition (IPC'23).

2023   **Winner of the International Planning Competition (Learning track)**: with the "planner: "GOFAI", developed with Daniel Gnad at International Planning Competition (IPC'23).

2023   **Runner-up of the International Planning Competition (Learning track)**: with the planner: "HUZAR", developed with iotr Rafal Gzubicki and Bartosz Piotr Lachowicz at International Planning Competition (IPC23).

2023   **Program Committee Awards: Discussion Master Award and "Personally Commended Award** at European Conference on Artificial Intelligence (ECAI 2023).

2022   **Distinguished Program Comitee Member** at International Joint Conference on Artificial Intelligence (IJCAI-ECAI'22) (distinguised 3% reviewers).

2022   **SoCS 2022 Best Paper Award.** For the paper *Additive Pattern Databases for Decoupled Search*, co-authored with Silvan Sievers and Daniel Gnad.

2022   **AAAI 2022 Honorable Mention in the Outstanding Paper Award.** For the paper *Operator-Potential Heuristics for Symbolic Search*, co-authored with Daniel Fišer and Jörg Hoffmann.

2018   **Distinguished Program Comitee Member (Level 2)** at International Joint Conference on Artificial Intelligence (IJCAI-ECAI'18) (Top 33 of 2016 reviewers).

2016   **Honorable Mention in ICAPS Best Dissertation Award 2016.**

2016   **ICAPS 2016 Outstanding Student Paper Award.** For the paper *Practical Undoability Checking via Contingent Planning*, co-authored with Jeanette Daum, Jörg Hoffmann, Patrik Haslum, and Ingo Weber.

2016   Developer of the *SymPA* planner, **runner-up of the 1st unsolvability international planning competition (IPC'16)**.

2015   **Best Paper Award at the 8th Symposium on Combinatorial Search (SoCS'15).** For the paper *Focusing on What Really Matters: Irrelevance Pruning in Merge-and-Shrink*, co-authored with Peter Kissmann.

2014   Developer of the *SymBA*-2* planner, **winner of the sequential-optimal track of the 8th international planning competition (IPC'14)**. (joint work with Vidal Alcázar, Peter Kissmann, Stefan Edelkamp, and Daniel Borrajo)

2014	Developer of the *cGamer* planner, **runner-up of the sequential-optimal track of the 8th international planning competition (IPC'14)**. (joint work with Vidal Alcázar, Peter Kissmann, and Stefan Edelkamp)
2013	**Best Paper Award at the 6th Symposium on Combinatorial Search (SoCS'13).** For the paper *Constrained Symbolic Search: On Mutexes, BDD Minimization and More*, co-authored with Vidal Alcázar.

Invited Talks

2023	**Invited Speaker at AAAI'23** on New Faculty Highlight Program. Talk: *Reshaping State-Space Search: From Dominance to Contrastive Analysis*
2023	**Invited talk at HSDIP'23** on *Contrastive Analysis: Heuristic Search Beyond Heuristics*
2023	**Master Class at SoCS'23** on *Decoupled Search: A New Form of State-Space Exploration.*

Visits

2019	Visit to Antonín Komenda in Czech Technical University in Prague, Czech Republic. (1 week)
2018	Visit to Malte Helmert in Universität Basel, Switzerland. (1 week)
2014 –2018	Visit to Carlos Areces in Universidad Nacional de Córdoba, Argentina. (Globally 3 months in 4 visits)
2012	Visit to Stefan Edelkamp in Universität Bremen, Germany. (3 months)

Publications

Journal Articles

1. Á. Torralba, C. Linares López, D. Borrajo, *Symbolic Perimeter Abstraction Heuristics for Cost-Optimal Planning*, Artificial Intelligence Journal, 2018.

2. Á. Torralba, V. Alcázar, P. Kissmann, S. Edelkamp, *Efficient Symbolic Search for Cost-Optimal Planning*, Artificial Intelligence Journal, 2017.

3. V. Demberg, J. Hoffmann, D. Howcroft, D. Klakow, and Á. Torralba, *Search Challenges in Natural Language Generation with Complex Optimization Objectives*, Kuenstliche Intelligenz, 2015.

4. J. García, J. E. Flórez, Á. Torralba, D. Borrajo C. Linares López, A. García Olaya and J. Sáenz, *Combining linear programming and automated planning to solve inter-modal transportation problems*, European Journal of Operational Research, 2013

Conference Papers

5. F. Pham an Á. Torralba, *Can I Really Do That? Verification of Meta-Operators via Stackelberg Planning*, Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI'23).

6. J. Eisenhut, Á. Torralba, M. Christakis and J. Hoffmann, *Automatic Metamorphic Test Oracles for Action-Policy Testing*, Proceedings of the 33rd International Conference on Automated Planning and Scheduling (ICAPS'23).

7. T. Klößner,Á. Torralba, M. Steinmetz and S. Sievers, *A Theory of Merge-and-Shrink for Stochastic Shortest Path Problems*, Proceedings of the 33rd International Conference on Automated Planning and Scheduling (ICAPS'23).

8. S. Sievers, D. Gnad and Á. Torralba, *Efficient Evaluation of Large Abstractions for Decoupled Search: Merge-and-Shrink and Symbolic Pattern Databases*, Proceedings of the 33rd International Conference on Automated Planning and Scheduling (ICAPS'23).

9. Á. Torralba, *Reshaping State-Space Search: From Dominance to Contrastive Analysis*, related to the Invited talk for New Faculty Highlights, Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI'23).

10. S. Sievers, D. Gnad and Á. Torralba, *Additive Pattern Databases for Decoupled Search*, Proceedings of the 15th Annual Symposium on Combinatorial Search (SOCS'22).

11. S. Schmid, B. C. Schrenk and Á. Torralba, *NetStack: A Game Approach to Synthesizing Consistent Network Updates*, Proceedings of the 21st IFIP Networking 2022 Conference (IFIP'22).

12. T. Klößner, M. Steinmetz, Á. Torralba and J. Hoffmann, *Pattern Selection Strategies for Pattern Databases in Probabilistic Planning*, Proceedings of the 32nd International Conference on Automated Planning and Scheduling (ICAPS'22).

13. D. Fišer, Á. Torralba and J. Hoffmann, *Operator-Potentials in Symbolic Search: From Forward to Bi-Directional Search*, Proceedings of the 32nd International Conference on Automated Planning and Scheduling (ICAPS'22).

14. D. Gnad, Á. Torralba P. Rytir, L. Chrpa and S. Edelkamp, *Beyond Stars - Generalized Topologies for Decoupled Search*, Proceedings of the 32nd International Conference on Automated Planning and Scheduling (ICAPS'22).

15. R. Horčík, Á. Torralba and D. Fišer, *Optimal Mixed Strategies for Cost-Adversarial Planning Games*, Proceedings of the 32nd International Conference on Automated Planning and Scheduling (ICAPS'22).

16. D. Fišer, Á. Torralba and J. Hoffmann, *Operator-Potential Heuristics for Symbolic Search*, Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI'22).

17. R. Horčík, D. Fišer and Á. Torralba, *Homomorphisms of Lifted Planning Tasks: The Case for Delete-free Relaxation Heuristics*, Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI'22).

18. P. Lauer, Á. Torralba, D. Fišer, D. Höller, J. Wichlacz and J. Hoffmann, *Polynomial-Time in PDDL Input Size: Making the Delete Relaxation Feasible for Lifted Planning*, Proceedings of the 30th International Joint Conference on Artificial Intelligence (IJCAI'21).

19. Á. Torralba, J. Seipp and S. Sievers, *Automatic Instance Generation for Classical Planning*, Proceedings of the 31st International Conference on Automated Planning and Scheduling (ICAPS'21).

20. T. Klößner, M. Steinmetz, J. Hoffmann and Á. Torralba, *Pattern Databases for Goal-Probability Maximization in Probabilistic Planning*, Proceedings of the 31st International Conference on Automated Planning and Scheduling (ICAPS'21).

21. Á. Torralba, *On the Optimal Efficiency of A* with Dominance Pruning*, Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI'21).

22. Á. Torralba, P. Speicher, R. Künnemann, M. Steinmetz and J. Hoffmann, *Faster Stackelberg Planning via Symbolic Search and Information Sharing*, Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI'21).

23. N. Tran, P. Speicher, R. Künnemann, M. Backes, Á. Torralba, and J. Hoffmann, *Planning in the Browser*, System Demonstration at the 30th International Conference on Automated Planning and Scheduling (ICAPS'20)

24. A. Köhn, J. Wichlacz, C. Schäffer, Á. Torralba, J. Hoffmann and A. Koller, *Generating Instructions at Different Levels of Abstraction*, Proceedings of the 28th International Conference on Computational Linguistics (Coling'20).

25. A. Köhn, J. Wichlacz, C. Schäffer, Á. Torralba, J. Hoffmann and A. Koller, *MC-Saar-Instruct: A Platform for Minecraft Instruction Giving Agents*, Proceedings of the 21st Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL'20).

26. R. Eifler, M. Steinmetz, Á. Torralba and J. Hoffmann, *Plan-Space Explanation via Plan-Property Dependencies: Faster Algorithms & More Powerful Properties*, Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI'20).

27. J. Wichlacz, D. Höller, Á. Torralba and J. Hoffmann, *Applying Monte-Carlo Tree Search in HTN Planning*, Proceedings of the 13th Annual Symposium on Combinatorial Search (SOCS'20).

28. J. Groß, Á. Torralba and M. Fickert, *Novel Is Not Always Better: On the Relation between Novelty and Dominance Pruning.*, Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI'20).

29. Á. Torralba, S. Sievers, *Merge-and-Shrink Task Reformulation for Classical Planning*, Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI'19).

30. S. Franco, Á. Torralba, *Interleaving Heuristic Improvement and Search*, Proceedings of the 12th Annual Symposium on Combinatorial Search (SOCS'19).

31. M. Steinmetz, Á. Torralba, *Bridging the Gap Between Abstractions and Critical-Path Heuristics via Hypergraphs*, Proceedings of the 29th International Conference on Automated Planning and Scheduling (ICAPS'19).

32. D. Speck, F. Geißer, R. Mattmüller, Á. Torralba, *Symbolic Planning with Axioms*, Proceedings of the 29th International Conference on Automated Planning and Scheduling (ICAPS'19).

33. D. Gnad, Á. Torralba, M. Dominguez, C. Areces, F. Bustos, *Learning How to Ground a Plan - Partial Grounding in Classical Planning*, Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI'19).

34. D. Fišer, Á. Torralba, A. Shleyfman, *Operator Mutexes and Symmetries for Simplifying Planning Tasks*, Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI'19).

35. Á. Torralba, *Completeness-Preserving Dominance Techniques for Satisficing Planning*, Proceedings of the 27th International Joint Conference on Artificial Intelligence (IJCAI'18).

36. Á. Torralba, *From Qualitative to Quantitative Dominance Pruning*, Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI'17).

37. S. Franco, Á. Torralba, L. H. S. Lelis, and M. Barley, *On Creating Complementary Pattern Databases*, Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI'17).

38. D. Gnad, Á. Torralba, and J. Hoffmann, *Symbolic Leaf Representation in Decoupled Search*, Proceedings of the 10th Annual Symposium on Combinatorial Search (SOCS'17).

39. D. Gnad, Á. Torralba, A. Shleyfman, and J. Hoffmann, *Symmetry Breaking in Star-Topology Decoupled Search*, Proceedings of the 27th International Conference on Automated Planning and Scheduling (ICAPS'17).

40. M. Schwenger, Á. Torralba, J. Hoffmann, D. Howcroft, V. Demberg, *From OpenCCG to AI Planning: Detecting Infeasible Edges in Sentence Generation*, Proceedings of the 26th International Conference on Computational Linguistics (Coling'16).

41. Á. Torralba, D. Gnad, P. Dubbert, J. Hoffmann, *On State-Dominance Criteria in Fork-Decoupled Search*, Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI'16).

42. Á. Torralba, C. Linares López, D. Borrajo, *Abstraction Heuristics for Symbolic Bidirectional Search*, Proceedings of the 25th International Joint Conference on Artificial Intelligence (IJCAI'16).

43. J. Daum, Á. Torralba, J. Hoffmann, P. Haslum, and I. Weber, *Practical Undoability Checking via Contingent Planning*, Proceedings of the 26th International Conference on Automated Planning and Scheduling (ICAPS'16).

44. M. Schwenger, Á. Torralba, J. Hoffmann, D. Howcroft, V. Demberg, *Using AI Planning Techniques in OpenCCG: Detecting Infeasible Composites in Sentence Generation*, KI 2016 -OGAI-Tagung 2016, 30.

45. Á. Torralba and P. Kissmann, *Focusing on What Really Matters: Irrelevance Pruning in Merge-and-Shrink*, Proceedings of the 8th Symposium on Combinatorial Search (SOCS'15).

46. Á. Torralba and J. Hoffmann, *Simulation-Based Admissible Dominance Pruning*, Proceedings of the 24th International Joint Conference on Artificial Intelligence (IJCAI'15).

47. V. Alcázar and Á. Torralba, *A Reminder about the Importance of Computing and Exploiting Invariants in Planning*, Proceedings of the 25th International Conference on Automated Planning and Scheduling (ICAPS'15).

48. S. Edelkamp, P. Kissmann and Á. Torralba, *BDDs Strike Back (in AI Planning)*, Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI'15).

49. J. Hoffmann, P. Kissmann, and Á. Torralba, *"Distance"? Who Cares? Tailoring Merge-and-Shrink Heuristics to Detect Unsolvability*, Proceedings of the 21st European Conference on Artificial Intelligence (ECAI'14).

50. Á. Torralba, V. Alcázar, *Constrained Symbolic Search: On Mutexes, BDD Minimization and More*, Proceedings of the 6th Symposium on Combinatorial Search (SOCS'13).

51. Á. Torralba, C. Linares López, D. Borrajo, *Symbolic Merge-and-Shrink for Cost-Optimal Planning*, Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI'13).

52. Á. Torralba, S. Edelkamp, P. Kissmann, *Transition Trees for Cost-Optimal Symbolic Planning*, Proceedings of the 23rd International Conference on Automated Planning and Scheduling (ICAPS'13).

53. J. García, Á. Torralba, A. García Olaya, J. E. Flórez, D. Borrajo, *Solving Multi-modal and Uni-modal Transportation Problems through TIMIPlan*, Proceedings of the 13th Symposium on Control in Transportation Systems (IFAC'12).

54. S. Edelkamp, P. Kissmann, Á. Torralba, *Symbolic A*ope Search with Pattern Databases and the Merge-and-Shrink Abstraction* Proceedings of the 20th European Conference on Artificial Intelligence (ECAI'12).

55. Á. Parra, Á. Torralba, C. Linares López, *Precomputed-Direction Heuristics for Suboptimal Grid-Based Path-finding*, Proceedings of the 5th Symposium on Combinatorial Search (SOCS'12).

56. J. E. Flórez, Á. Torralba, J. García, C. Linares López, A. García Olaya, D. Borrajo, *Planning Multi-Modal Transportation Problems*, Proceedings of the 21st International Conference on Automated Planning and Scheduling (ICAPS'11).

57. Á. Torralba, C. Linares López, *Size-Independent Additive Pattern Databases for the Pancake Problem*, Proceedings of the 4th Symposium on Combinatorial Search (SOCS'11).

Parts of Books

58. J. García, Á. Torralba, J. E. Flórez, D. Borrajo, C. Linares López and A. García Olaya, *TIMIPLAN: A Tool for Transportation Tasks Autonomic Road Transport Support Systems*, Part of the series Autonomic Systems, Springer, pp. 269-285, May 2016.

Workshop Papers

59. N. S. Johansen, L. B. Kær, J. A. B. Stolberg, R. G. Tollund, N. Hyldig, P. Oktober and Á. Torralba *Towards Believable Non-Player Characters with Domain-Independent Planning*, Proceedings of the 2022 Workshop on Scheduling and Planning Applications woRKshop. (SPARK'22).

60. M. Greco, Á. Torralba, J. A. Baier and H. Palacios *Scaling up ML-based Black-box Planning with Partial STRIPS Models*, Proceedings of the ICAPS'22 Workshop on Reliable Data-Driven Planning and Scheduling (RDDPS'22).

61. S. Sievers, D. Gnad and Á. Torralba, *Additive Pattern Databases for Decoupled Search*, Proceedings of the 13th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'21).

62. S. Schmid, B. C. Schrenk and Á. Torralba, *NetStack: A Game Approach to Synthesizing Consistent Network Updates*, Proceedings of the workshop Deception against Planning Systems and Planning in Adversarial Conditions (DAPSPAC 2022).

63. D. Fišer, Á. Torralba and J. Hoffmann, *Introducing Operator-Potential Heuristics for Symbolic Search*, Proceedings of the 13th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'21).

64. P. Lauer, Á. Torralba, D. Fišer, D. Höller, J. Wichlacz and J. Hoffmann, *Polynomial-Time in PDDL Input Size: Making the Delete Relaxation Feasible for Lifted Planning*, Proceedings of the 13th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'21).

65. A. Torralba, *On the Optimal Efficiency of A* with Dominance Pruning*, Proceedings of the 12th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'20).

66. A. Torralba, J. Seipp, S. Sievers, *Automatic Configuration of Benchmark Sets for Classical Planning*, Proceedings of the 12th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'20).

67. J. Wichlacz, D. Höller, Á. Torralba and J. Hoffmann, *Applying Monte-Carlo Tree Search in HTN Planning*, Proceedings of the 3rd Workshop on Hierarchical Planning (HTNPlan'20).

68. J. Wichlacz, A. Torralba, and J. Hoffmann, *Construction-Planning Models in Minecraft*, Proceedings of the 2nd Workshop on Hierarchical Planning (HTNPlan'19).

69. A. Torralba and S. Sievers, *Merge-and-Shrink Task Reformulation for Classical Planning*, Proceedings of the 11th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'19)

70. D. Gnad, A. Torralba, M. Dominguez, C. Areces and F. Bustos, *Learning How to Ground a Plan - Partial Grounding in Classical Planning*, Proceedings of the 11th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'19)

71. Á. Torralba, *Completeness-Preserving Dominance Techniques for Satisficing Planning*, Proceedings of the 10th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'18)

72. Á. Torralba, *From Qualitative to Quantitative Dominance Pruning*, Proceedings of the 9th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'17)

73. Á. Torralba, C. Linares López, D. Borrajo, *Abstraction Heuristics for Symbolic Bidirectional Search*, Proceedings of the 8th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'16).

74. Á. Torralba, D. Gnad, P. Dubbert, J. Hoffmann, *On State-Dominance Criteria in Fork-Decoupled Search*, Proceedings of the 8th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'16).

75. A. Torralba and J. Hoffmann, *Simulation-Based Admissible Dominance Pruning*, Proceedings of the 7th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'15).

76. J. Hoffmann, P. Kissmann, and A. Torralba, *"Distance"? Who Cares? Tailoring Merge-and-Shrink Heuristics to Detect Unsolvability*, Proceedings of the 6th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'14).

77. S. Edelkamp, P. Kissmann, Á. Torralba *Symbolic A* Search with Pattern Databases and the Merge-and-Shrink Abstraction* Proceedings of the 4th Workshop on Heuristic Search for Domain-Independent Planning (HSDIP'12).

78. S. Edelkamp, P. Kissmann, Á. Torralba, *Advances in BDD Search: Filtering, Partitioning, and Bidirectionally Blind*, Third Workshop on the International Planning Competition, WIPC 2012.

79. S. Edelkamp, P. Kissmann, Á. Torralba, *Lex-Partitioning: A New Option for BDD Search*, First Workshop on GRAPH Inspection and Traversal Engineering, GRAPHITE 2012.

Other Publications

80. P. R. Gzubicki, B. P. Lachowicz and A. Torralba, *HUZAR- Predicting Useful Actions with Graph Neural Networks-Planner Abstract*, in Proceedings of the International Planning Competition-Learning Track, at ICAPS'23.

81. A. Torralba and D. Gnad, *GOFAI- Planner Abstract*, in Proceedings of the International Planning Competition-Learning Track, at ICAPS'23.

82. A. Torralba, *QDom-LMCut: Enhancing Search with Quantitative Dominance Pruning- Planner Abstract*, in Proceedings of the International Planning Competition-Classical Tracks, at ICAPS'23.

83. A. Torralba, *SymBD: A Symbolic Bidirectional Search Baseline- Planner Abstract*, in Proceedings of the International Planning Competition -Classical Tracks, at ICAPS'23.

84. D. Gnad, S. Sievers and A. Torralba, *DecAbStar- Planner Abstract*, in Proceedings of the International Planning Competition-Classical Tracks, at ICAPS'23.

85. D. Gnad, A. Torralba and A. Shleyfman, *DecStar- Planner Abstract*, in Proceedings of the International Planning Competition-Classical Tracks, at ICAPS'23.

86. A. Torralba, S. Sievers, R. Tollund and K. Ø. Nielsen, *FTSPlan: Task Reformulation via Merge-and-Shrink- Planner Abstract*, in Proceedings of the International Planning Competition-Classical Tracks, at ICAPS'23.

87. D. Gnad, A. Torralba, M. Dominguez and C. Areces, *IPALAMA - Planner Abstract*, in Proceedings of the Sparkle Planning Challenge 2019, at ICAPS'19.

88. A. Torralba, *SymPA: Symbolic Perimeter Abstractions for Proving Unsolvability*, in Proceedings of the 1st Unsolvability International Planning Competition (IPC 2016), at ICAPS'16.

89. A. Torralba J. Hoffmann, and P. Kissmann, *MS-Unsat and SimulationDominance: Merge-and-Shrink and Dominance Pruning for Proving Unsolvability*, in Proceedings of the 1st Unsolvability International Planning Competition (IPC 2016), at ICAPS'16.

90. D. Gnad, A. Torralba, J. Hoffmann, and M. Wehrle, *Decoupled Search for Proving Unsolvability*, in Proceedings of the 1st Unsolvability International Planning Competition (IPC 2016), at ICAPS'16.

91. A. Torralba, V. Alcázar, P. Kissmann and S. Edelkamp *cGamer: Constrained Gamer*, in Proceedings of the 8th International Planning Competition (IPC 2014) at ICAPS'14.

92. A. Torralba, V. Alcázar, C. Linares López and D. Borrajo, *SPM&S Planner: Symbolic Perimeter Merge-and-Shrink*, in Proceedings of the 8th International Planning Competition (IPC 2014) at ICAPS'14.

93. A. Torralba, V. Alcázar and D. Borrajo, *SymBA*: A Symbolic Bidirectional A* Planner*, in Proceedings of the 8th International Planning Competition (IPC 2014) at ICAPS'14.

Teaching

Supervision of PhD Students

since 2023   *Marcos Martin Pozo Delgado* at Universidad Carlos III de Madrid (co-supervised with Carlos Linares López)

Main Lectures and Seminars

Autumn 2023   *Automated Planning Tools for Intelligent Decision Making*, PhD Courses, Aalborg University. (co-lectured with Kim G. Larsen, Peter Nielsen, Peter Gjl Jensen and Inkyung Sung)

Autumn 2023   *Machine Intelligence*, Core lecture at Bachelor, Bachelor in Data Science and Machine Intelligence and Master in Software and Computer Sciences, Aalborg University.

Autumn 2023   *Specialization course in Machine Intelligence*, Spezialized lecture at Master in Software and Computer Science, Aalborg University. (co-lectured with Manfred Jäger and Thomas D. Nielsen)

Spring 2023   *Algorithms and Computability*, Core lecture at Bachelor in Software, Aalborg University. (co-lectured with Simonas Saltenis)

Spring 2023   *Algorithms and Satisfability*, Core lecture at Bachelor in Computer Sciences, Aalborg University. (co-lectured with Simonas Saltenis)

Autumn 2022	*Machine Intelligence*, Core lecture at Bachelor and Master in Software and Computer Sciences, Aalborg University.
Autumn 2022	*Specialization course in Machine Intelligence*, Spezialized lecture at Master in Software and Computer Science, Aalborg University. (co-lectured with Manfred Jäger and Thomas D. Nielsen)
Spring 2022	*Algorithms and Computability*, Core lecture at Bachelor in Software, Aalborg University. (co-lectured with Bin Yang)
Spring 2022	*Algorithms and Satisfability*, Core lecture at Bachelor in Computer Sciences, Aalborg University. (co-lectured with Bin Yang)
Autumn 2021	*Specialization course in Machine Intelligence*, Spezialized lecture at Master in Software and Computer Science, Aalborg University. (co-lectured with Manfred Jäger and Thomas D. Nielsen)
Spring 2021	*Algorithms and Computability*, Core lecture at Bachelor in Software, Aalborg University. (co-lectured with Bin Yang and Dalin Zhang)
Spring 2021	*Algorithms and Satisfability*, Core lecture at Bachelor in Computer Sciences, Aalborg University. (co-lectured with Bin Yang and Dalin Zhang)
Spring 2021	*Automated Planning Tools for Intelligent Decision Making*, PhD Courses, Aalborg University. (co-lectured with Kim G. Larsen, Peter Nielsen, Peter Gjl Jensen and Inkyung Sung)
Summer 2019	*Artificial Intelligence*, Core Lecture, Saarland University. (co-lectured with Jana Koehler)
Winter 2018 – 2019	*AI Planning*, Specialized Lecture in Artificial Intelligence, Saarland University.
Summer 2018	*Artificial Intelligence*, Core Lecture, Saarland University. (co-lectured with Wolfgang Wahlster)
Summer 2017	*Artificial Intelligence*, Core Lecture, Saarland University. (co-lectured with Jörg Hoffmann and Wolfgang Wahlster)
Winter 2016 – 2017	*Automatic Planning*, Specialized Lecture in Artificial Intelligence, Saarland University. (co-lectured with Jörg Hoffmann)
Summer 2017	*Search Problems in Natural Language Processing*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann)
Winter 2016 – 2017	*Search Problems in Natural Language Processing*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann)
Summer 2016	*Admissible Search Enhancements*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann, Daniel Gnad, and Marcel Steinmetz)

Winter 2015 – 2016	*Automatic Planning*, Specialized Lecture in Artificial Intelligence, Saarland University. (co-lectured with Jörg Hoffmann)
Winter 2015 – 2016	*Admissible Search Enhancements*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann, Daniel Gnad, and Marcel Steinmetz)
Summer 2015	*Heuristic Search for MDPs*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann and Peter Kissmann)
Winter 2014 – 2015	*Heuristic Search for MDPs*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann and Peter Kissmann)
Summer 2014	*Planning and Learning*, Seminar, Saarland University. (co-lectured with Jörg Hoffmann and Peter Kissmann)

Teaching Assistant

Winter 2017 – 2018	*Automatic Planning*, Specialized Lecture in Artificial Intelligence, Saarland University. (co-assistant with Cosmina Croitoru)
Summer 2016	*Artificial Intelligence*, Core Lecture, Saarland University. (co-assistant with Daniel Gnad, Marcel Steinmetz and student tutors)
Summer 2015	*Artificial Intelligence*, Core Lecture, Saarland University. (co-assistant with Daniel Gnad, Marcel Steinmetz and student tutors)
Winter 2014 – 2015	*Automatic Planning*, Specialized Lecture in Artificial Intelligence, Saarland University. (co-assistant with Peter Kissmann and Daniel Gnad)
Summer 2014	*Artificial Intelligence*, Core Lecture, Saarland University. (co-assistant with Peter Kissmann and student tutors)
Winter 2013 – 2014	*Heuristic Search and Optimization*, Core Lecture, Universidad Carlos III de Madrid. (co-assistant with Jesús Virseda)
Winter 2012 – 2013	*Heuristic Search and Optimization*, Core Lecture, Universidad Carlos III de Madrid. (co-assistant with Vidal Alcázar)
Winter 2011 – 2012	*Heuristic Search and Optimization*, Core Lecture, Universidad Carlos III de Madrid. (co-assistant with Vidal Alcázar)
Winter 2010 – 2011	*Programming*, Core Lecture, Universidad Carlos III de Madrid.

Problem Based Learning[1]

Project supervisor for PBL projects on the following topics:

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[1]Pedagogical model of the Aalborg University consisting of Learning by Problem Oriented Methods: https://www.en.aau.dk/about-aau/aalborg-model-problem-based-learning/

Autumn 2023	*Spezialization in Data Science on DVML-3*: 1 group, Aalborg University
Autumn 2023	*Secure, Scalable and Useful Systems on DAT7*: 2 groups, Aalborg University
Autumn 2022	*Secure, Scalable and Useful Systems on DAT7*: 1 group, Aalborg University
Autumn 2022	*Experimental/Theory-driven Data Analysis and Modeling on DAT5*: 3 groups, Aalborg University
Spring 2022	*BSc Project Development of Complex Software Systems on DAT6*: 1 group, Aalborg University
Spring 2022	*BSc Project Development of Cyber Physical Systems on SW6*: 2 group, Aalborg University
Spring 2022	*Reliable Innovative Systems on IT8*: 1 group, Aalborg University
Spring 2022	*Reliable Innovative Systems on DAT8*: 1 group, Aalborg University
Autumn 2021	*Semantics and Verification on DAT9*: 1 group, Aalborg University
Autumn 2021	*Secure, Scalable and Useful Systems on DAT7*: 2 groups, Aalborg University
Autumn 2021	*Secure, Scalable and Useful Systems on IT7*: 3 groups, Aalborg University
Autumn 2021	*Experimental/Theory-driven Data Analysis and Modeling on DAT5*: 1 groups, Aalborg University
Spring 2021	*BSc Project Development of Complex Software Systems on DAT6*: 1 group, Aalborg University
Autumn 2020	*Experimental/Theory-driven Data Analysis and Modeling on DAT5*: 2 groups, Aalborg University
Autumn 2020	*Secure, Scalable and Useful Systems on IT7*: 2 groups, Aalborg University

Supervision of Master Thesis

2023	*Efficiently Finding Ratio-Optimal Infinite Cycles in Doubly-Priced Timed Automata* by Rasmus Grønkjær Tollund, Kristian Ødum Nielsen and Nicklas Slorup Johansen (co-supervised with Kim Larssen), Aalborg University.
2023	*Automated planning optimization - Intelligent preprocessing of the state space using Graph Neural Networks* by Bartosz Piotr Lachowicz and Piotr Rafal Gzubicki, Aalborg University.
2022	*Arity is Key: Improving Polynomial-Time Delete Relaxation Heuristics for Lifted Planning* by Pascal Lauer (co-supervised with Jörg Hoffmann), Saarland University.

2022   *Dynamic Macro-Operators for Automated Planning* by Florian Pham (co-supervised with Jörg Hoffmann), Saarland University.

2020   *On Probabilistic Abstraction Heuristics* by Thorsten Klößner (co-supervised with Marcel Steinmetz), Saarland University.

2020   *Novelty Pruning for Random Planning Tree Search* by Hanan Othman, Saarland University

2019   *Partial Grounding Techniques* by Melis Tanriverdi (co-supervised with Jörg Hoffmann and Daniel Gnad), Saarland University.

2018   *Conditional Simulation-Based Dominance Pruning* by Anna Wilhelm (co-supervised with Jörg Hoffmann), Saarland University.

2017   *Dynamic Merging Strategies for Merge and Shrink Unsolvability Heuristics* by Muhammad Lathif Pambudi (co-supervised with Jörg Hoffmann), Saarland University.

2017   *Planning intelligent agents in Minecraft using ActorSim* by Soumya Chakraborty (co-supervised with Jörg Hoffmann), Saarland University.

2017   *Planning Methods in Linguistic Distance* by Jeanette Aline Daum (co-supervised with Jörg Hoffmann), Saarland University.

2015   *Fork-Decoupled FOND Planning* by Robin Wagner (co-supervised with Jörg Hoffmann and Daniel Gnad), Saarland University.

Supervision of Bachelor Thesis

2022   *Finite-Domain Approximations of Numeric Planning Problems* by Jakob B. Hyldgaard, Sebastian Lassen and Steven Tran, Aalborg University.

2022   *PDDL Task Planning System for Autonomous Mobile Robots* by Magnus Mathiesen, Christopher Timothy Ehlert Buchardt, Casper Søgard and Micklas Skov Skelmose, Aalborg University.

2022   *Multi-agent Pathfinding in an Online Warehouse Setting* by Jacob Bjørklund, Jonas Møller Olesen, Rasmus Borrisholt Schmidt, Simon Helming Nielsen, Aalborg University.

2021   *Inferring Operator Mutexes in Merge-and-Shrink Abstractions by Finding Unusable Transitions* by Lasse Brink Kær, Rasmus Grønkjær Tollund, Kristian Ødum Nielsen and Nicklas Slorup Johansen, Aalborg University.

2020   *Saturated Cost Partitioning and Symbolic Pattern Databases* by Tim Arendes (co-supervised with Jörg Hoffmann), Saarland University.

2020   *Unary Relaxation* by Pascal Lauer, co-supervised with Julia Wichlacz, Daniel Höller and Jörg Hoffmann), Saarland University.

2019   *Efficiently Discovering Mutexes for Merge-and-Shrink-Heuristics* by Jessica Werner, Saarland University.

2019   *Comparing and Combining Novelty and Dominance Pruning* by Joschka Florenz Groß(co-supervised with Jörg Hoffmann), Saarland University.

2018   *Data structures for Dominance Checking* by Florian Pham (co-supervised with Jörg Hoffmann), Saarland University.

2018   *Human Experiments in Minecraft* by Doreen Osmelak (co-supervised with Jörg Hoffmann), Saarland University.

2016   *An Analysis of OpenCCGs Search Space* by Julia Wichlacz (co-supervised with Jörg Hoffmann), Saarland University.

2016   *Building a Partial Sentence Completion Quality Predictor for OpenCCG* by Polina Stadnikova (co-supervised with Jörg Hoffmann and Vera Demberg), Saarland University.

2015   *When a Sentence falls apart… Using heuristically guided dead end detection in sentence realization* by Maximilian Schwenger (co-supervised with Jörg Hoffmann, David Howcraft and Vera Demberg), Saarland University.

2015   *Dominance Pruning Methods for Fork-Decoupled Search* by Patrick Dubbert (co-supervised with Jörg Hoffmann and Daniel Gnad), Saarland University.

2015   *Search Algorithms and Determinization Heurisitcs in Simulated Pentesting* by Luise Odenthal (co-supervised with Jörg Hoffmann), Saarland University.

2015   *Búsqueda de caminos en mapas de videojuegos: desarrollo de técnicas de búsqueda de caminos con preprocesamiento para mapas de videojuegos* by Álvaro Parra de Miguel, Universidad Carlos III de Madrid.

2014   *Learning Pattern Collections* by Maike Maas (co-supervised with Jörg Hoffmann), Saarland University.

2014   *Exploiting Portfolios in the Usage of Learned Pruning Rules for Heuristic Search Planning* by Valerie Poser (co-supervised with Jörg Hoffmann and Olivier Buffet), Saarland University.

2014   *Understanding the Learning and Usage of Pruning Rules for Heuristic Search Planning* by Inken Hagestedt (co-supervised with Jörg Hoffmann, Alan Fern, and Olivier Buffet), Saarland University.

2014   *Analizador de posiciones del tablero del Go* by Javier Huertas Tato (co-supervised with Daniel Borrajo), Universidad Carlos III de Madrid.

2013 *Jaminion: Plataforma de Dominion* by Sergio Durán Vegas, Universidad Carlos III de Madrid.

Other teaching duties

Autumn 2023 Semester coordinator for 5th Semester at Bachelor in Computer Sciences, Aalborg University.

Autumn 2023 Problem Based Learning (PBL): The "Aalborg Model" for CS-staff. Course on "Teaching methods" for Newly employed at the Department of Computer Science (co-lectured with Hans Hüttel), Aalborg University.

2022 – now Member of the PBL-UG group: Management group with the objective of developing the PBL culture within the CS department and ensure quality., Aalborg University.

Autumn 2022 Problem Based Learning (PBL): The "Aalborg Model" for CS-staff. Course on "Teaching methods" for Newly employed at the Department of Computer Science (co-lectured with Ivan Aaen), Aalborg University.

Autumn 2022 Semester coordinator for 5th Semester at Bachelor in Computer Sciences, Aalborg University.

Autumn 2021 Semester coordinator for 5th Semester at Bachelor in Computer Sciences, Aalborg University.

Autumn 2021 Coordinator for pilot project on Online Courses on Artificial Intelligence and Machine Learning at Bachelor in Computer Sciences, Aalborg University.

2020–2022 Internal Censor at several courses, Aalborg University.

Scientific Activities

Event Organization

- Organizer of the Doctoral Consortium at International Conference on Automated Planning and Scheduling (ICAPS'20).

- Organizer of the 2018th edition of the International Planning Competition (IPC'18).

Workshop Organization

- Organizer of the 13th edition of the Heuristics and Search for Domain-independent Planning Workshop (HSDIP'21).

- Organizer of the 12th edition of the Heuristics and Search for Domain-independent Planning Workshop (HSDIP'20).

- Organizer of the Workshop on the International Planning Competition (WIPC'19).

- Organizer of the 9th edition of the Heuristics and Search for Domain-independent Planning Workshop (HSDIP'17).

- Organizer of the 8th edition of the Heuristics and Search for Domain-independent Planning Workshop (HSDIP'16).

Tutorial Organization

- AAAI 2019: An Overview of the International Planning Competition

- ICAPS 2017: Alternatives to Explicit State Space Search: Symbolic Search

- ICAPS 2017: Alternatives to Explicit State Space Search: Decoupled Search

Event Participation

- Mentor at the mentoring program at Doctoral Consortium in the International Conference on Automated Planning and Scheduling (ICAPS'21).

- Talk on "Large-Scale Symbolic Search" in the "International Workshop on Pattern Databases and Large-Scale Search" in Freie Universität Berlin (PDB 18).

- "Panel on the Past, Present, and Future of Domain Independent Heuristic Search" in the 10th edition of the Heuristics and Search for Domain-independent Planning Workshop (HSDIP'18).

Journal Editor

- Associate editor for AI Communications

Journal Reviewer

Frequent reviewer for:

- Journal of Computer and System Sciences (JCSS)

- Artificial Intelligence Journal (AIJ)

- Journal of Artificial Intelligence Research (JAIR)

- AI Communications

Occasional reviewer for:

- Multimedia Tools and Applications

- Autonomous Agents and Multi-Agent Systems

Conference Reviewer

- Senior Program Committee of the *38th AAAI Conference on Artificial Intelligence (AAAI'24)*.

- Program Committee of the *26th European Conference on Artificial Intelligence (ECAI'23)*.

- Program Committee of the *16th Symposium on Combinatorial Search (SOCS'23)*.

- Program Committee of the *32nd International Joint Conference on Artificial Intelligence (IJCAI'23)*.

- Program Committee of the *33rd International Conference on Automated Planning and Scheduling (ICAPS'23)*.

- Program Committee of the *37th AAAI Conference on Artificial Intelligence (AAAI'23)*.

- Program Committee of the *15th Symposium on Combinatorial Search (SOCS'22)*.

- Program Committee of the *31st International Joint Conference on Artificial Intelligence (IJCAI'22)*.

- Senior Program Committee of the *32nd International Conference on Automated Planning and Scheduling (ICAPS'22)*.

- Program Committee of the *36th AAAI Conference on Artificial Intelligence (AAAI'22)*.

- Program Committee of the *14th Symposium on Combinatorial Search (SOCS'21)*.

- Senior Program Committee of the *30th International Joint Conference on Artificial Intelligence (IJCAI'21)*.

- Senior Program Committee of the *31st International Conference on Automated Planning and Scheduling (ICAPS'21)*.

- Program Committee of the *35th AAAI Conference on Artificial Intelligence (AAAI'21)*.

- Program Committee of the *13th Symposium on Combinatorial Search (SOCS'20)*.

- Program Committee of the *29th International Joint Conference on Artificial Intelligence (IJCAI'20)*.

- Program Committee of the *24th European Conference on Artificial Intelligence (ECAI'20)*.

- Program Committee of the *30th International Conference on Automated Planning and Scheduling (ICAPS'20)*.

- Senior Program Committee of the *34th AAAI Conference on Artificial Intelligence (AAAI'20)*.

- Program Committee of the *12th Symposium on Combinatorial Search (SOCS'19)*.

- Program Committee of the *28th International Joint Conference on Artificial Intelligence (IJCAI'19)*.

- Program Committee of the *Demo-Track of the 28th International Joint Conference on Artificial Intelligence (IJCAI'19)*.

- Program Committee of the *29th International Conference on Automated Planning and Scheduling (ICAPS'19)*.

- Program Committee of the *33rd AAAI Conference on Artificial Intelligence (AAAI'19)*.

- Program Committee of the *11th Symposium on Combinatorial Search (SOCS'18)*.

- Program Committee of the *27th International Joint Conference on Artificial Intelligence (IJCAI'18)*, 2-star distinguished member[2].

- Program Committee of the *Demo-Track of the 27th International Joint Conference on Artificial Intelligence (IJCAI'18)*.

- Program Committee of the *28th International Conference on Automated Planning and Scheduling (ICAPS'18)*.

- Program Committee of the *32nd AAAI Conference on Artificial Intelligence (AAAI'18)*.

- Program Committee of the *10th Symposium on Combinatorial Search (SOCS'17)*.

- Program Committee of the *26th International Joint Conference on Artificial Intelligence (IJCAI'17)*.

- Program Committee of the *Demo-Track of the 26th International Joint Conference on Artificial Intelligence (IJCAI'17)*.

- Program Committee of the *27th International Conference on Automated Planning and Scheduling (ICAPS'17)*.

- Program Committee of the *31st AAAI Conference on Artificial Intelligence (AAAI'17)*.

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[2]https://www.ijcai-18.org/distinguished-members/

- Program Committee of the *25th International Joint Conference on Artificial Intelligence (IJCAI'16).*

- Program Committee of the *Demo-Track of the 25th International Joint Conference on Artificial Intelligence (IJCAI'16).*

- Program Committee of the *26th International Conference on Automated Planning and Scheduling (ICAPS'16).*

- Program Committee of the *8th Symposium on Combinatorial Search (SOCS'15).*

- Program Committee of the *24th International Joint Conference on Artificial Intelligence (IJCAI'15).*

- Program Committee of the *29th AAAI Conference on Artificial Intelligence (AAAI'15).*

- Program Committee of the *7th Symposium on Combinatorial Search (SOCS'14).*

- Additional Reviewer of the *25th International Conference on Automated Planning and Scheduling (ICAPS'15).*

- Additional Reviewer of the *24th International Conference on Automated Planning and Scheduling (ICAPS'14).*

- Additional Reviewer of the *6th Symposium on Combinatorial Search (SOCS'13).*

- Additional Reviewer of the *5th Symposium on Combinatorial Search (SOCS'12).*

Membership in Ph.D. Committees

- October 2023 , Irfansha Shaik, Aarhus University, Denmark.

- December 2022 , Sean Bin Yang, Aalborg University, Denmark.

- December 2022, Søren Enevoldsen, Aalborg University, Denmark.

- February 2022, David Speck, Freiburg University, Germany.

- November 2021, Tobias Skovgaard, Aalborg University, Denmark.

- August 2017, Mittul Singh, Saarland University, Germany.

- March 2017, Isabel Cenamor, Universidad Carlos III de Madrid. Spain.

- May 2016, Stefan Richter, Saarland University, Germany.

- December 2015, Stefan Schuh, Saarland University, Germany.

Grant reviewer

- External Grant reviewer for Grant Institutions and Foundations.

Third-Party Funding

- ERC Starting Grant: Scored **A** (fully meets the ERC's excellence criterion and is recommended for funding if sufficient funds are available) in Step 2 of the evaluation process (but not funded), 2022.

- Successful proposal for a Explorer Project at IFC-DIREC *: Re-Use of Robotic-data in Production through search, simulation and learning (ReRoPro)*, ca. 201.000 DKK funding (+ 216.000 DKKs from industrial partners) as collaborator, 2022.

- Successful proposal VisionDenmark *Automated Planning Models for Emotion-Aware Decision Making in Videogames*, ca. 100.000 DKK funding (+ 100.000 DKKs from industrial partners) as Principal Investigator, 2021.

I have also collaborated in the following project proposals:

- Successful proposal for the DFG Collaborative Research Center *Information Density and Linguistic Encoding*, ca. 8 million EUR funding for the second funding phase 2018-2022 (I collaborated in project A7 with PI's Jöerg Hoffmann and Alexander Koller).

- Successful proposal for the DAAD exchange project *Optimizing Planning Domains*, 12795 EUR funding, 2017-2018 (PI Jöerg Hoffmann, I wrote most of the proposal and coordinated the project from the german side).

Last updated: October 11, 2023.