

Alberto Maria Segre

Curriculum Vitae

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Date of Birth: April 20, 1957
Place of Birth: Madison, Wisconsin (USA)
Citizenship: United States of America

Education

B.S.	University of Illinois at Urbana-Champaign	1980	Computer Engineering (<i>Honors</i>)
A.B.	University of Illinois at Urbana-Champaign	1980	LAS/Music Theory (<i>Distinction</i>)
M.S.	University of Illinois at Urbana-Champaign	1983	Electrical Engineering
Ph.D.	University of Illinois at Urbana-Champaign	1987	Electrical Engineering

Awards and Honors

Phi Beta Kappa, Phi Kappa Phi.
Fulbright Scholar, 1980 – 1981.
Caterpillar Corporation Graduate Fellowship, 1986 – 1987.
Outstanding Educator, Merrill Presidential Scholars Program, Cornell University, 1993.
Faculty Scholar, The University of Iowa, 1998 – 2001.
Henry B. Tippie Research Fellow, The University of Iowa, 2001 – 2003.
Outstanding Mentor Award, Graduate College, The University of Iowa, 2006.
Gerard P. Weeg Faculty Scholar in Informatics, The University of Iowa, 2008 – 2020.

Experience

Undergraduate Research Assistant, Computer Music Studio, University of Illinois at Urbana-Champaign, August 1978 – July 1980.
Visiting Researcher (Fulbright Scholar), Istituto di Cibernetica, Università degli Studi di Milano (Milan, Italy), August 1980 – July 1981.
Graduate Research Assistant, Computer-Based Education Research Laboratory, University of Illinois at Urbana-Champaign, August 1981 – July 1982.

Graduate Teaching Assistant, Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, January 1985 – May 1985.

Graduate Research Assistant, Artificial Intelligence Research Group, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, August 1982 – December 1986.

Assistant Professor, Department of Computer Science, Cornell University, January 1987 – July 1994.

Associate Professor, Department of Management Sciences, Department of Computer Science, and Program in Applied Mathematical and Computational Sciences, The University of Iowa, August 1994 – August 2001.

Visiting Professor, Scuola Matematica Interuniversitaria, Consiglio Nazionale delle Ricerche, Università di Perugia (Perugia, Italy), July 1997 – August 1997, July 1999 – August 1999.

Associate Professor (Courtesy), Organization, Systems, and Community Health Program, College of Nursing, The University of Iowa, August 1999 – August 2001.

Visiting Professor, Istituto di Matematica Computazionale, Consiglio Nazionale delle Ricerche (Pisa, Italy), September 1999 – July 2000.

Professor, Department of Management Sciences, Department of Computer Science, and Program in Applied Mathematical and Computational Sciences, The University of Iowa, August 2001 – May 2003.

Professor (Courtesy), Systems and Practice Program (was previously Organization, Systems, and Community Health Program), College of Nursing, The University of Iowa, August 2001 – 2007.

Professor and Associate Chair, Department of Computer Science and Professor, Program in Applied Mathematical and Computational Sciences, The University of Iowa, May 2003 – July 2010.

Professor, Interdisciplinary Genetics Graduate Program, The University of Iowa, July 2004 – present.

Professor, Program in Public Health Genetics, College of Public Health, The University of Iowa, May 2003 – July 2007 (program terminated).

Associate Director, Center for Statistical Genetics Research, College of Public Health, The University of Iowa, May 2003 – July 2007 (center moved to The Research Institute at Nationwide Children's Hospital and the Ohio State University).

Adjunct Professor, Battelle Center for Mathematical Medicine The Research Institute at Nationwide Children's Hospital, January 2007 – December 2013.

Professor and Chair, Department of Computer Science and Professor, Program in Applied Mathematical and Computational Sciences, The University of Iowa, August 2010 – present.

Co-director, The Innovation Laboratory, Signal Center for Healthcare Innovation, University of Iowa Health Ventures, January 2016 – March 2018.

Co-director, Mobile Technology Laboratory, Institute for Clinical and Translational Science, The University of Iowa, September 2018 – present.

Service Activities

University

Member, Committee to Establish a Graduate Minor in Cognitive Studies, Cornell University (Spring 1987).

Member, *SuperQuest High School Supercomputing Competition* Selection Committee, Cornell University/National Science Foundation Center for Theory and Simulation in Science and Engineering (Spring 1993).

Member, Advanced Research Computing Services Advisory Committee, Information Technology Services, The University of Iowa (1994 – 1999, 2000 – 2001).

Chair, Advanced Research Computing Services Advisory Committee, Information Technology Services, The University of Iowa (1998 – 1999, 2000 – 2001).

Member, Committee to Revise the Graduate Subtrack in Software Engineering, Department of Electrical Engineering and Department of Computer Science, The University of Iowa (1995 – 1996).

Member, *Software@Iowa* Planning Committee, College of Engineering, College of Liberal Arts and College of Business Administration, The University of Iowa (1997 – 1998).

Member, Interdisciplinary Programs Strategic Planning Committee, Office of the Provost, The University of Iowa (1998 – 1999).

Member, Committee to Establish a Certificate in Health Informatics, Graduate College, The University of Iowa (1997 – 1998).

Member, Health Informatics Core Steering Committee, Graduate College, The University of Iowa (1998 – 2005).

Member, Informatics Study Committee, Office of the Vice President for Research, The University of Iowa (2000 – 2001).

Member, Faculty Scholar Award Selection Committee, Office of the Provost, The University of Iowa (2001 – 2002, 2003 – 2004, 2005 – 2006).

Member, Advisory Committee in the Physical and Mathematical Sciences, Office of the Vice President for Research, The University of Iowa (2001 – 2008).

Convener, Advisory Committee in the Physical and Mathematical Sciences, Office of the Vice President for Research, The University of Iowa (2004 – 2006).

Member, Advisory Committee for the Carver Scientific Research Initiative Program, Office of the Vice President for Research, The University of Iowa (2002).

Convener, Advisory Committee for the Carver Scientific Research Initiative Program, Office of the Vice President for Research, The University of Iowa (2004).

Member, Informatics Steering Committee, Office of the Vice President for Research and the Dean of the Graduate College, The University of Iowa (2001 – 2003).

CoChair, Informatics Steering Committee, Office of the Vice President for Research and the Dean of the Graduate College, The University of Iowa (2003 – 2005).

Member, Academic Technology Advisory Council, Information Technology Services, The University of Iowa (2002 – 2004).

Member, *Ad Hoc* NIH Research Misconduct Investigation Committee, Office of the Vice President for Research, The University of Iowa (2004 – 2005).

Member, Project MAUI University Advisor Core Group, Information Technology Services, The University of Iowa (2007 – 2009).

Member, Research Council, Office of the Vice President for Research, The University of Iowa (2009 – 2015, 2016 – 2019).

Chair, Research Council, Office of the Vice President for Research, The University of Iowa (2011 – 2012, 2018 – 2019).

Member, Task Force on Graduate Education, Office of the Provost, The University of Iowa (2009 – 2010).

Member, Early Intervention Committee, Office of the Registrar, The University of Iowa (2009 – 2011).

Member, Search Committee for the Director of Retention, Office of the Provost, The University of Iowa (2010).

Member, Aging Mind and Brain Cluster Steering Committee, Office of the Provost, The University of Iowa (2010 – 2014).

Member, Search Committee for the Honors Center Director, Office of the Provost, The University of Iowa (Spring 2011).

Member, Task Force on Bioinformatics, Office of the Provost, The University of Iowa (2011 – 2012).

Member, Digital Arts Cluster Steering Committee, Office of the Provost, The University of Iowa (2013 – present).

Member, Secondary Student Training Program Advisory Committee, The University of Iowa (2013 – 2015).

Member, Informatics Curriculum Advisory Committee, Office of the Provost, The University of Iowa (2014 – 2015).

Member, International Impact Award Selection Committee, International Programs, The University of Iowa (Summer 2014, Summer 2015, Summer 2016, Summer 2017, Summer 2018).

Member, Information Technology Advisory Committee, Information Technology Services, The University of Iowa (2015 – present).

Member, Ad Astra Report Review Committee, Office of the Provost, The University of Iowa (2014 – 2016).

Member, Classroom Scheduling and Utilization Committee, Office of the Provost, The University of Iowa (2016 – 2017).

Member, College of Engineering Five-Year Decanal Review Committee, Office of the Provost, The University of Iowa (Spring 2017).

Member, Campus Space Planning Committee, Facilities Management, The University of Iowa (Spring 2016 – present).

Member, Communications Center Renovation Committee, Facilities Management, The University of Iowa (Spring 2017).

Collegiate

Member, Search Committee for the Assistant Director of Advising and Minority Programs, College of Engineering, Cornell University (Spring 1989).

Instructor, *Minority Introduction to Engineering*, College of Engineering, Cornell University (Summer 1991).

Site Visits, *Engineering Cooperative Program*, College of Engineering, Cornell University: Hewlett-Packard Corporation, Andover, MA (Fall 1990), IBM Research Triangle Park, Raleigh, NC (Fall 1992), NSF/Cornell Center for Theory and Simulation in Science and Engineering, Ithaca, NY (Fall 1992).

Member, Academic Computing Council, College of Business Administration, The University of Iowa (1994 – 1995, 1996 – 1997).

Member, Undergraduate Program Committee, College of Business Administration, The University of Iowa (1995 – 1996, 1997 – 1998).

Member, Committee to Establish a Master's Degree in Quantitative Finance, College of Business Administration, The University of Iowa (1995 – 1996).

Member, World Wide Web Advisory Committee, College of Business Administration, The University of Iowa (1996 – 1997).

Member, Elected Faculty Council, College of Business Administration, The University of Iowa (Spring 1997).

Member, Strategic Planning Committee, College of Business Administration, The University of Iowa (2000 – 2001).

Member, Developmental Leave Advisory Committee, College of Business Administration, The University of Iowa (2002 – 2003).

Member, Graduate Council, Graduate College, The University of Iowa (2006 – 2012).

Member, Selection Committee, D.C. Priestersbach Dissertation Award in Physical, Mathematical and Engineering Sciences, Graduate College, The University of Iowa (2006, 2008, 2010, 2012).

Member, Selection Committee, Ballard Seashore Dissertation Year Fellowships in the Humanities and Social Sciences, Graduate College, The University of Iowa (2007 – 2008).

Member, Educational Policy Committee, College of Liberal Arts and Sciences, The University of Iowa (2007 – 2010).

Faculty Reviewer, Jakobsen Graduate Student Conference, Graduate College and Graduate Student Senate, The University of Iowa (2008, 2009, 2010, 2011, 2012, 2018).

Member, Selection Committee, Graduate College Mentor Award, Graduate College, The University of Iowa (2010).

Member, GEEMAP/IGERT Steering Committee, College of Liberal Arts and Sciences, The University of Iowa (2010 – 2016).

Member, Executive Committee, College of Liberal Arts and Sciences, The University of Iowa (2012 – 2015, 2016 – 2019).

Member, Associate Dean for Graduate and Online Education Search Committee, College of Liberal Arts and Sciences, The University of Iowa (2013).

Member, Public Digital Arts Music Faculty Search Committee, College of Liberal Arts and Sciences, The University of Iowa (2015 – 2016).

Member, Academic Advisor Search Committee, College of Liberal Arts and Sciences, The University of Iowa (2015).

Member, Academic Advisor Search Committee, College of Liberal Arts and Sciences, The University of Iowa (2015).

Departmental

Member, Faculty Recruiting Committee, Department of Computer Science, Cornell University (1987 – 1990, 1991 – 1992).

Member, Committee to Revise the Graduate Qualifying Exam, Department of Computer Science, Cornell University (1987 – 1988).

Coordinator, Colloquium Series, Department of Computer Science, Cornell University (1987 – 1988).

Member, Undergraduate Curriculum Advisory Committee, Department of Computer Science, Cornell University (1988 – 1989).

Coordinator, Artificial Intelligence Graduate Qualifying Exam, Department of Computer Science, Cornell University (1989 – 1993).

Member, Graduate Admissions Committee, Department of Computer Science, Cornell University (1990 – 1993).

Organizer, AI/Machine Vision/Robotics Joint Workshop, Department of Computer Science, Cornell University, and Thomas J. Watson Research Center, IBM (1992).

Member, Master of Engineering Curriculum Advisory Committee, Department of Computer Science,

Cornell University (1992 – 1993).

Member, Colloquium Series Committee, Graduate Field of Cognitive Studies, Cornell University (1992 – 1993).

Member, Faculty Recruiting Committee, Department of Management Sciences, The University of Iowa (1994 – 1995, 1996 – 1997, 2000 – 2002).

Member, Information Systems Curriculum Review Committee, Department of Management Sciences, The University of Iowa (1995 – 1997).

Faculty Advisor, Undergraduate INFORMS Chapter, Department of Management Sciences, The University of Iowa (1994 – 1999).

Coordinator, Colloquium Series, Department of Management Sciences, The University of Iowa (1996 – 1997).

Chair, Undergraduate Achievement Award Selection Committee, Department of Management Sciences, The University of Iowa (1996 – 1997).

Chair, Undergraduate Program Committee, Department of Management Sciences, The University of Iowa (1997 – 1999).

Member, Multimedia Planning Committee, Helen C. Levitt Center for Viral Pathogenesis and Disease, The University of Iowa (1998 – 1999).

Member, Faculty Recruiting Committee, Department of Computer Science, The University of Iowa (2003 – 2006, 2007 – 2008, 2010 – 2011).

Director of Graduate Programs, Department of Computer Science, The University of Iowa (2003 – 2009).

Member, Computational Genetics Subtrack Committee, Interdisciplinary Genetics Graduate Program, The University of Iowa (2004 – 2006).

Member, Executive Committee, Department of Computer Science, The University of Iowa (2004 – 2006).

Director, Undergraduate Informatics Program, Department of Computer Science, The University of Iowa (2008 – 2016).

External Member, Faculty Promotion Committee, Department of Geography, The University of Iowa (2009).

External Member, Faculty Review Committee, School of Library and Information Science, The University of Iowa (2010).

External Member, Genetics of Aging Faculty Search Committee, Department of Biology, The University of Iowa (2012).

External Member, Digital Arts Faculty Search Committee, School of Music, The University of Iowa (2015).

Professional

External Reviewer: *Computer Science and Engineering* (The University of Nebraska, Lincoln: 2013).

Member, Editorial Board, and Book Review Editor, *Machine Learning*, (1991 – 1996).

Member, Editorial Board, *Journal of the Learning Sciences*, (1993 – 2000).

Member, Editorial Board, *Intelligent Data Analysis*, (1996 – 2001).

Guest Editor, Special Track on Applications of Machine Learning, *IEEE Expert* (1992).

Program Committee Chair, *Sixth International Workshop on Machine Learning* (ML89).

Organizing Committee Chair, *Sixth International Workshop on Machine Learning* (ML89).

Session Organizer, Session on Computational Biology, *INFORMS National Conference* (1996).

Program/Organizing Committees: *ACM Conference on Bioinformatics, Computational Biology and Biomedicine* (BCB11); *National Conference on Artificial Intelligence* (AAAI90); *National Conference on Artificial Intelligence* (AAAI93); *Eighth Biennial Canadian Artificial Intelligence Conference* (CSCSI90); *Seventh International Conference on Machine Learning* (ICML90); *Eighth International Workshop on Machine Learning* (ICML91); *Ninth International Conference on Machine Learning* (ICML92); *Nineteenth International Conference on Machine Learning* (ICML02); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM09); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM10); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM11); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM12); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM13); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM14); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM15); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM16); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM17); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM18); *AMIA 2012 Annual Symposium* (AMIA12); *AMIA 2013 Annual Symposium* (AMIA13); *AMIA 2017 Annual Symposium* (AMIA17); *AMIA 2018 Annual Symposium* (AMIA18); *First International Conference on Artificial Intelligence Planning Systems* (AIPS92); *Eleventh International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems* (IEA/AIE98); *International ICSC Symposium on Advances in Intelligent Data Analysis* (AIDA99); *European Working Session on Learning* (EWSL91); *AAAI Spring Symposium on Planning and Search* (1989).

Referee/Reviewer († indicates repeated service): National Institutes for Health†; Centers for Disease Control and Prevention†; National Science Foundation†; Ford Foundation Predoctoral Diversity Fellowship Program†; NASA; Department of Defense Medical Research Program; North Carolina Biotechnology Center; The University of Iowa Technology Innovation Center; *Artificial Intelligence*†; *Machine Learning*†; *Journal of Artificial Intelligence Research*; *Journal of Heuristics*; *Intelligent Data Analysis*; *Biophysical Journal*; *Journal of the ACM*; *ACM Computing Surveys*; *ACM Transactions on Intelligent Systems and Technology*; *Communications of the ACM*; *Journal of Parallel and Distributed Computing*; *IEEE Journal on Pattern Analysis and Machine Intelligence*†; *IEEE Transactions on Robotics and Automation*; *IEEE Transactions on Knowledge and Data Engineering*; *Journal of the Learning Sciences*; *Cognition*; *ORSA Journal on Computing*; *Information Processing Letters*; *Tenth International Joint Conference on Artificial Intelligence* (IJCAI87); *Eleventh International Joint Conference on Artificial Intelligence* (IJCAI89); *Twelfth International Joint Conference on Artificial Intelligence* (IJCAI91); *Fifteenth International Joint Conference on Artificial Intelligence* (IJCAI97); *European Conference on Artificial Intelligence* (ECAI90); *Thirteenth Annual Meeting of the Cognitive Science Society* (CogSci91); *Fourteenth Annual Meeting of the Cognitive Science Society* (CogSci92); *Fifteenth Annual Meeting of the Cognitive Science Society* (CogSci93); *Sixteenth Annual Meeting of the Cognitive Science Society* (CogSci94); *ACM Computer Science Conference* (1994); *ACM Computer Science Conference* (1995); *ACM Computer Science Conference* (1996); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM07); *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM08); *IEEE International Conference on Bioinformatics and Bioengineering* (BIBE07); *IEEE International Conference on Robotics and Automation* (ICRA93); *IEEE Conference on Artificial Intelligence Systems in Government* (AISIG90); *AAAI Spring Symposium on Explanation-Based Learning* (1988); *Fifth International IEEE Conference on Tools with Artificial Intelligence* (TAI93); *Sixth International IEEE Conference on Tools with Artificial Intelligence* (TAI94); *International Computer Music Conference* (ICMC82); *Logic for*

Programming, Artificial Intelligence, and Reasoning (LPA05); *International Multisymposiums on Computer and Computational Sciences* (IMSCCS07); *Seventh International Conference on Machine Learning and Applications* (IMCLA08); *IEEE International Joint Conference on Computational Sciences and Optimization* (CSO09); Cornell University Press; Kluwer Academic Press; Morgan Kaufmann Publishers; Prentice-Hall Publishers; Oxford University Press; Science Research Associates Press; Macmillan Publishing Company; Manning Publications Company.

Member: *Association for Computing Machinery* (ACM); *Institute of Electrical and Electronics Engineers* (IEEE).

Research Funding

Principal Investigator, *The Cornell Apprentice Project*, Office of Naval Research (December 1, 1987 – January 31, 1990); \$201,842.

Principal Investigator (Workshop Organizer), *Sixth International Workshop on Machine Learning*, National Science Foundation (March 15, 1989 – August 31, 1989); \$6,000.

Principal Investigator (Workshop Organizer), *Sixth International Workshop on Machine Learning*, Office of Naval Research (May 1, 1989 – July 31, 1989); \$8,800.

Recipient, Equipment gift, Hewlett-Packard Corporation (1990); \$77,754.

Recipient, Unrestricted gift, Xerox Corporation (1990); \$10,000.

Principal Investigator, *The Cornell Apprentice Project* (renewal), Office of Naval Research (February 1, 1990 – January 31, 1991); \$127,103.

Principal Investigator, *The Cornell Apprentice Project* (renewal), Office of Naval Research (February 1, 1991 – January 31, 1994); \$300,000.

Consultant, *A Decision Support System for Estimating Angler Harvests* (with Principal Investigators Bruce Wilkins, Natural Resources, Cornell University and Cynthia Jones, Applied Marine Research Laboratory, Old Dominion University), New York Sea Grant Institute (January 1, 1992 – December 31, 1993); \$107,972.

Principal Investigator, *Learning, Deliberation, and Action: An Adaptive Approach to the Planning Problem* (with Co-Principal Investigator Randall Calistri-Yeh, Odyssey Research Associates), Advanced Research Projects Administration (February 1, 1993 – January 31, 1996); \$782,107.

Principal Investigator, *A Program of Research in Distributed Adaptive Logical Inference*, Office of Naval Research (September 1, 1994 – June 30, 1997); \$347,017. This proposal also received an additional \$10,000 in equipment matching funds from the University of Iowa Office of Sponsored Programs.

Principal Investigator, *Interdisciplinary Health Informatics Courses Within the Health Sciences Center* (with Co-Principal Investigators Connie Delaney, R. Edward Howell, Michael Kienzle, James Wagner, Kathryn Rattenborg, Susan Zollo, Andrew Kusiak and Padmini Srinivasan, The University of Iowa), The University of Iowa Office of the Vice President for Health Sciences (1996); \$8,266.

Principal Investigator, *A Distributed Optimization Algorithm for the Prediction of Protein Tertiary Structure* (with Co-Principal Investigators Yinyu Ye, Management Sciences; Kenneth Murphy, Biochemistry; and William Kearny, Nuclear Magnetic Resonance Laboratory; The University of Iowa), The University of Iowa Biosciences Initiative Pilot Grant Program (January 1, 1998 – June 30, 1998); \$25,000.

Principal Investigator, *Instrumentation for Research in Search Technology* (with Co-Principal Investigators Hantao Zhang, Maria Paola Bonacina and Jarkko Kari, Computer Science; and Yinyu Ye, Management Sciences; The University of Iowa), National Science Foundation (April 1, 1998 –

- May 31, 1999); \$100,752. This proposal also received an additional \$67,168 in equipment matching funds from the University of Iowa Office of Sponsored Programs, and \$125,000 in operations and maintenance matching funds from the University of Iowa.
- Principal Investigator, *A Distributed Optimization Algorithm for the Prediction of Protein Tertiary Structure* (with Co-Principal Investigators Yinyu Ye, Management Sciences; Kenneth Murphy, Biochemistry; and William Kearny, Nuclear Magnetic Resonance Laboratory; The University of Iowa), National Science Foundation (June 15, 1998 – June 14, 2000); \$100,000.
- Principal Investigator, *Distributed Hybrid Optimization Techniques with Applications to Proteomics and Genomics*, National Science Foundation (September 1, 2002 – August 31, 2007); \$487,741.
- Principal Investigator, *A Prototype Genetic Likelihood Visualization Utility* (with Co-Principal Investigators Mark Logue and Veronica Vieland, Biostatistics; James Cremer, Computer Science; and Jun Ni, Steven Beck and Boyd Knosp, ITS Research Technologies; The University of Iowa), The University of Iowa Informatics Initiative Seed Grant Program (January 1, 2003 – December 31, 2003); \$30,000.
- Principal Investigator, *The Iowa Bioinformatics Portal* (with Co-Principal Investigators Jan Fassler and William Ballard, Biology; Boyd Knosp, ITS Research Technologies; Jian Huang, Statistics and Actuarial Sciences; and Tom Casavant, Electrical Engineering; The University of Iowa), The University of Iowa Informatics Initiative Seed Grant Program (January 1, 2003 – December 31, 2003); \$24,212.
- Co-Investigator, *Enhancing the Computing Infrastructure and Laboratory Facilities for Computer Science and Management Information Systems Students*, (with Co-Investigators Warren Boe and Yvonne Galusha, Management Sciences; James Cremer, Computer Science; The University of Iowa), State Farm Insurance (August 2006 – August 2007); \$50,791.
- Principal Investigator, *Infrastructure to Facilitate Discovery of Autism Genes*, Autism Speaks subcontract through the Ohio State University (August 1, 2006 – July 31, 2007); \$70,828.
- Principal Investigator, *Beyond Random Mixing in Epidemiological Models* (with Co-Principal Investigators Philip Polgreen, Internal Medicine, The University of Iowa; Ted Herman and Sriram Pemmaraju, Computer Science, The University of Iowa; and Troy Tassier, Economics, Fordham University), The University of Iowa Translational Research Pilot Grant Program (February 1, 2007 – February 1, 2008); \$50,000.
- Principal Investigator, *Infrastructure to Facilitate Discovery of Autism Genes*, Autism Speaks subcontract through the Ohio State University (March 14, 2007 – March 14, 2008); \$81,401.
- Principal Investigator, *Infrastructure to Facilitate Discovery of Autism Genes*, Autism Speaks subcontract through the Ohio State University (March 14, 2008 – August 31, 2008); \$22,497.
- Principal Investigator, *Contact Network Epidemiology of Influenza and Other Nosocomial Infections* (with Co-Principal Investigator Philip Polgreen, Internal Medicine and Co-Investigators Sriram Pemmaraju, Computer Science; Ted Herman, Computer Science; and Joseph Cavanaugh, Biostatistics), National Institutes of Health (June 19, 2009 – June 18, 2012), \$401,778.
- Co-Investigator, *IGERT: Geoinformatics for Environmental and Energy Modeling and Prediction (GEEMaP)* (with Principal Investigator Mary Kathryn Cowles, Statistics and Biostatistics; Co-Investigators David Bennett, Kathleen Stewart, Geography; and Andrew Kusiak, Mechanical and Industrial Engineering) NSF IGERT (July 1, 2010 – June 30, 2018), \$2,631,084.
- Co-Investigator, *Emerging Infections Sentinel Networks* (with Principal Investigator Philip Polgreen, Internal Medicine), Centers for Disease Control and Prevention (July 1, 2010 – June 30, 2011), \$281,797.
- Co-Investigator, *A Sustainable Health Prediction Market* (with Principal Investigator Forrest Nelson,

- Economics; and Co-Investigators George Neumann, Economics; Philip Polgreen, Internal Medicine; Linnea Polgreen, Pharmacy Practice and Science), Robert Woods Johnson Foundation (August 1, 2010 – July 31, 2011), \$297,584.
- Principal Investigator, *Hand-Hygiene Monitoring and Reporting via Wireless Mobile Devices* (with Co-Principal Investigators Philip Polgreen, Internal Medicine; Ted Herman, Computer Science; Sriram Pemmaraju, Computer Science; Geb Thomas, Industrial Engineering; and Dale Zimmerman, Statistics), The University of Iowa Translational Research Pilot Grant Program (January 1, 2011 – June 30, 2011); \$25,000.
- Principal Investigator, *CSR: Small: Non-Invasive Detection of Malicious JavaScript at Web Browsers*, National Science Foundation subcontract through the University of San Francisco (September 1, 2010 – August 30, 2011); \$26,406.
- Principal Investigator, *Sensor Technology for Tracking and Displaying Bed Elevation Data for Mechanically Ventilated Patients* (with Co-Principal Investigators Philip Polgreen, Internal Medicine; Geb Thomas, Industrial Engineering; and Ted Herman, Computer Science), Medline Industries (April 1, 2012 – October 1, 2012); \$25,000.
- Co-Investigator, *Six-Degrees of (Dr.) Kevin Bacon: Using Wireless Devices for Estimation of Contact Patterns in Outpatient Hemodialysis to Optimize Infection Prevention* (with Principal Investigators Matt Wise, Centers for Disease Control and Prevention, and Philip Polgreen, Internal Medicine, The University of Iowa; and Co-Investigators Geb Thomas, Industrial Engineering; and Ted Herman, Computer Science, The University of Iowa), Centers for Disease Control and Prevention (July 1, 2012 – June 30, 2013); \$100,000.
- Principal Investigator, *An Empirical Study of Bed-Tilt Feedback for Mechanically Ventilated Patients* (with Co-Principal Investigators Philip Polgreen, Internal Medicine; Ted Herman, Computer Science; Juan Pablo Hourcade, Computer Science; and Kevin Doerschug, Internal Medicine), Medline Industries (July 1, 2013 – June 30, 2014); \$100,000.
- Principal Investigator, *Making Algorithmic Thinking Concrete via Collaboration with the Performing Arts* (with Co-Principal Investigator George de la Pena, Department of Dance), Innovations in Teaching with Technology Awards (December 30, 2013 – June 30, 2013); \$10,000.
- Co-Investigator, *The Infectious Diseases Society of America Emerging Infections Network (IDSA EIN)* (with Principal Investigator Philip Polgreen, Internal Medicine and Co-Investigator James Cremer, Computer Science), Centers for Disease Control and Prevention (July 1, 2015 – June 30, 2016), \$300,000.
- Co-Investigator, *Volume of Contamination and Nosocomial Infection Control* (with Principal Investigator Eli Perencevich, Internal Medicine, and Co-Investigators James Cremer, Computer Science; Philip Polgreen, Internal Medicine; Priyadarhini Pennathur, Industrial Engineering; Heather Reisinger, Internal Medicine; Michael Edmond, Internal Medicine; Matthew Nonnenmann, Occupational and Environmental Health; Amy O’Shea, Internal Medicine; Michihiko Goto, Internal Medicine; Marin Schweizer, Internal Medicine; Daniel Diekema, Internal Medicine; Loreen Herwaldt, Internal Medicine), Centers for Disease Control and Prevention (October 1, 2015 – September 30, 2018), \$2,195,739.
- Co-Investigator, *The Innovation Laboratory*, Signal Center for Healthcare Innovation (with Principal Investigator Philip Polgreen, Internal Medicine), University of Iowa Health Ventures (January 1, 2016 – December 31, 2017); \$2,500,000.
- Principal Investigator, *An m-Health Tool to Increase Activity Among Patients at Risk for Type 2 Diabetes* (with Co-Principal Investigator Philip Polgreen, Internal Medicine and Co-Investigators James Cremer, Computer Science and Joseph Cavanaugh, Biostatistics), National Institutes of Health

(July 1, 2016 – June 30, 2018), \$418,814.

Principal Investigator, *Pair Programming as a Pedagogical Approach for Promoting Success and Equity in Computer Science Coursework* (with Co-Principal Investigator Nicholas Bowman, Department of Higher Education and Student Affairs), National Science Foundation (June 15, 2016 – June 14, 2019), \$299,904.

Co-Investigator, *The Infectious Diseases Society of America Emerging Infections Network (IDSA EIN)* (with Principal Investigator Philip Polgreen, Internal Medicine and Co-Investigator James Cremer, Computer Science), Centers for Disease Control and Prevention (July 1, 2016 – June 30, 2021), \$2,000,000.

Principal Investigator, *Data-Driven Modeling and Simulation of Healthcare-Associated Infections* (with Co-Investigators Sriram Pemmaraju, Computer Science; Philip Polgreen, Internal Medicine and Daniel Sewell, Biostatistics), Centers for Disease Control and Prevention (August 1, 2017 – July 31, 2020), \$1,725,262.

Principal Investigator, *Remote Monitoring of Diabetic Foot Ulcers* (with Co-Investigators John Femino, Orthopaedic Surgery), Fraternal Order of Eagles Diabetes Research Center Pilot Grant Program (August 1, 2017 – July 31, 2019); \$100,000.

Co-Investigator, *Accuracy and Acceptability of StandDesk Monitor for Measuring Time spent Sitting and Standing at a Workstation* (with Principal Investigator Lucas Carr, Health and Human Physiology; Philip Polgreen, Internal Medicine; Ted Herman and Lucas Simmering, Computer Science), Healthier Workforce of the Midwest Pilot Grant Program (July 1, 2018 – June 30, 2019); \$29,549.

Grants Pending

Co-Investigator, *A Data-Driven Approach to Understand the Incidence and Contributing Factors for Delayed Diagnoses of Intravenous Drug Use (IDU) in Patients Presenting with Potentially-IDU-Related Infection* (with Principal Investigator Philip Polgreen, Internal Medicine and Co-Investigators Daniel Sewell, Biostatistics, and Linnea Polgreen, Pharmacy), National Institutes of Health (September 1, 2018 – August 30, 2023), \$1,747,947.

Publications

Books

1. A.M. Segre, *Machine Learning of Robot Assembly Plans*, Kluwer Academic, Boston, MA (March 1988).
2. *Proceedings of the Sixth International Machine Learning Workshop*, Morgan Kaufmann, San Mateo, CA (June 1989).

Journal Articles

1. A.M. Segre, C.P. Elkan, and A. Russell, “A Critical Look at Experimental Evaluations of EBL,” *Machine Learning* **6**(2), pp. 183-196, Kluwer Academic, Boston, MA (March 1991).
2. A.M. Segre, “Learning How to Plan,” *Robotics and Autonomous Systems* **8**(1-2), pp. 93-111, North Holland, New York, NY (November 1991). Reprinted in *Towards Learning Robots*, (1993).
3. A.M. Segre, “Applications of Machine Learning,” *IEEE Expert* **7**(3), pp. 30-35, IEEE Computer Society, Los Alamitos, CA (June 1992).
4. A.M. Segre and D. Scharstein, “Bounded-Overhead Caching for Definite-Clause Theorem Proving,” *Journal of Automated Reasoning* **11**(1), pp. 83-113, Kluwer Academic, Boston, MA (August 1993).

5. A.M. Segre and G.J. Gordon, "Computer Systems that Learn (Book Review)," *Artificial Intelligence* **62**(2), pp. 363-378, North Holland, New York, NY (August 1993).
6. M. Koppel, R. Feldman, and A.M. Segre, "Bias-Driven Revision of Logical Domain Theories," *Journal of Artificial Intelligence Research* **1**, pp. 159-208, Morgan Kaufmann, San Mateo, CA (February 1994).
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