

RAIR Lab Publication List

2024

- [1] James T. Oswald, Thomas M. Ferguson, and Selmer Bringsjord. “A Universal Intelligence Measure for Arithmetical Uncomputable Environments”. In: *Artificial General Intelligence - 17th International Conference, AGI 2024, Seattle, WA, USA, August 13-16, 2024, Proceedings*. Ed. by Kristinn R. Thórisson, Peter Isaev, and Arash Sheikhlari. Vol. 14951. Lecture Notes in Computer Science. Springer, 2024, pp. 134–144. DOI: [10.1007/978-3-031-65572-2_15](https://doi.org/10.1007/978-3-031-65572-2_15). URL: https://doi.org/10.1007/978-3-031-65572-2_15.

2023

- [1] Vivek Nallur, Louise A. Dennis, Selmer Bringsjord, and Naveen Sundar Govindarajulu. “A Partially Synthesized Position on the Automation of Machine Ethics”. In: *Digit. Soc.* 2.2 (2023). DOI: [10.1007/s44206-023-00040-8](https://doi.org/10.1007/s44206-023-00040-8). URL: <https://doi.org/10.1007/s44206-023-00040-8>.
- [2] Selmer Bringsjord, Michael Giancola, Naveen Sundar Govindarajulu, John Slowik, James T. Oswald, Paul Bello, and Micah Clark. “Argument-based inductive logics, with coverage of compromised perception”. In: *Frontiers Artif. Intell.* 6 (2023). DOI: [10.3389/frai.2023.1144569](https://doi.org/10.3389/frai.2023.1144569). URL: <https://doi.org/10.3389/frai.2023.1144569>.
- [3] Selmer Bringsjord, John Slowik, Naveen Sundar Govindarajulu, Michael Giancola, James T. Oswald, and Rikhiya Ghosh. “Affect-based Planning for a Meta-Cognitive Robot Sculptor: First Steps”. In: *11th International Conference on Affective Computing and Intelligent Interaction, ACII 2023 - Workshops and Demos, Cambridge, MA, USA, September 10-13, 2023*. IEEE, 2023, pp. 1–8. DOI: [10.1109/ACIIW59127.2023.10388202](https://doi.org/10.1109/ACIIW59127.2023.10388202). URL: <https://doi.org/10.1109/ACIIW59127.2023.10388202>.
- [4] Selmer Bringsjord, James T. Oswald, Michael Giancola, Brandon Rozek, and Naveen Sundar Govindarajulu. “The M Cognitive Meta-architecture as Touchstone for Standard Modeling of AGI-Level Minds”. In: *Artificial General Intelligence - 16th International Conference, AGI 2023, Stockholm, Sweden, June 16-19, 2023, Proceedings*. Ed. by Patrick Hammer, Marjan Alirezaie, and Claes Strannegård. Vol. 13921. Lecture Notes in Computer Science. Springer, 2023, pp. 62–73. DOI: [10.1007/978-3-031-33469-6_7](https://doi.org/10.1007/978-3-031-33469-6_7). URL: https://doi.org/10.1007/978-3-031-33469-6_7.
- [5] James T. Oswald and Brandon Rozek. “Parallel Verification of Natural Deduction Proof Graphs”. In: *Proceedings of the 18th International Workshop on Logical Frameworks and Meta-Languages: Theory and Practice, LFMTTP@FSCD 2023, Rome, Italy, 2nd July 2023*. Ed. by Alberto Ciaffaglione and Carlos Olarte. Vol. 396. EPTCS. 2023, pp. 36–51. DOI: [10.4204/EPTCS.396.4](https://doi.org/10.4204/EPTCS.396.4). URL: <https://doi.org/10.4204/EPTCS.396.4>.

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- [1] Selmer Bringsjord, Naveen Sundar Govindarajulu, John Slowik, James T. Oswald, Michael Giancola, John Angel, Shreya Banerjee, and Aidan Flaherty. “PERI.2 Goes to PreSchool and Beyond, in Search of AGI”. In: *Artificial General Intelligence - 15th International Conference, AGI 2022, Seattle, WA, USA, August 19-22, 2022, Proceedings*. Ed. by Ben Goertzel, Matt Iklé, Alexey Potapov, and Denis K. Ponomaryov. Vol. 13539. Lecture Notes in Computer Science. Springer, 2022, pp. 178–187. DOI: [10.1007/978-3-031-19907-3_17](https://doi.org/10.1007/978-3-031-19907-3_17). URL: https://doi.org/10.1007/978-3-031-19907-3%5C_17.
- [2] Michael Giancola, Selmer Bringsjord, and Naveen Sundar Govindarajulu. “Toward Generating Natural-Language Explanations of Modal-Logic Proofs”. In: *Artificial General Intelligence - 15th International Conference, AGI 2022, Seattle, WA, USA, August 19-22, 2022, Proceedings*. Ed. by Ben Goertzel, Matt Iklé, Alexey Potapov, and Denis K. Ponomaryov. Vol. 13539. Lecture Notes in Computer Science. Springer, 2022, pp. 220–230. DOI: [10.1007/978-3-031-19907-3_21](https://doi.org/10.1007/978-3-031-19907-3_21). URL: https://doi.org/10.1007/978-3-031-19907-3%5C_21.
- [3] Shreya Banerjee, Selmer Bringsjord, Michael Giancola, and Naveen Sundar Govindarajulu. “Qualitative Mechanical Problem-Solving by Artificial Agents: Further Progress, Under Psychometric AI”. In: *Proceedings of the Thirty-Fifth International Florida Artificial Intelligence Research Society Conference, FLAIRS 2022, Hutchinson Island, Jensen Beach, Florida, USA, May 15-18, 2022*. Ed. by Roman Barták, Fazel Keshtkar, and Michael Franklin. 2022. DOI: [10.32473/FLAIRS.V35I.130630](https://doi.org/10.32473/FLAIRS.V35I.130630). URL: <https://doi.org/10.32473/flairs.v35i.130630>.
- [4] Michael Giancola, Selmer Bringsjord, and Naveen Sundar Govindarajulu. “Novel Intensional Defeasible Reasoning for AI: Is it Cognitively Adequate? (poster)”. In: *Proceedings of the Workshop on Cognitive Aspects of Knowledge Representation co-located with the 31st international joint conference on artificial intelligence (IJCAI-ECAI 2022), Vienna, Austria, July 23, 2022*. Ed. by Jesse Heyninck, Thomas Meyer, Marco Ragni, Matthias Thimm, and Gabriele Kern-Isberner. Vol. 3251. CEUR Workshop Proceedings. CEUR-WS.org, 2022. URL: <https://ceur-ws.org/Vol-3251/paper9.pdf>.

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- [1] Selmer Bringsjord, Naveen Sundar Govindarajulu, and Michael Giancola. “Automated argument adjudication to solve ethical problems in multi-agent environments”. In: *Paladyn J. Behav. Robotics* 12.1 (2021), pp. 310–335. DOI: [10.1515/PJBR-2021-0009](https://doi.org/10.1515/PJBR-2021-0009). URL: <https://doi.org/10.1515/pjbr-2021-0009>.
- [2] Selmer Bringsjord and Naveen Sundar Govindarajulu. “Fundamental Proof Methods in Computer Science: A Computer-Based Approach, by Arkoudas and Musser, The MIT Press, Cambridge, USA, ISBN 978-0-262-03553-8”. In: *Theory Pract. Log. Program.* 21.2 (2021), pp. 283–290. DOI: [10.1017/S1471068420000071](https://doi.org/10.1017/S1471068420000071). URL: <https://doi.org/10.1017/S1471068420000071>.
- [3] Selmer Bringsjord, Naveen Sundar Govindarajulu, and Michael Giancola. “AI Can Stop Mass Shootings, and More”. In: *CoRR* abs/2102.09343 (2021). arXiv: [2102.09343](https://arxiv.org/abs/2102.09343). URL: <https://arxiv.org/abs/2102.09343>.

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- [1] Selmer Bringsjord and Naveen Sundar Govindarajulu. “Rectifying the Mischaracterization of Logic by Mental Model Theorists”. In: *Cogn. Sci.* 44.12 (2020). DOI: [10.1111/COGS.12898](https://doi.org/10.1111/COGS.12898). URL: <https://doi.org/10.1111/cogs.12898>.
- [2] Selmer Bringsjord and Naveen Sundar G. “The Theory of Cognitive Consciousness, and Λ (Lambda)”. In: *J. Artif. Intell. Conscious.* 7.2 (2020), pp. 155–181. DOI: [10.1142/S2705078520500095](https://doi.org/10.1142/S2705078520500095). URL: <https://doi.org/10.1142/s2705078520500095>.
- [3] Selmer Bringsjord, Naveen Sundar Govindarajulu, John Licato, and Michael Giancola. “Learning Ex Nihilo”. In: *6th Global Conference on Artificial Intelligence, GCAI 2020, Hangzhou, China, April 6-9, 2020*. Ed. by Grégoire Danoy, Jun Pang, and Geoff Sutcliffe. Vol. 72. EPiC Series in Computing. EasyChair, 2020, pp. 1–27. DOI: [10.29007/GGCF](https://doi.org/10.29007/GGCF). URL: <https://doi.org/10.29007/ggcf>.
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- [1] Selmer Bringsjord and Naveen Sundar Govindarajulu. “Introducing Λ for Measuring Cognitive Consciousness”. In: *Papers of the 2019 Towards Conscious AI Systems Symposium co-located with the Association for the Advancement of Artificial Intelligence 2019 Spring Symposium Series (AAAI SSS-19), Stanford, CA, March 25-27, 2019*. Ed. by Antonio Chella, David Gamez, Patrick Lincoln, Riccardo Manzotti, and Jonathan D. Pfautz. Vol. 2287. CEUR Workshop Proceedings. CEUR-WS.org, 2019. URL: <https://ceur-ws.org/Vol-2287/paper26.pdf>.
- [2] Naveen Sundar Govindarajulu and Selmer Bringsjord. “Towards a Computable & Harnessable Model of Consciousness”. In: *Papers of the 2019 Towards Conscious AI Systems Symposium co-located with the Association for the Advancement of Artificial Intelligence 2019 Spring Symposium Series (AAAI SSS-19), Stanford, CA, March 25-27, 2019*. Ed. by Antonio Chella, David Gamez, Patrick Lincoln, Riccardo Manzotti, and Jonathan D. Pfautz. Vol. 2287. CEUR Workshop Proceedings. CEUR-WS.org, 2019. URL: <https://ceur-ws.org/Vol-2287/paper27.pdf>.

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- [3] Naveen Sundar Govindarajulu, Jean-Claude Paquin, Shreya Banerjee, Atriya Sen, Paul Mayol, and Selmer Bringsjord. “On Datasets for Evaluating Architectures for Learning to Reason”. In: *Proceedings of the AAAI 2019 Spring Symposium on Combining Machine Learning with Knowledge Engineering (AAAI-MAKE 2019) Stanford University, Palo Alto, California, USA, March 25-27, 2019., Stanford University, Palo Alto, California, USA, March 25-27, 2019*. Ed. by Andreas Martin, Knut Hinkelmann, Aurore Gerber, Doug Lenat, Frank van Harmelen, and Peter Clark. Vol. 2350. CEUR Workshop Proceedings. CEUR-WS.org, 2019. URL: <https://ceur-ws.org/Vol-2350/xposter4.pdf>.
- [4] Naveen Sundar Govindarajulu, Selmer Bringsjord, Rikhiya Ghosh, and Vasanth Sarathy. “Toward the Engineering of Virtuous Machines”. In: *Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society, AIES 2019, Honolulu, HI, USA, January 27-28, 2019*. Ed. by Vincent Conitzer, Gillian K. Hadfield, and Shannon Vallor. ACM, 2019, pp. 29–35. DOI: [10.1145/3306618.3314256](https://doi.org/10.1145/3306618.3314256). URL: <https://doi.org/10.1145/3306618.3314256>.
- [5] Selmer Bringsjord, Naveen Sundar Govindarajulu, and Christina Elmore. “Logicist Computational Cognitive Modeling of Infinitary False Belief Tasks”. In: *Proceedings of the 41th Annual Meeting of the Cognitive Science Society, CogSci 2019: Creativity + Cognition + Computation, Montreal, Canada, July 24-27, 2019*. Ed. by Ashok K. Goel, Colleen M. Seifert, and Christian Freksa. cognitivesciencesociety.org, 2019, pp. 43–44. URL: <https://mindmodeling.org/cogsci2019/papers/0022/index.html>.
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- [7] Naveen Sundar Govindarajulu, Selmer Bringsjord, and Matthew Peveler. “On Quantified Modal Theorem Proving for Modeling Ethics”. In: *Proceedings of the Second International Workshop on Automated Reasoning: Challenges, Applications, Directions, Exemplary Achievements, ARCADE@CADE 2019, Natal, Brazil, August 26, 2019*. Ed. by Martin Suda and Sarah Winkler. Vol. 311. EPTCS. 2019, pp. 43–49. DOI: [10.4204/EPTCS.311.7](https://doi.org/10.4204/EPTCS.311.7). URL: <https://doi.org/10.4204/EPTCS.311.7>.
- [8] Selmer Bringsjord and Naveen Sundar Govindarajulu. “Learning Ex Nihilo”. In: *CoRR abs/1903.03515 (2019)*. arXiv: [1903.03515](https://arxiv.org/abs/1903.03515). URL: <http://arxiv.org/abs/1903.03515>.

2018

- [1] Atriya Sen, Selmer Bringsjord, Naveen Sundar Govindarajulu, Paul Mayol, Rikhiya Ghosh, Biplav Srivastava, and Kartik Talamadupula. “Toward a Smart City Using Tentacular AI”. In: *Ambient Intelligence - 14th European Conference, Aml 2018, Larnaca, Cyprus, November 12-14, 2018, Proceedings*. Ed. by Achilles Kameas and Kostas Stathis. Vol. 11249. Lecture Notes in Computer Science. Springer, 2018, pp. 106–112. DOI: [10.1007/978-3-030-03062-9%5C_9](https://doi.org/10.1007/978-3-030-03062-9%5C_9). URL: https://doi.org/10.1007/978-3-030-03062-9%5C_9.

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- [2] Selmer Bringsjord, Naveen Sundar G., Bertram F. Malle, and Matthias Scheutz. “Contextual Deontic Cognitive Event Calculi for Ethically Correct Robots”. In: *International Symposium on Artificial Intelligence and Mathematics, ISAIM 2018, Fort Lauderdale, Florida, USA, January 3-5, 2018*. 2018. URL: https://isaim2018.cs.ou.edu/papers/ISAIM2018%5C_Ethics%5C_Bringsjord%5C_etal.pdf.
- [3] Naveen Sundar Govindarajulu, Rikhiya Ghosh, and Selmer Bringsjord. “Extending Formal Models of the Doctrine of Double Effect with Emotions”. In: *International Symposium on Artificial Intelligence and Mathematics, ISAIM 2018, Fort Lauderdale, Florida, USA, January 3-5, 2018*. 2018. URL: https://isaim2018.cs.ou.edu/papers/ISAIM2018%5C_Ethics%5C_Govindarajulu%5C_etal.pdf.
- [4] John Angel, Naveen Sundar Govindarajulu, and Selmer Bringsjord. “Toward Formalizing Teleportation of Pedagogical Artificial Agents”. In: *CoRR abs/1804.03342* (2018). arXiv: 1804.03342. URL: <http://arxiv.org/abs/1804.03342>.
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- [6] Selmer Bringsjord, Naveen Sundar Govindarajulu, Atriya Sen, Matthew Peveler, Biplav Srivastava, and Kartik Talamadupula. “Tentacular Artificial Intelligence, and the Architecture Thereof, Introduced”. In: *CoRR abs/1810.07007* (2018). arXiv: 1810.07007. URL: <http://arxiv.org/abs/1810.07007>.
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- [1] Paul Bello and Selmer Bringsjord. “Two Problems Afflicting the Search for a Standard Model of the Mind”. In: *2017 AAAI Fall Symposia, Arlington, Virginia, USA, November 9-11, 2017*. AAAI Press, 2017, pp. 296–301. URL: <https://aaai.org/ocs/index.php/FSS/FSS17/paper/view/15961>.
- [2] Naveen Sundar Govindarajulu and Selmer Bringsjord. “On Automating the Doctrine of Double Effect”. In: *Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence, IJCAI 2017, Melbourne, Australia, August 19-25, 2017*. Ed. by Carles Sierra. ijcai.org, 2017, pp. 4722–4730. DOI: 10.24963/IJCAI.2017/658. URL: <https://doi.org/10.24963/ijcai.2017/658>.
- [3] Selmer Bringsjord, Naveen Sundar Govindarajulu, Shreya Banerjee, and John Hummel. “Do Machine-Learning Machines Learn?” In: *Philosophy and Theory of Artificial Intelligence 2017, PT-AI 2017, Leeds, UK, November 4-5, 2017, Proceedings*. Ed. by Vincent C. Müller. Vol. 44. Studies in Applied Philosophy, Epistemology and Rational Ethics. Springer, 2017, pp. 136–157. DOI: 10.1007/978-3-319-96448-5_14. URL: https://doi.org/10.1007/978-3-319-96448-5%5C_14.
- [4] Naveen Sundar Govindarajulu and Selmer Bringsjord. “Proof Verification Can Be Hard!” In: *CoRR abs/1703.08746* (2017). arXiv: 1703.08746. URL: <http://arxiv.org/abs/1703.08746>.

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- [7] Matthew Peveler, Biplav Srivastava, Kartik Talamadupula, Naveen Sundar G., Selmer Bringsjord, and Hui Su. “Towards Cognitive-and-Immersive Systems: Experiments in a Shared (or common) Blockworld Framework”. In: *CoRR* abs/1709.05958 (2017). arXiv: [1709.05958](https://arxiv.org/abs/1709.05958). URL: <http://arxiv.org/abs/1709.05958>.
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