Stanford



Michael Genesereth

Associate Professor of Computer Science

Bio

BIO

Genesereth is most known for his work on Computational Logic and applications of that work in Enterprise Management, Computational Law, and General Game Playing. He is one of the founders of Teknowledge, CommerceNet, Mergent Systems, and Symbium. Genesereth is the director of the Logic Group at Stanford and the founder and research director of CodeX - the Stanford Center for Legal Informatics.

ACADEMIC APPOINTMENTS

- Associate Professor, Computer Science
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)

ADMINISTRATIVE APPOINTMENTS

- Research Director, CodeX: The Stanford Center for Legal Informatics, (2005- present)

PROGRAM AFFILIATIONS

- Symbolic Systems Program

PROFESSIONAL EDUCATION

- PhD, Harvard University (1978)

LINKS

- http://logic.stanford.edu/people/genesereth: http://logic.stanford.edu/people/genesereth

Teaching

COURSES

2026-27

- Computational Law: CS 204 (Spr)
- Computational Logic: CS 157 (Aut)
- General Game Playing: CS 227B (Spr)

2025-26

- Computational Logic: CS 157 (Aut)
- General Game Playing: CS 227B (Spr)
- Logic Programming: CS 151 (Spr)

2024-25

- Computational Law: CS 204 (Spr)
- Computational Law: LAW 4019 (Spr)
- Computational Logic: CS 157 (Aut)
- General Game Playing: CS 227B (Spr)

2023-24

- Computational Logic: CS 157 (Aut)
- General Game Playing: CS 227B (Spr)
- Logic Programming: CS 151 (Spr)

STANFORD ADVISEES

Master's Program Advisor

Cees Armstrong, Vedang Dhirendra Asgaonkar, Upamanyu Dass-Vattam, Ethan Hersch, So Hirota, Su Kara, Aryan Katiyar, Mick Li, Sarvesh Ramiya, Elliott Rodgers, Mingyang Wang

Publications

PUBLICATIONS

- **Practical Reformulation of Deductive Databases**
  Genesereth, M., Mohapatra, A., IEEE
  IEEE COMPUTER SOC.2019: 65–72
- **The Herbrand Manifesto Thinking Inside the Box**
  Genesereth, M., Kao, E.
  edited by Bassiliades, N., Gottlob, G., Sadri, F., Paschke, A., Roman, D.
  SPRINGER-VERLAG BERLIN.2015: 3–12
- **The International General Game Playing Competition** *AI MAGAZINE*
  Genesereth, M., Bjoernsson, Y.
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- **General game playing: Overview of the AAAI competition** *AI MAGAZINE*
  Genesereth, M., Love, N., Pell, B.
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- **Computational Law**
  Love, N., Genesereth, M., R.
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- **General Game Playing - Overview of the AAAI Competition** *AAAI Magazine*
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- **Recursive query plans for data integration** *JOURNAL OF LOGIC PROGRAMMING*
  Duschka, O. M., Genesereth, M. R., Levy, A. Y.
  2000; 43 (1): 49-73
- **Linearly bounded reformulations of conjunctive databases** *1st International Conference on Computational Logic (CL 2000)*
  Chirkova, R., Genesereth, M. R.
  SPRINGER-VERLAG BERLIN.2000: 987–1001
- **General Game Playing** *COMMUNICATIONS OF THE ACM*

Genesereth, M.
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- **A community-driven vision for a new knowledge resource for AI** *AI MAGAZINE*
  Chaudhri, V. K., Baru, C., Bennett, B., Bhatt, M., Cassel, D., Cohn, A. G., Dechter, R., Erdem, E., Ferrucci, D., Forbus, K., Gelfond, G., Genesereth, M., Gordon, et al
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- **Insurance Portfolio Analysis as Containment Testing**
  Carlson, P., Genesereth, M.
  edited by Spanakis, J., VanDijck, G., Sileno, G.
  IOS PRESS.2023: 137-142

- **Knowledge graphs: Introduction, history, and perspectives** *AI MAGAZINE*
  Chaudhri, V. K., Baru, C., Chittar, N., Dong, X., Genesereth, M., Hendler, J., Kalyanpur, A., Lenat, D. B., Sequeda, J., Vrandecic, D., Wang, K.
  2022; 43 (1): 17-29

- **Rule-Based Exploration of Structured Data in the Browser**
  Agarwal, S., Mohapatra, A., Genesereth, M., Boley, H.
  edited by Bassiliades, N., Gottlob, G., Sadri, F., Paschke, A., Roman, D.
  SPRINGER-VERLAG BERLIN.2015: 161–75

- **PARACONSISTENT INFERENCE FROM DATA USING EXISTENTIAL Omega-ENTAILMENT** *INTERNATIONAL JOURNAL OF SEMANTIC COMPUTING*
  Kassoff, M., Genesereth, M. R.
  2011; 5 (3): 257–69

- **Semantics for Smart Services** *SCIENCE OF SERVICE SYSTEMS*
  Petrie, C., Hochstein, A., Genesereth, M.
  edited by Demirkan, H., Spohrer, J. C., Krishna
  2011: 91–105

- **Logical Spreadsheets** *4th International Web Rule Symposium*
  Genesereth, M.
  SPRINGER-VERLAG BERLIN.2010: 1–1

- **Data Integration - The Relational Logic Approach**
  Genesereth, M., R.
  Morgan-Claypool.2010

- **Semantic Email Addressing The Semantic Web Killer App?** *IEEE INTERNET COMPUTING*
  Kassoff, M., Petrie, C., Zen, L., Genesereth, M.
  2009; 13 (1): 48-55

- **Equivalence of SQL Queries In Presence of Embedded Dependencies** *28th ACM SIGMOD-SIGACT-SIGART Symposium on Principles of Database Systems (PODS)*
  Chirkova, R., Genesereth, M. R.
  ASSOC COMPUTING MACHINERY.2009: 217–226

- **Propositional Automata and Cell Automata: Representational Frameworks for Discrete Dynamic Systems** *21st Australian Joint Conference on Artificial Intelligence*
  Schkufza, E., Love, N., Genesereth, M.
  SPRINGER-VERLAG BERLIN.2008: 56–66

- **PrediCalc: a logical spreadsheet management system** *KNOWLEDGE ENGINEERING REVIEW*
  Kassoff, M., Genesereth, M. R.
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- **Reformulation for extensional reasoning** *7th International Symposium on Abstraction, Reformulation and Approximation*
  Hinrichs, T. L., Genesereth, M. R.

SPRINGER-VERLAG BERLIN.2007: 215–229

- **Database Reformulation with Integrity Constraints**
  Chirkova, R., Genesereth, M., R.
  2005
- **Axiom Schemata as Metalevel Axioms: Model Theory**
  Hinrichs, T., L., Genesereth, M., R.
  2005
- **PrediCalc: A Logical Spreadsheet Management System**
  Kassoff, M., Zen, L., Garg, A., Genesereth, M., R.
  2005
- **Adding AI to web services** *International Symposium on Agent-Mediated Knowledge Management*
  Petrie, C., Genesereth, M., Bjornsson, H., Chirkova, R., Ekstrom, M., Gomi, H., Hinrichs, T., Hoskins, R., Kassoff, M., Kato, D., Kawazoe, K., Min, J. U., Mohsin, et al
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- **Linearly Bounded Reformulations of Conjunctive Databases**
  Chirkova, R., Genesereth, M., R.
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- **Database Reformulation**
  Chirkova, R., Genesereth, M., R.
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- **Dervish** *in AI-based Mobile Robots: Case Studies of Successful Robot Systems*
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- **Query Planning with Disjunctive Sources**
  Duschka, O., Genesereth, M., R.
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- **Teaching AI Using Robots** *in AI-based Mobile Robots: Case Studies of Successful Robot Systems*
  Nourbakhsh, I., Genesereth, M., R.
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- **Mobile robot obstacle avoidance via depth from focus** *ROBOTICS AND AUTONOMOUS SYSTEMS*
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  Wiederhold, G., Genesereth, M.
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- **Using Infomaster to Create a Housewares Virtual Catalog** *Journal of Electronic Markets, Institute for Media and Communication Management, University of St. Gallen, Switzerland*
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- **Infomaster: An Information Integration System**
  Genesereth, M., R., Keller, A., M., Duschka, O.
  1997
- **Answering Recursive Queries Using Views**
  Duschka, O., Genesereth, M., R.
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- **Query Planning in Infomaster**
  Duschka, O., Genesereth, M., R.
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- **An Agent-Based Framework for Interoperability** *in Software Agents*
  Genesereth, M., R.
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- **Assumptive planning and execution: A simple, working robot architecture** *AUTONOMOUS ROBOTS*
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- **Assumptive Planning and Execution: A Simple** *Working Robot Architecture,Autonomous Robots*
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  Nourbakhsh, I. R., Andre, D., Tomasi, C., Genesereth, M. R.
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- **A Framework for Collaborative Distributed Facility Engineering**
  Khedro, T., Genesereth, M., R., Teicholz, P.
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- **Modeling Multiagent Cooperation as Distributed Constraint Satisfaction Problem Solving**
  Khedro, T., Genesereth, M., R.
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- **Solution Consistency and Convergence in Cooperative Distributed Problem Solving**
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- **Concurrent Engineering through Interoperable Software Agents**
  Khedro, T., Genesereth, M., R., Teicholz, P.
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  Khedro, T., Teicholz, P., M., Genesereth, M., R.
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- **FCDA: A Framework for Collaborative Distributed Multidisciplinary Design**
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- **An Agent-Based Framework for Integrated Facility Engineering** *International Journal for Engineering with Computers*
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- **PACT - AN EXPERIMENT IN INTEGRATING CONCURRENT ENGINEERING SYSTEMS** *COMPUTER*
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- **SINGLE-PHASE AGREEMENTS AMONG RATIONAL AGENTS** *JOURNAL OF EXPERIMENTAL & THEORETICAL ARTIFICIAL INTELLIGENCE*
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  Khedro, T., Genesereth, M., R., Teicholz, P., M.
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- **Agent-Based Concurrent Engineering**
  Genesereth, M., R., Huyn, P., Letsinger, R.
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- **Partial Programs**
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- **A Comparative Analysis of Some Simple Architectures for Autonomous Agents** *Architectures for Cognition*
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- **A Fast Algorithm for Automatic Theorem Proving with Equality** *Logic-91-2, Stanford University Computer Science Department*
  Sikka, V., Gensereth, M., R., Singh, N.
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- **Knowledge Interchange Format**
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- **Discrete Systems Theory** *Logic-89-6, Stanford University Computer Science Department*
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- **Deals Among Rational Agents** *in The Ecology of Computation*
  Rosenschein, J., S., Genesereth, M., R.
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- **Choosing Directions for Rules** *Journal of Automated Reasoning*
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- **Introspective Fidelity** *in Metalevel Architectures and Reflection*
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  Genesereth, M., R., Nilsson, N., J.
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- **The Relevance of Irrelevance**
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- **Choosing Directions for Rules**
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- **ORDERING CONJUNCTIVE QUERIES** *ARTIFICIAL INTELLIGENCE*
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- **Deals Among Rational Agents**
  Rosenschein, J., S., Genesereth, M., R.
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- **A Variable Supply Model for Distributing Deductions** *Journal of Parallel and Distributed Computing*
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- **PM: A Parallel Execution Model for Backward Chaining Deductions** *Future Computing Systems*
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- **Expressiveness and Language Choice** *Data and Knowledge Engineering*
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- **Choosing Directions for Rules** *KSL-85-46, Stanford University Heuristic Programming Project*
  Trietel, R., Genesereth, M., R.
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- **Ordering Conjuncts in Problem Solving** *Artificial Intelligence*
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- **LOGIC PROGRAMMING** *COMMUNICATIONS OF THE ACM*
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- **Solving the Prisoner's Dilemma** *STAN-CS-84-1032, Stanford University Computer Science Department*
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- **The Role of Abstractions in Understanding Analogies** *HPP-84-8, Stanford University Heuristic Programming Project*
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- **Expressiveness of Languages**
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- **Procedural Hints in the Control of Reasoning** *HPP-84-11, Stanford University Heuristic Programming Project*
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- **An Overview of Meta-Level Architecture**
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- **What's New: A Semantic Definition of Novelty**
  Greiner, R., Genesereth, M., R.
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- **Residue: A Deductive Approach to Design** *HPP-83-46, Stanford University Heuristic Programming Project*
  Finger, J., J., Genesereth, M., R.
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- **Meta-Cognition:Reasoning about Knowledge** *in Expert Systems*
  Davis, R., Doyle, J., Genesereth, M., R., Goldstein, I., Lenat, D., Shrobe, H.
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- **The Advanced Scientific Computing Environment Project**
  Kulp, J., L., Genesereth, M., R., Edwards, B., E., Holloway, J., T.
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- **Automated Consultation for Complex Computer Systems**
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  1979
- **The Canonicality of Rule Systems**
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- **The Difficulties of Using Macsyma and the Functions of User Aids**
  Genesereth, M., R.
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- **A Fast Inference Algorithm for Semantic Networks** *Memo, M.I.T. Mathlab Group*
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- **Multi-Vendor Catalogs: Smart Catalogs and Virtual Catalogs**
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