

Joanne Sylvia Luciano, Ph.D.
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EDUCATION

Ph.D. 1996 Cognitive and Neural Systems, Boston University, Boston, MA
M.S. 1987 Computer Science, Boston University, Boston, MA
B.S. 1982 Computer Science, *cum laude*, Boston University, Boston, MA

SELECTED TECHNICAL AND LEADERSHIP EXPERTISE

Data Science; Statistical Analysis; Predictive Modeling; Machine Learning and Neural Networks; Exploratory Data Analysis; Data Visualization; Data Modeling and Integration; Data Architecture and Infrastructure; Natural Language Processing; Software Engineering; Data Quality and Governance; Semantic Web; Ontology Engineering; Knowledge Representation; RDF/OWL; FAIR Data Principles; Python; SQL; SAS; Java; Systems Engineering; Applied Research; Technical and Interdisciplinary Team Leadership; Technical Communication.

PATENTS

1. *Automated Treatment Selection Method*, US Patent Number 6,063,028. Issued 5/16/00.
2. *Method for Predicting the Therapeutic Outcome of a Treatment*, US Patent Number 6,317,731. Issued 11/13/01.

DOCTORAL DISSERTATION

Neural Network Modeling of Unipolar Depression: Patterns of Recovery and Prediction of Outcome (1996). Developed neural-network models of major depressive disorder recovery and treatment outcome prediction, integrating computational neuroscience, mathematical modeling, and clinical data. This work led to two U.S. patents covering automated treatment selection and prediction of therapeutic outcome.

BOOKS

Luciano, JS, Cumming, GP, Kahana, E, Wilkinson, MD, Brooks, EH, Jarman, H, McGuinness, DL, Levine, MS. **Health Web Science**. Now Publishers Inc. *Foundations and Trends in Web Science*. Hanover, MA, USA. (2014).

ACADEMIC PROGRAM ADMINISTRATION AND RESEARCH EXPERIENCE

SuperUROP Program Administrator, January 2023 - present
Massachusetts Institute of Technology, Department of Electrical Engineering & Computer Science
Job Type: Part-time (25% fte) Program Management (60%), Corporate/Industry Outreach (40%).

SUPERVISORY/MANAGERIAL ORGANIZATION LEADERSHIP – Manage, cultivate, and grow key internal and external partnerships to increase donor support for the Advanced Undergraduate Research Program (SuperUROP) which leads undergraduates through the complete research cycle, from selecting a topic and designing their experiment to writing a technical paper and presenting their results at conferences. Manage fundraising for student support as well as manage student participation in fundraising efforts. Review and evaluate SuperUROP applications for funding selection and determine the assignment of student fellows to the most appropriate funding sources. Serve as a liaison between SuperUROP logistics team members and SuperUROP teaching staff on course-related matters. Work closely with the Senior Leadership Giving Officer, Administrative

Officer, and the Senior Financial Administrator on the assigned budgets to ensure the program stays within budget.

EXPERT ADVISOR, RECRUITMENT - Leading efforts in developing and executing a strategy to build relationships with and maintain a network of partner organizations.

FACILITATES AN ENVIRONMENT THAT ENCOURAGES CREATIVE THINKING - In collaboration with the department head and Senior Leadership Giving Officer, identify and engage prospective donors, expanding the donor base and philanthropic support of SuperUROP. Collaborates and assists with developing, producing, and disseminating collateral and content related to initiatives including proposals.

Distinguished Professor, Courtesy Appointment, 2022-2023

University of the Virgin Islands

College of Science and Mathematics, U.S. Virgin Islands

Following conclusion of full-time faculty appointment in 2021.

STRATEGIC PROGRAM DEVELOPMENT, GOVERNMENT ENGAGEMENT, AND GRANT LEADERSHIP - Coral Wings Aviation Program (Co-PI, 3/1/2023, \$499,301, G-22-WD-AP-011). While serving UVI under a courtesy faculty appointment, conceived the Coral Wings Aviation Program and developed and wrote the successful federal grant proposal. Built the coalition of community, education, aviation, and industry partners required to support the initiative and engaged directly with the Federal Aviation Administration to refine the strategy and strengthen the proposal following an earlier unsuccessful submission. The resulting program expands aviation education and career pathways for underserved youth across the U.S. Virgin Islands while building local workforce capacity and supporting the Territory's disaster resilience.

KEY CONSULT AND ADVISOR IN CURRENT METHODOLOGIES, TOOLS AND TECHNIQUES - *kinima.FIT* (Senior Personnel, 12/8/2022, \$273,000, FAIN R43AG078071) *Augmented Reality Personalized Motion Tracking Assessment and Improvement Technology for Fall Prevention in a Community Setting Using Mobile Phone*. KINIMA Seniors aims to reduce fall risk through the use of its novel mobile assistive technology for fall prevention in older adults by incorporating evidence-based exercises with automated real-time feedback and automated assessments of fall risk measures. Review and contribute to study materials; advise executive directors and staff; review study data; and oversee statistical analysis and data-driven interpretation.

RECOGNIZED AUTHORITY, EVALUATION SERVICES - USVI Library Community Collaboration: Training and Technology Innovations project (National Leadership award from the Institute of Museum and Library Services).

Distinguished Professor of Data Science, August 2018- 2021

University of the Virgin Islands, College of Science and Mathematics

Job Type: Full Time 40 hours a week

PROGRAM AND CURRICULUM ARCHITECTURE - Conceived, designed, and implemented UVI's undergraduate Data Science Minor and Certificate, creating an integrated, university-wide curriculum accessible to students across disciplines. Met with deans across the university to align requirements and cross-list the curriculum so students from different majors could participate. Adapted the graduate Applied Data Science course I had developed at Indiana University into a two-course undergraduate sequence organized around the end-to-end data science workflow. Data Science I (200-level) established the foundations of data science, including ethics, governance, privacy, data stewardship and FAIR principles, analysis, visualization, communication, and Python. Data Science II (400-level) deepened the technical curriculum with advanced database concepts and

SQL; data cleaning and integration across relational, NoSQL, and web-based sources; statistical methods; machine learning, including regression and classification; modeling and simulation; recommender systems; visualization; big-data analytics; cloud computing; and end-to-end projects from data exploration through prediction serving. The curriculum was designed to teach students to reason about the full data science lifecycle, select appropriate methods, and critically evaluate assumptions, methods, and results.

Selected webinar: [*Unlocking the Value in Data: What Government Employees Need to Know About Data*](#) — UVI Data Science Program.

EXPERTISE ADVISOR - Assisted the Virgin Islands Established Program to Stimulate Competitive Research (VI-EPSCoR) program in exploring data science-related projects; provided seminars on data science for general and specialty audiences and served as Data Science Advisor to the UVI Hazard Mitigation and Resilience Plan for the territory with responsibility for the health sector assessment and recommendations for increased resilience.

EXPERTISE ADVISOR, AVIATION WORKFORCE DEVELOPMENT - Initiated UVI aviation activities, advised students in creating UVI FLY, secured \$5,000 in JetBlue Foundation seed funding, and developed an initial federal aviation proposal that informed subsequent program development.

LED FUNDING EFFORTS, EXPERTISE ADVISOR - Initiated and led an effort to secure funding for a diabetes registry and repository for the territory. Won an Amazon Imagine Health Equities Initiative award for \$87,000 in Amazon Web Service Credits and secured a software company to complete a proof of concept for a registry app and initial implementation of the diabetes repository in collaboration with the VI Department of Health (VIDOH) using data from the VIDOH Clinics.

Visiting Associate Professor, October 2016- August 2018

Indiana University, School of Informatics, Computing, and Engineering. Data Science Program

Job Type: Full Time 40 hours a week

CURRICULUM DEVELOPMENT AND APPLIED DATA SCIENCE - Developed and taught graduate data science curriculum, including Applied Data Science, a course organized around the complete data science workflow. The course integrated data communication; data access and protection; data cleaning and wrangling; SQL; heterogeneous data sources, including CSV, JSON, XML, RDF, and NoSQL; linked data and ontologies; visualization; statistical modeling; and machine learning, including regression, decision trees, Naive Bayes, support vector machines, and neural networks. This course became the foundation for the two-course undergraduate data science sequence I later developed at UVI. Also taught Data Science for Drug Discovery, Health and Translational Medicine and Real World Data Science, and continued research in Health Web Science and precision medicine.

Visiting Research Scholar, December 2013- February 2016

Rensselaer Polytechnic Institute, Center for Cognition, Communication & Culture, New York

Job Type: Full Time 40 hours a week

TEACHING, SEEKING UP TO DATE DATA SCIENCE DEVELOPMENTS AND BEST PRACTICES TO IMPLEMENT - Initiated a multidepartment collaboration to integrate state-of-the-art technologies to deliver a personalized response to depression, a major health burden. The focus of this project aimed to support the subpopulation of incoming students who suffer from depression. Through an unprecedented innovative multi-disciplinary approach, multimodal sensors adjust lighting and provide support through personalized agents to support students and reduce the negative side effects of medications.

Visiting Semantic Scientist, January 2014 – October 2014

General Electric Global Research Center, Niskayuna, New York**Job Type:** Full Time 40 hours a week

DETERMINED APPROPRIATE DATA SCIENCE METHODOLOGIES FOR PROJECT APPLICATIONS - Visiting Semantic Scientist, Knowledge Discovery Lab. KDL harnesses the power of Semantic and Big Data technologies to capture knowledge and deliver scalable solutions. In addition to being on site as a resource for the lab, my contributions included the development of KDL's external business strategy, a semantic approach to engineering data management modeling that facilitates the design of new turbine engines for Aviation, Power and Water, a semantic model for the integration of heterogeneous data for GE Healthcare, and semantic support for risk reporting for GE Capital.

Visiting Research Associate, December 2013 - December 2014**University of California, Irvine, Department of Electrical Engineering and Computer Science****Job Type:** Full Time 40 hours a week

Project: My initial role as a participating faculty member was to provide the expertise to help build the global Semantic Problem Solving Network (SPSN) into a geographically distributed resource, open to the public, that can be easily connected to solve semantic-based problems. Semantic Computing (SC) is an emerging field that addresses technologies that allow users to search, create, and manipulate computational resources (data, documents, tools, devices, etc.) based on semantics ("meaning", "intention"). The Institute for Semantic Computing (ISC) is a National Science Foundation (NSF) I/UCRC (Industry-University Collaborative Research Center) whose mission is to foster new technologies that may facilitate semantic, automatic problem solving and therefore new business models to stimulate, strengthen, and grow the economy. The I/UCRC was initially established among three closely collaborating Southern California institutions (UCI, UCLA, and UCSD). As it evolved, the Center would include other institutions.

Dozor Visiting Scholar, 2013

Faculty of Health Sciences, Ben Gurion University of the Negev, Be'er Sheva, Israel

Course: "Semantic eHealth: Getting More Out of Biomedical Data Using Semantic Technology," December 22-25, 2013. The course introduces the new field of data science, with an emphasis on its relationship to biomedical research. It introduces a set of advanced tools that can be used to integrate biomedical data to answer clinical questions and provides knowledge of the standards and best practices that enable integration across the web and data mining at Web scale.

Research Associate Professor and Deputy Director, Web Science Research Center, 2010-2013

Rensselaer Polytechnic Institute, Tetherless World Constellation, Troy, NY.

The WSRC is a founding lab within the Web Science Trust Network (WSTNet). Collectively, the WSTNet labs provide the only global resource for the field of Web Science. My responsibilities included being the point of contact for our lab, overseeing our website, and outreach and research activities that included representation and presentation of the lab's research at international WSTNet and Web Science meetings.

The Tetherless World Constellation (TWC) at Rensselaer Polytechnic Institute (RPI) is a constellation of multidisciplinary researchers who study the scientific and engineering principles that underlie the Web, to enhance the Web's reach beyond the desktop and laptop computer, and develop new technologies and languages that expand the capabilities of the Web under three themes: Future Web, Xinformatics, and Semantic Foundations. I taught graduate courses, advised students, led research projects, and participated in department and institute programs. Served as lead computer scientist on the NSF I-CHOOSE project, working across computer science, information science, and public policy. Led the semantic methodology and guided a team of PhD students from research design through development of a working proof-of-concept system, translating complex technical issues for multidisciplinary collaborators.

Research Interests: Health Web Science is a sub-discipline of Web Science that studies current and potential uses of the web for health. I led the first three international workshops on Health Web Science, published journal articles, and led an international multidisciplinary collaboration to write a foundational monograph that established Health Web Science as a field of study. Current interests include how to construct a Web Observatory to enable the study of major depression from a Health Web Science perspective and how to use the study of depression to facilitate the creation of useful Web Observatories.

Core Group Member and BioPathways Consortium Liaison, 2002-2011

BioPAX/Memorial Sloan-Kettering Cancer Center, New York, NY

BioPAX is a global standard for the exchange of life science metadata, chiefly data about biological processes, aka *biopathways*. Played a lead role in the creation, advancement, and adoption of this community-based ontology development initiative. Identified sources of funding and adoption of BioPAX by technical presentations, outreach, fundraising, and related administrative activities.

- Acquired initial and subsequently doubled Department of Energy funding (total \$120,000).
- Selected Protégé as the critical tool for on-time delivery of the initial release.
- Assembled a worldwide network of stakeholders and contributors to this emerging standard.

Multidisciplinary Systems Engineering Lead, Bio-Ontology Expert, 2007-2009

The MITRE Corporation, Bedford, MA

Led development of FLU, an influenza ontology collaboration with BioHealthBase and Gemina supporting U.S. influenza research, surveillance, and monitoring. Founded and served as Principal Investigator of an ontology-evaluation research program that developed the Generalized Ontology Evaluation Framework (GOEF) and received NIST support. Applied systems-engineering, knowledge-representation, and semantic technologies to multidisciplinary biomedical information problems.

Lecturer in Genetics, 2005-2009

Harvard Medical School/Massachusetts General Hospital, Boston, MA

Principal Investigator, EMPWR project, NSF-funded ontology-based biopathway research.

Visiting Scholar, 2005-2008

University of Manchester, School of Computer Science, Manchester, UK

PI: EMPWR NSF Funded Project (<http://empwr.org>)

Computer Science Instructor, 2005

Boston University, Metropolitan College

Fellowships, 1996-2005

Harvard Medical School and Massachusetts General Hospital

- Research in Outcome Prediction, Modeling Depression Recovery and Pharmacogenomics
- Research Fellow – Psychiatry Department Joint Appointment
 - Neural Systems Group, 1996-1999
 - Depression Research Program, 1999-2005
 - Faculty, Institute of Cybermedicine, 2000-2002

INDUSTRY AND GOVERNMENT EXPERIENCE

Scientific Research Officer, Peer Review and Science Management, 2022-present

General Dynamics Information Technology (GDIT), Frederick, MD

GDIT manages the scientific peer review of biomedical research for a federal government agency. Oversee the scientific/technical aspects of the review process, ensure a fair and thorough review of

each application by a panel of subject-matter experts, and ensure the integrity of the peer review process in the biomedical science fields.

President, Consultant, Advisor, 2022-present

Data And Technology Associates, LLC (DATA, LLC), U.S. Virgin Islands

DATA, LLC provides custom educational and training services to non-profit, for-profit, and government organizations in data science and technology to build capacity in the U.S. Virgin Islands. DATA, LLC adds value to organizations in acquiring, harnessing, managing, understanding, and ultimately, leveraging their data to make better-informed, data-driven decisions.

- **Office of Child Care and Regulatory Services (OCCRS), Virgin Islands Department of Human Services, Government of the U.S. Virgin Islands** – Consultant on the Child Care Market Rate Survey and Narrow Cost Analysis, including revision of the survey instrument, development of provider training materials to improve data quality and consistency, analysis of survey data, and preparation of the final report. The project provides evidence to support child care subsidy rate-setting and provider sustainability.
- **UVI CELL** – *Instructor/Curriculum Design and Development*. Provided training for Virgin Islands Government employees in the *Skills for Today* workforce development program.
- **Junior Achievement VI** – *Instructor, Workshop Development*. Provided training for this non-profit to educate Junior High School and High School teachers across the Virgin Islands about how to incorporate data science into their curricula.

President, Consultant, Advisor, 1988-2025

Predictive Medicine, Inc. (formerly Orchard St. Software), Belmont, MA

Provided project-based consulting and applied research in data science, predictive analytics, statistical analysis, biomedical informatics, data integration, knowledge representation, and advanced technology. Led projects and managed personnel and subcontractors for selected clients:

- **IO-Informatics** – *Consultant Data Scientist/Biostatistician*. Matched Treated and Control patient groups from total N = 388 (194 Treated Patients compared to 194 Untreated patients) using Coarsened Exact Matching technique for Parkinson's Institute and Clinical Center (PICC). This effort supports PICC's mission to deliver personalized and precision treatments and cures for individuals afflicted with neurodegenerative disease. (2017)
- **Deep Blue Communications, Inc.** – *Consultant Data Scientist*. Created and presented visualizations of data for client reports. The visualizations contained interactive graphics to analyze the details about usage and system performance by locations for DBC's client. (2016)
- **Elsevier Science** – *Consultant Data Scientist*. Elsevier, a world-leading provider of scientific, technical, and medical information products. *Sherpath™* is the first nursing educational platform to integrate content, assessment, and simulations, personalized to each program, course, and student. My contributions included analytics of the pilot data, a white paper on the hybrid recommender system, an analysis of the initial data model, and an analysis and recommendations for enhancements to the recommender, analytics, and personalization engines that would maximize student performance outcomes. (2014-2015)
- **Emergent Network Defense Security, Inc.** – *Consultant*. END Security is a cybersecurity startup. My primary role was to identify or develop algorithms for different aspects of the ANTS system. I created and ran simulations of the ANTS theory using the NetLogo platform to analyze network behavior and emergent properties. In addition, where necessary, I educated the team on emergent network behavior concepts. I participated in Scrum and Agile development processes. (2014)
- **DataBotz** – *Health Application Consultant to HealthBotz*, a healthcare startup of DataBotz. Subject Matter Expert on Semantics in Health Care for a project to develop Diabetes and Readmission Prevention apps. (2010-2012)
- **Selventa (formerly Genstruct)** – *Patent Infringement Analyst, BioPAX Consultant*
- **Advanced Biological Laboratories SA** – *Intellectual Property Consultant*.

- **Siderean Software, Inc.** – *Life Science Consultant*. Under contract to Siderean, developed a drug-discovery use case demonstrating how Semantic Web technologies could integrate and navigate heterogeneous biomedical data using Siderean Seamark and the Oracle RDF Data Model. At ISWC 2005 in Galway, after seeing related material in a keynote by Professor Carole Goble, Sir Tim Berners-Lee asked me directly for slides of my work. I provided a short slide deck, and he selected the Siderean demonstration graphic for use in his ISWC wrap-up/RuleML kickoff presentation and subsequently in several other presentations. The use case provided a concrete demonstration of the concept Berners-Lee was advocating: using identifiers to link heterogeneous data across independently maintained, distributed data sources so that the combined information could be explored as an integrated whole. The underlying work was later published in the *Journal of Web Semantics* in 2006. [W3C presentation](#)
- **Pfizer, Inc.** – *Knowledge Management Consultant*. Assisted and advised Pfizer in the area of biological pathways and ontologies in order to identify the best synergies among biological pathway models, knowledge structures, text mining technologies, kinase science, and Pfizer's drug discovery process to develop the Pfizer Kinase Knowledge Base.
- **Beyond Genomics, Incorporated** – *Knowledge Management Consultant*. Identified synergies between biological pathway models and knowledge structures for scientific and intellectual property goals. Created methodology to facilitate and expedite scientific discovery and identify new areas for Intellectual Property development.
- **Viveca, Incorporated** – *Information Architect consultant*. Designed solutions to streamline Viveca's design process from initial customer contact and webpage content extraction through to final delivery to customer. Examined process details that led to effective technical strategies while decreasing turnaround time and reducing errors.
- **Pharmacia & Upjohn** – Analyzed Medicare claims data for evidence to support new market. Saved the client the substantial cost and risk associated with initiating clinical trials in new therapeutic area.
- **Genome Therapeutics Corporation** – Adapted linkage analysis software for internal use and developed Web-based demonstration version of PathoGenome that allowed viewing on client's system.
- **Eli Lilly & Company** – Biostatistics Consultant and SAS Programmer for long-term Prozac study.
- **Millennium Pharmaceuticals, Incorporated** – Researched and developed computational methods in sequence and disease analysis that included UI and database design, project management, HTML, PERL and OPS5 programming. Enabled superior access to disease information by researchers, and ability to identify secreted proteins of interest that served as most viable drug candidates.

Director of Business Development, 2001-2002

Molecular Mining Corporation, Boston, MA

Directed business initiatives for life science data mining company.

- Initiated and supported collaborations with pharmaceutical and biotechnology industry and academic clientele.
- Spearheaded company drive for involvement in high-throughput analysis and pharmaceutical integration projects while expanding client offerings. Developed broad strategic concept for pharmaceutical partners.

Senior Scientist, BioPathways, 2000-2001

3rd Millennium, Incorporated, Boston, MA

Senior Scientist on NIST grant to develop next generation integrated information infrastructure for pharmaceutical and biotech research.

- Expertly developed demo of hypothesis-driven visualization system using Huntington's disease as model.

- Effectively researched and captured information for display of disease mechanisms and manifestations that served as research planning tool for biopathways.

Assistant Director, Bioinformatics, 1999-2000

Genome Therapeutics Corporation, Waltham, MA

- Created vision and standards that drove bioinformatics operation and set up academic research alliance to utilize and develop novel approaches to drug target screening for pathological genetics, functional genomics and pharmacogenomics.
- Established and led 16-person multidisciplinary team that successfully completed GTC's corporate-wide Y2K Readiness Program two months ahead of aggressive schedule.

Research Associate, 1991-1992

Boston University, Behavioral Pharmacology

President and Owner, 1982-1988

Luciano and Hillier, Incorporated

- Led a consultancy serving Greater Boston's technology and business systems marketplace. For Lotus Development Corporation, led the strategic testing effort for Lotus Metro, a personal information manager product, and developed an automated regression compatibility test for the Lotus Metro kernel.

Software Engineer, 1979-1982

Gould, Inc., Modicon Division

Initially involved in "Futures," the research and advanced development group. Participated in the designs for MODWAY, MODVIEW, and the P200. Responsible for the design and implementation of several prototypes illustrating the concept of process control systems using a menu driven graphics programming panel (P200) and a touch sensitive screen. Designed and implemented the graphics, menu processor, and all necessary communications and interface software. Wrote the Software Functional and Detailed Design Specifications for the J346 MODBUS Slave Interface implementing a portion of the software. Later completed the detailed software design specification for the MICRO-84 Controller, implementing a portion of that design.

Staff Consultant, 1979

TE Corporation, Boston, MA

At this small consulting firm, I was a staff member working with 5 others developing the Nihongo Word Processor for NEC. This word processor was designed to work with Kanji (Japanese) characters. Contributed to the overall design and wrote the paging, software disk buffer management, and page/editor interface software. This was written in Pascal on Motorola and Future Data development systems.

Systems Programmer, 1978-1979

WANG Laboratories, Research and Development Department, Lowell, MA

I worked in the sub-group responsible for the word processing software for the Wang Word Processor that runs on the CRT. This included the editing software, the keyboard, screen management routines, system calls, and the user interface. Wrote the auto-hyphenation function, maintained Word Processing software, re-hosted the PL/M cross-compiled Word Processing system to run under the Wang OIS operating system with native Intel compilers, and wrote file conversion routines to allow word processing files to be edited by the OIS text editor and OIS text files to be word processed.

Computer Operator, 1976-1979

Smithsonian Astrophysical Observatory, Cambridge, MA

Ran the computing center operations on weekends part-time while in college.

Computer Operator, Terminal Consultant, Teaching Assistant, 1976-1979

Boston University, Boston, MA

Worked part-time while in college in the academic computer center as a computer operator, in the computing center terminal room at the help desk, and as a teaching assistant for over a dozen computer science courses.

TEACHING EXPERIENCE**University of the Virgin Islands, St. Thomas USVI**

CSC 117 Introduction to Programming in Java Spring 2019 (undergraduate, 13 students)

SCI/CSC 230 Data Science I Fall 2020, Spring 2021, Summer 2021, Fall 2021
(undergraduate, 9 students, 7 students, 14 students, 18 students)

CSC 239 Scientific Computer Applications, Fall 2018 (undergraduate, 14 students)

SCI/CSC/IST 435 Data Science II (Fall 2021) (undergraduate, 6 students)

Advanced databases and SQL; data cleaning and integration; statistical methods; machine learning, including regression and classification; recommender systems; visualization; big-data analytics; cloud computing; and end-to-end data science projects.

CSC 465 Special topics in Computer Science – Introduction to the Data Science Workflow
 Spring 2019 (undergraduate, 11 students) St. Thomas, St. Croix remote by video
 Fall 2019 (undergraduate, 3 students)

CSC 495 Directed Independent Research in Comp Sci, Spring 2019 (undergraduate, 1 student)

CSC X97 Junior and Senior Science Seminar I (CSC 397, CSC 497, respectively)
 Fall 2018 (undergraduate, 16 students) St. Thomas, St. Croix remote by video
 Fall 2019 (undergraduate, 10 students) St. Thomas, St. Croix remote by video

CSC X98 Junior and Senior Science Seminar II (CSC 398, CSC 498, respectively)
 (undergraduate, 17 students) St. Thomas, St. Croix remote by video

Indiana University Bloomington

- Data Science for Drug Discovery, Health and Translational Medicine, Spring 2017 (graduate, 38 students), Fall 2017 (graduate, 22 students)
- Real World Data Science, Spring 2017 (graduate, 22 students)
- Applied Data Science, Summer 2017 (graduate, 43 students), Fall 2017 (graduate, 71 students)
- Independent Study INFO-I 699 LEC 14075 Graduate student (Zachariah Meador) project to create an inventory repository, assimilate, review and rewrite multiple works into a single paper fit for publication. Subject matter is decades of research focused on major depressive disorder treatment outcome-prediction that is the work of Luciano et al.

Ben-Gurion University of the Negev

- Semantic eHealth: getting more out of biomedical data using Semantic Technology. December 22-25, 2013. Faculty of Health Sciences, 1-credit course. Co-taught with Eitan Rubin. (graduate, 10 students).

Rensselaer Polytechnic Institute

- Semantic eScience, CSCI 4962/6962 (advanced undergraduate/graduate, 9 students), Fall 2010, Co-instructor. Reviewed and updated course content, developed learning outcomes, co-taught lectures, mentored students on projects, graded homework assignments and projects. Instructor evaluation: 4.2/5.
- Advanced Semantic Technologies, CSCI 6965 (graduate, 5 students), Spring 2011, Co-instructor. Reviewed and updated course content, developed learning outcomes, co-taught lectures, mentored students on projects, graded homework assignments and projects.

Boston University, Metropolitan College

- Introduction to Telecommunications, CS535 (graduate, 11 students), Spring 2005. Instructor. This was a required core course for the MS in computer science. I was responsible for all aspects of the course (lectures, grading, office hours, assignments, and projects). A syllabus was provided, with room for additional topics. I added commercial wireless off-the-shelf communication systems.

Boston University, College of Arts and Sciences

- Teaching Assistant for over a dozen computer science courses, 1976-1979.

MENTORING**Undergraduate Students****UVI:**

1. **Travis Hamlin** – Travis was my student at UVI, a marine sciences major who took the Data Science I course in Fall 2020. Travis became the TA for Data Science I in the three subsequent semesters that I taught the course, became the TA for Data Science II, was the first to earn the new Certificate in Data Science, and was hired immediately after graduation by the University to assist with the redesign and development of the university's data infrastructure.
2. **Christopher Murphy** – Chris was my student at UVI, a physics major who took my special topics course introduction to the data science workflow. Chris was interested in pursuing a career in data science and sought my advice on many occasions. In Fall 2020, Chris served as the TA for the new Data Science I course and as President for the Data Science Club. Chris had two offers from large stateside companies for a position as a data scientist starting upon graduation (May 2021).
3. **Kenique Liburd** – Kenique was my student at UVI, a computer science major who shared an interest in and passion for aviation. He had been exposed to aviation through a high school program offered by the Organization of Black Aerospace Professionals (OBAP). Through him, I learned there was significant student interest in and a need for aviation opportunities at UVI, and together we created the UVI Aviators Club. We secured \$5,000 in seed funding from the JetBlue Foundation, and in Spring 2020 I offered an aviation studies course. After graduating, Kenique continued his flight training and completed the full progression of pilot and instructor credentials he pursued, culminating in commercial pilot, instrument, multiengine, certified flight instructor, instrument instructor, and multiengine instructor credentials. He works as a flight instructor and commercial pilot in the U.S. Virgin Islands.
4. **Jarod Power** – Jarod was my student at UVI and was an atypical undergraduate student, at 39 years old and with a full-time job as an application developer at the University of California at San Francisco. Jarod was interested in the intersection of life sciences and computer science, particularly applications using machine learning, deep learning, and artificial intelligence. (2/24/21 – senior seminar presentation)

RPI:

1. **Lindsay Poirier** – undergraduate researcher. Lindsay is interested in technologies to promote health science. She was motivated to participate in the SMART App Challenge and took the initiative to organize the effort, scheduling logistics and meeting. She created a mash-up demonstration to explore the impact of physical education and nutrition policies on obesity. She blogged for TWC, her DC internship, and writes a personal blog (www.lindsayrepository.wordpress.com).
2. **David Molik** – Health Web Science. Recent graduate (BS). David did an excellent job assisting me in reviewing proposals for the 2nd Health Web Science Workshop, held at Northwestern (Evanston, IL) in June in conjunction with the ACM Web Science Conference. He also assisted with project management, editing and internal co-author revision of the Health Web Science

manuscript. I continue to mentor and guide him in his career and research interests. David is a bioinformatics specialist at Cold Spring Harbor Lab and will be going to graduate school for a PhD at Notre Dame fall 2016.

3. **Brendan Ashby**- Following initial meetings regarding research topics, Brendan signed up for the Undergraduate Research Program for Spring 2012, and began to become familiar with Semantic Technologies (SADI Framework Tutorial).
4. **Zachary Jablons** – Zachary learned of my depression research in an undergraduate mathematics course and approached me with interest. He converted and enhanced the simulation software and completed an implementation of the Luciano Model using additional data from Dr. Greg Siegle (University of Pittsburgh Medical Center). Zach created visualizations that impressed Greg because they showed him patterns and irregularities in his data he had not seen before.

Harvard:

1. **Natasha Schiller**, Natasha worked with me as an executive assistant during the summer of 2005 when she was home from college. She assisted with the preparation of the administrative components of an NSF grant proposal that was subsequently funded. As a result of her experience working with me, she changed her major from Art History to Biology. She is currently working towards a master's in public health at Boston University and is a Research Assistant at Clinical Addiction and Research Education Unit, Boston Medical Center.

Graduate Students

Indiana University

1. **Jeremy Joseph Yang**, graduate student, Senior Research Scientist, University of New Mexico School of Medicine, Dept. of Internal Medicine, Translational Informatics Division. Concurrently, Jeremy is an Informatics PhD candidate (Cheminformatics Track with Data Science Minor) in the School of Informatics, Computing and Engineering, in the Integrative Data Science Lab (Wild Group) at Indiana University. I served on Jeremy's Ph.D. research committee (Ph.D. defense 3/7/2022)
2. **Ayishih Bellew** – Graduated from UVI in 2004 with a BS in Computer Science and served as Research Analyst at the Eastern Caribbean Center for 14 years under the direction of Dr. Frank Mills who has led the Virgin Islands Census Data Center since 1988. In 2019 she earned a master's in data analytics from Georgia Tech. In 2020, I hired Ms. Bellew to assist in the development of the Data Science Program. I brought her into all aspects and gave her a seat at the table and the opportunity to directly voice and contribute to the program and curriculum.
3. **Arjun Sathiyarayanan Rao** – graduate student. Research Assistant. I mentored Arjun in data science using Tableau Public and industry job interviewing skills. Arjun served as my research assistant and teaching assistant post-graduation. He provided teaching and tutoring to the students at UVI remotely.
4. **Salon Sharma**, graduate student in Data Science at Indiana University. Mentored.
5. **Khushboo Sah**, graduate student in Data Science, Vice President of the Data Science Club.

RPI

1. **Amruta Akut** – Research Assistant. I guided Amruta to do initial work on Ontology Evaluation. She built a user interface and created a PowerPoint presentation of the Generalized Framework for Ontology Evaluation (GOEF). (Spring 2012)
2. **Brendan Ashby** – MS Thesis – topic to be determined. One credit summer 2012, 3 credits Fall 2012. Development of SeeSaw - A semantically enabled visual computational platform for blog sentiment analysis (<http://tw.rpi.edu/web/project/SeeSaw>) with co-PI, Vivien Marx (Nature Publishing). Brendan is currently helping with the porting of Yuezhang's SEMMDD master's thesis and converting the data to RDF. He is a co-author of the CSHALS poster.

3. **Yuezhang (George) Xiao**, MS, Industrial Engineering, Master's thesis advisor (Mark Embrechts, ISE faculty sponsor). Master's thesis: *Semantically Enabled Neural Network Modeling of Major Depressive Disorder*. Conference and journal paper submitted to Semantic Web Applications for Health and Life Science (Nov 2012).
4. **Ping Wang, BS/MS**. Ping was a student in both courses I co-taught with Professor McGuinness and she was a summer research assistant. I co-advised her research on the Semantic Water Quality Portal and guided her through acquisition of environmental data from EPA, and her presentation and write-up of her research with Professor McGuinness.
5. **Peter Ragone, BS/MS**. Peter was my student in the Advanced Semantic Technologies course during his last semester at RPI as a combined BS/MS student. Peter is deeply interested in medicine and was an Emergency Medical Technician for RPI and in the surrounding community. Peter's background includes software engineering and molecular biology. He quickly saw the potential impact of semantic technologies and continued to keep contact after graduation, which resulted in his joining the Nightingale collaboration on Major Depressive Disorder. Peter entered medical school in the class of 2019 at Lake Erie College of Osteopathic Medicine.

High School Students

1. **Jill Stone** – Jill worked for me as an administrative assistant at Predictive Medicine, Inc., my consulting practice. She was a high school junior, interested in English. I mentored her in science as part of her on-the-job training. Jill graduated from Framingham State College (2007) with a Bachelor of Arts, in Corporate Communications, and a minor in psychology. She is currently a Team Manager at SunTrust Banks.
2. **Jordana Jacobs** – Jordana came to live with me for her last year of high school. She had been at a therapeutic boarding school recovering and rebuilding her self-esteem that resulted from the traumatizing divorce of her parents. I mentored, tutored, coached, counseled, consoled, and celebrated in many aspects of school, work, and life. She took a gap year to complete and prepare for school taking classes and working part-time. She was accepted to Indiana University School of Global and International Studies with a scholarship, Fall 2019.

GRANTS

Completed

NIST: GOEF Generalized Framework for Ontology Evaluation Methods and Metrics.

9/1/12-8/31-15. Award No. 60NANB12D201 \$214,002 (\$154,002 cut in 2013 Sequester yrs. 2&3). Role: PI (subcontract from SUNY Albany Center for Technology in Government). The goal of the project is to advance the state of the art in ontology evaluation methods and metrics by explicitly adding support for evaluation concerning an application context, developing the infrastructure to support iterative evaluation framework development, and identifying areas of further ontology metrics research.

NSF-I-CHOOSE: PI: Theresa Pardo (SUNY Albany, CTG), 7/1/13-3/31/14.

Role: PI of RPI subcontract from SUNY Albany, Center for Technology in Government. NSF INTEROP Program.

Summer, \$19,000.

I led the ontology model and semantic methodology that implemented the prototype proof of concept. Led a team of three PhD students from SUNY Albany. I guided them on a summer project in which they learned about semantic web development methodology and the technology necessary to implement the proof-of-concept into a working prototype at the end of the summer.

NSF-I-CHOOSE: PI: Theresa Pardo (SUNY Albany, CTG), 9/1/12-3/31/13. NSF INTEROP Program. Role: PI of RPI subcontract from SUNY Albany, Center for Technology in Government, \$12,000. Consulted on the use of ontology semantic methodology. Defined scope of proof-of-concept and research plan to accomplish a working prototype proof-of-concept. I ran a hackathon at RPI as part of the ontology Summit 2013 for which I-Choose was a use case for the NIST-funded Generalized Framework for Ontology Evaluation. By having one NSF project serve as a Use Case for a second, we leveraged two independently funded multiple-agency awards to benefit both projects and the greater community through the Ontology Summit. It provided an enhanced learning experience for the students and enabled them to present in a global on-line professional community.

IARPA: Foresight and Understanding from Scientific Exposition (FUSE). Awarded: Phase 1 8/11/11-1/31/13.

Role PI for RPI, subcontract to BAE Systems.

The goal of this project was to identify emerging topics in science and then to explain emergence findings. I was part of the team, taking a senior advisory role, with particular expertise in test and evaluation components of the explanation capability.

NSF Semantic eScience Framework – Facilitating Next Generation Data Intensive Science.

Role: Ontology Evaluation consultant, 7/10-8/12.

The goal of the project was to create a next-generation tool suite for supporting eScience. I built upon prior work in an ontology evaluation framework and co-taught a class on semantic eScience with Professor McGuinness.

NSF SGER: EMPWR: Computational Exploration of Molecules in the Context of Biological Pathway Networks [Grant No. 0601931](#)

Role: PI for Harvard Medical School.

Total costs: \$195,038

Getting data into a common framework and format is only part of the solution. Given biology's complexity, this project sought to identify ways to systematically and automatically explore data *in silico*, and demonstrate the utility by allowing researchers in other disciplines to reuse these data, in new ways, to ask new and different questions. *Project Web Site maintained courtesy of the Internet Archive:* <http://web.archive.org/web/20150926044252/http://empwr.org/>

BioPAX Department of Energy Workshop Grant #DE-FG02-04ER63931

1st round, \$60,000; 2nd round, \$80,000.

Roles: Community Liaison, Consultant, developer and co-author.

The BioPAX group's goal was to develop a common exchange format for biological pathways data.

HONORS AND AWARDS

University of the Virgin Islands – WOW Awards – “This professor has stood by each of her students in their time of need. When we were stressing about other professors not being fair she showed us different. This young lady has change [sic] my view on life and school. I have never met a professor quite like her.” May 2020

Indiana University Women in Technology Awards – “Being a mentor.” Spring 2018.

Robert Wood Johnson Foundation *Health Policy Fellow Finalist 2014-2015*

Dozor Visiting Scholar at the Faculty of Health Sciences, Ben Gurion University of the Negev, Be'er-Sheva, Israel, 12/17/13-12/31/13. This award includes all associated travel expenses and a per diem.

Keynote speaker, Joint Workshop on Semantic Technologies Applied to Biomedical Informatics and Individualized Medicine, November 11, 2012, “Understanding Recovery as a Mechanism for

Individualized Treatment Selection in Major Depressive Disorder: A case study.” The Joint Workshop on Semantic Technologies Applied to Biomedical Informatics and Individualized Medicine. Workshop of 11th International Semantic Web Conference.

For a New Social Science, Coral Springs Florida. (\$7,500) Dr. Sam Leven, Director, provided initial funding, supplied books, contacted on my behalf, and introduced me to Dr. Jacqueline A. Samson of Harvard’s McLean Hospital, Belmont MA. Dr. Samson became my PhD dissertation advisor in clinical research and provided the clinical data that was used and analyzed in my dissertation.

Boston University Medical School, Pharmacology Department Graduate Student Research Assistantship. Trained in electrophysiology under Dr. David Farb and in behavioral pharmacology under Dr. Conan Kornetsky. [1993-1994]

PRESENTATIONS

Selected Webinars

1. [*Unlocking the Value in Data. What Government Employees Need to Know about Data*](#) UVI’s Data Science Program hosted a webinar for government employees who want to know more about data and how it’s used across the territory. Participants learned how to increase their agency’s understanding by partnering with UVI’s new data science program. This webinar increased their value because they learned how data: affects their budget, gets their agency more money, and is used to evaluate the success of their agency programs.
2. [*UVI HackFest 2020 - Emerging Trends in Data Science. Dr. Joanne Luciano*](#) Oct 28, 2020
3. [*Triple Helix Conference. Brazil*](#) 6/23/2021 [*Food Security in the Virgin Islands - Joanne Luciano and Travis Hamlin \(student\)*](#)
4. The Emerald Archipelago project at the University of the Virgin Islands (US) studied the feasibility of blockchain technology to create a marketplace for the farming industry of the US Virgin Islands that would drive crop production by aggregation to meet demand. Funding awarded by Morgan State University FinTech Center 2020 Educational Research Grant (\$10,000). The presentation at the HBCU Blockchain Summit: [*Implementation of Supply Chain Smart Contracts in the VI*](#) November 12, 2020.
5. UBRI [*All About Blockchain Podcast with Lauren Weymouth interviews Joanne Luciano about Achieving Food Security With Smart Contracts “The Emerald Archipelago Supply Chain Use Case”*](#) February 24, 2021

Selected Invited Lectures

1. UVI Hackfest
2. Semantic eHealth: getting more out of biomedical data using Semantic Technology. December 29, 2013. Ben Gurion University of the Negev, Beer-Sheva, Israel.
3. Translational Medicine: Patterns in Response to Antidepressant Treatment and their Implications. IEEE Schenectady Section, May 17, 2013. Engineering in Medicine & Biology Society (EBMS), Schenectady, NY.
4. How Data Science, the Web, and Linked Data are Changing Medicine Wolfram Data Summit, Washington DC, Sept 6-7, 2012.
5. Tom Munnecke interviews Joanne S. Luciano on Data-Driven Medicine, June 4, 2012. Cambridge MA, USA <http://munnecke.com/blog/?p=1690>.
6. American Medical Informatics Association, Joint Summits on Translational Science: TBI/CRI 2011, March 2011, San Francisco, CA.
7. Lessons Learnt in Ontology Construction, Hunter Lab, University of Colorado Health Sciences Center, Denver, CO. January 14, 2008.

8. BioPAX - Biological Pathway Exchange Language, Pasteur Institute, Paris France, July 2005.
9. DARPA Workshop on Computable Semantics for Systems Biology, Arlington, VA, March 3-4, 2005.
10. Systems Biology Summit, Boston MA, September 22, 2004.

Selected Conference Platform Presentations, Workshops, and Tutorials

1. *Introduction to Data Science for High School Students*. Commissioned by Operation Inspire and Junior Achievement, held two two-hour workshops with High School Students across the USVI territory, December 1 & 2, 2021.
2. *Data Science Introduction and Curriculum for High School Students – Teacher’s Workshop*. January 15, 2022.
3. *Why are some websites successful (at behavioral change)?* Joanne S. Luciano, Grant Cumming, David Molik, Eva Kahana. INFORMS International 2016, June 12, 2016 -June 15, 2016, Hilton Waikoloa Village, Waikoloa Village, Hawaii USA
<http://meetings2.informs.org/wordpress/2016international/>
4. *Health Web Observatories: Creating Preferable Health Outcomes through Health Web Science*. INFORMS Healthcare Conference 2015, Nashville, TN July 29-30, 2015. Joanne S. Luciano, Healthcare Conference 2015 Nashville, Tennessee, USA
5. *Semantic Computing in Healthcare Industry*. Tutorial. Seventh IEEE International Conference on Semantic Computing (ICSC), September 16-18, 2013. Irvine, California. <http://iee-icsc.org/icsc2013>
6. An RDF/OWL Knowledge Base for Query Answering and Decision Support in Clinical Pharmacogenetics Presentation given by Matthias Samwald. Distinguished Paper Award. <http://www.medinfo2013.dk/program/distinguished-paper-and-poster-awards>
7. Keynote: Joint Workshop on Semantic Technologies Applied to Biomedical Informatics and Individualized Medicine November 11, 2012 *Understanding Recovery as a Mechanism for Individualized Treatment Selection in Major Depressive Disorder: A case study. The Joint Workshop on Semantic Technologies Applied to Biomedical Informatics and Individualized Medicine*. Workshop of 11th International Semantic Web Conference.
8. Data Driven Medicine; Data, not Programs, Sharing, not Hoarding, Personal, not Population UAB Innovation Forum BIG DATA Forum / June 5, 2012.
9. Life Web Science Workshop 2013. May 5, 2013, Paris France.
<http://www.websci13.org/workshops/wk9-life-web-science-workshop/>
10. Building Semantically-Enriched Web Observatories. First International Workshop on Building Web Observatories. Web Science 2013 Workshop. May 1, 2013, Paris, France. <https://sites.google.com/site/bwebobs13/>
11. OntologySummit2013 Hackathon Clinics GOEF IChoose. (HC-02) The General Ontology Evaluation Framework (GOEF) & the I-Choose Use Case. Project Champions: Joanne Luciano, James Michaelis, Nicolau DePaula, Djoko Sigit Sayogo, April 4-6, 2013.
http://ontolog.cim3.net/cgi-bin/wiki.pl?OntologySummit2013_Hackathon_Clinics_GOEF_IChoose
12. Webscience 2012, Second Health Web Science Workshop, June 21, 2012. Evanston, Illinois. <http://www.websci12.org/workshops/health-web-science-workshop>
13. Web Science 2011, Health Web Science Workshop, June 15, 2011. Koblenz, Germany <http://www.websci11.org/workshops/health-web-science-workshop/>
14. American Medical Informatics Association (AMIA) Summit on Translational Bioinformatics. San Francisco, California, March 10-12, 2010. Personalized Medicine Session. *Translational Medicine: Using Systems of Differential Equations to Identify Patterns in Symptom Remission in Response to Treatment and the Underlying Dynamics of the Interactions*. J. Luciano, Predictive Medicine, Inc.; M. Cohen, Boston University; J. Samson, Harvard Medical School and McLean Hospital.

15. American Medical Informatics Association (AMIA) Summit on Translational Bioinformatics. San Francisco, California, March 10-12, 2010. *The Translational Medicine Ontology and Knowledge Base: Using Semantic Web Technology in Personalized Medicine for Data Integration*, Joanne S. Luciano, Rensselaer Polytechnic Institute and Predictive Medicine Inc.
16. 23rd IEEE Annual Computer Communications Workshop, October 18-21, 2009, Lenox, Massachusetts, Invited special topic: W3C: Semantic Web for Healthcare and Life Science (HCLSIG). Workshop Co-Chairs: Bulent Yener, Rensselaer Polytechnic Institute, Troy, NY, USA and Sahin Albayrak, Technische Universitaet Berlin, Germany.
17. The Tenth Annual BioPathways Meeting, Jointly organized with EMERGENCE by Vítor Martins dos Santos, Vincent Danos, Joanne Luciano, Vincent Schachter, Aviv Regev, Eric Neumann, June 27-28, 2009, as a Special Interest Group Meeting within the ISMB / ECCB 2009 Stockholm, Sweden. Session on **Computational Methods in Translational Medicine** The talk: A NAIVE NOTION TO APPLY COMPUTATIONAL METHODS TO MEDICINE: A CASE STUDY MODELING UNIPOLAR DEPRESSION, THE FIRST 15 YEARS. Joanne S. Luciano, PhD., Tenth Annual BioPathways Meeting Program.
18. Infectious Disease Ontology Workshop September 16-17, 2008, Buffalo, N.Y. Influenza Ontology (presented by Burke Squires) and Ontology Evaluation (presented by Joanne Luciano). Presentations available on IDO website.
19. EBI Industry Programme Disease Ontology Workshop. June 19-20, 2008. Presentation available from [jluciano] if not on EBI website.
20. Luciano, Joanne S. and Stevens, Robert D. *OWL: PAX of mind or the AX? Experiences of Using OWL in the Development of BioPAX* For the workshop OWL: Experiences and Directions, Gaithersburg, MD, April 1-2, 2008. <http://www.EMPWR.org/OWL-ED-2008-Luciano.pdf>
21. W3C Semantic web health care and life science F2F, Boston, MA Jan 25, 2006
22. Experience Using OWL DL for the Exchange of Biological Pathway Information For the workshop 2005 OWL: Experiences and Directions, Galway, Ireland, Nov. 11-12, 2005
23. BioPAX Technical Workshop, Tokyo Japan, November 17, 2005: Review of the BioPAX Ontology: <http://tinyurl.com/go94r> (presented by Matthew Horridge)
24. Drug Discovery Technology Technical Scientific Workshop Series. Workshop 10: Systems Biology: Can it Deliver the Magic Bullet? Boston, MA, August 10, 2005
25. BioPathways Semantic Aggregation, Integration and Inference, Tutorial, ISMB Detroit, MI, June 2005 <http://slideplayer.com/slide/7890070/>
26. Oracle Life Science Users Group (BioIT), Boston, MA, May 2005 http://www.olsug.org/Presentations/May_2005/Workshops/RDF_Workshop05.pdf
27. W3C Life Science Meeting, BioIT, Boston, MA, May 2005
28. W3C Workshop on Semantic Web for Life Sciences, Cambridge, MA, October 27-28 2004 Session VII: Semantic Aggregation, Integration and Inference Report Luciano Presentation
29. Standards and Ontologies for Functional Genomics 2004 Presentation, Philadelphia PA
30. BioPathways Consortium 2004, Intelligent Systems for Molecular Biology 2004, Glasgow, Scotland 2004 Presentation
31. Bio-ontologies 2004, Intelligent Systems for Molecular Biology 2004 Glasgow, Scotland 2004 Presentation
32. Pacific Symposium on Biocomputing 2004 Presentation, Kohala Coast, HI.
33. Intelligent Systems for Molecular Biology 2003 BioPathways Consortium SIG, Brisbane, Australia
34. Intelligent Systems for Molecular Biology 2003 BioOntologies SIG, Brisbane, Australia
35. The Interoperable Informatics Infrastructure Consortium (I3C) Presentation, Cambridge, MA, USA, May 7, 2003
36. Pacific Symposium on Biocomputing 2003, January, 2003, Lihue, HI.
37. Neural Modeling of Cognitive and Brain Disorders, sponsored by NIH, Maryland, June 1995. *Neural Modeling of Major Depressive Disorder*. (cited in Neural Modeling of Psychiatric Disorders, Eytan Ruppin, March 25, 1995. <http://www.cs.tau.ac.il/~ruppin/review.pdf>).

Selected Conference Poster Presentations

1. Samwald, M., Freimuth, R., Powers, R., **Luciano, J.**, Prud'hommeaux, E., Boyce, R., Marshall, M., Dumontier, M. An Ontology-based Formalism, Knowledge Base and Reasoning System for Clinical Genetics. *2013 AMIA Summit on Translational Bioinformatics*. San Francisco, March, 2013.
2. Matthias Samwald, Jun Zhao, Michel Dumontier, M. Scott Marshall, Kei Cheung, **Joanne S. Luciano**. "Translating ethnopharmacological findings into novel drug leads: the potential roles of linked open data and ontologies" In *Proceedings of the AMIA Summit on Translational Bioinformatics*, San Francisco, CA, March 7, 2011. (poster) Conference proceedings.
3. Patricia L. Whetzel, Colin Batchelor, Elgar Pichler, Bosse Andersson, Olivier Bodenreider, Tim Clark, Christopher Domarew, Michel Dumontier, Anja Jentzsch, Vipul Kashyap, Julia Kozlovsky, **Joanne Luciano**, Chimezie Ogbuji, Matthias Samwald, Jun Zhao, Susie Stephens. "Translational Medicine Ontology: A Patient-Centric Ontology for Drug Development and Clinical Practice" *Proceedings of the Summit on Translational Bioinformatics 2010*, San Francisco, USA.
4. Christine Denney, Bosse Andersson, Colin Batchelor, Olivier Bodenreider, Sam Cheng, John Hart, John Hill, **Joanne Luciano**, John Madden, Mark Musen, Elgar Pichler, Matthias Samwald, Sándor Szalma, Lynn Schriml, David Sedlock, Larisa Soldatova, Koji Sonoda, David Statham, Holger Stenzhorn, Trish Whetzel, Elizabeth Wu, Susie Stephens. „Creating a Translational Medicine Ontology" The Sixth International Workshop of Data Integration in the Life Sciences (Poster & Demo), Manchester, UK, 2009 (poster)
5. *Utilizing the Ontology of Biomedical Investigations (OBI) for Influenza Sequence and Surveillance Analysis*. Richard Squires- UT Southwestern Medical Center at Dallas, Richard Scheuermann (UT Southwestern, Pathology); Lynn Schriml (University of Maryland School of Medicine, Institute for Genome Sciences); Eric Bortz (Mount Sinai School of Medicine, Microbiology); Torsten Staab (Los Alamos National Laboratory, Applied Engineering and Technology); Marc Colosimo (Mitre Corporation, Information Technology); Joanne Luciano (The MITRE Corporation, Information Technology); July 2008, Poster T13
6. BioOntologies [Poster 3] **Joanne Luciano**, Lynn Schriml, Burke Squires and Richard Scheuermann, *The Influenza Infectious Disease Ontology (I-IDO)*. (<http://bio-ontologies.org.uk/2008/download/Bio-Ontologies2008.pdf>). The 11th Annual Bio-Ontologies Meeting Organized by: Phillip Lord, Newcastle University, Nigam Shah, Stanford University, Susanna-Assunta Sansone, EMBL-EBI and Matthew Cockerill, BioMed Central, July 20, 2008, Co-located with ISMB 2008, Toronto, Canada
7. Molecular Medicine Tri Conference, San Francisco, CA April 2005
8. [ISMB 2008 Conference, Toronto, Canada, Birds of a Feather](#)
9. Pacific Symposium on Biocomputing, 2006, Maui, Hawaii. Poster (late arrival)
10. NIST 2003 Presentation (remote presentation)
11. Bio-Ontologies, Intelligent Systems for Molecular Biology 2003, Brisbane, Australia
12. [Intelligent Systems for Molecular Biology 2003](#), Birds-of-a-Feather
13. Several presentations and posters at various conferences including International Neural Networks Conference, Intelligent Systems for Molecular Biology, Neurosciences, Pacific Symposium on Biocomputing, 1995-2003.
- 14.

PROFESSIONAL SERVICE

Dean's Advisory Board, Boston University, Metropolitan College, 2003-2010
 Editor of the series, "Semantic Technologies in Healthcare and Life Sciences", Journal of Biomedical Semantics. BioMed Central. <http://www.jbiomedsem.com/series/SWAT4LSCSHALS>.
 Session Moderator: Geo-Data Informatics 2011 Workshop, Boulder, CO, 2011
 Co-Organizer/Steering Committee, BioPathways Consortium, 2001-2010.

BioPathways Consortium is an international organization fostering scientific development through an understanding of biological pathways.

- Grant proposal writing for funding various activities of the Consortium.
- Maintained a website facilitating worldwide communications among the life sciences community. Negotiated with a Web design firm that led to \$6,000 in savings
- Co-development of pathway genome databases for *Prochlorococcus marinus*, a marine photosynthetic bacterium in George Church's lab at Harvard Medical School.

Manuscript Reviewer

BioPathways Consortium
 BMC Bioinformatics
 Briefings in Bioinformatics
 Drug Discovery Today
 Intelligent Systems for Molecular Biology
 International Neural Network Society
 International Semantic Web Conference (ISWC)
 Journal of Bioinformatics
 Journal of Biomedical Informatics
 Journal of Biomedical Semantics
 Journal of Web Semantics
 OWL-ED
 Pacific Symposium on Biocomputing (PSB)
 PLoS One

Grant Proposal Reviewer

American Heart Association, 2019
 NIH Clinical Translational Science Award Reviewer X02, 2011
 NIH NCRR P41 Biomedical Technology Research Centers Review Panel, 2011
 NSF MERIT Review Survey, 2011
 NSF Review Panels, April 2005, November 2007

UNIVERSITY/DEPARTMENTAL SERVICE

University of the Virgin Islands: Faculty Advisor to student-led Data Science, Analytics, and Blockchain Club (Fall 2019). The Data Science, Analytics, and Blockchain Club was created to inspire and expose the next generation of computer scientists and engineers to blockchain technology, applications, and career opportunities.

University of the Virgin Islands: Faculty Advisor to student-led Aviation Club (Fall 2019). The purpose of the Aviation Club is to inspire and expose the next generation of aviators to the fields of aviation which include air traffic, control, airport security, aerospace engineering, and flight planning and training.

Indiana University: Faculty Advisor to the Data Science Club (Fall 2018)
 Host visitors to the university to meet with students about academic and industry opportunities.
 Build partnerships with industry and community to advance students through internship and/or research opportunities.

Indiana University: Initiated and facilitated the Data Science and Health Policy Club students in an Indiana University Opioid Data Wrangling Challenge held in April 2018. Faculty from School of Public and Environmental Affairs (SPEA), School of Informatics, Computing, and Engineering (SICE) and the School of Public Health (SPH) collaborated with the clubs. Prizes and certificates were awarded to the top three teams.

Organized and led RPI tutorial at the Conference on Health Care and Life Science, Cambridge, MA Feb 23-25, 2011. <http://www.iscb.org/archive/conferences/iscb/cshals2011-program/cshals2011-tutorial.html#rpi>

Organized and led RPI tutorial at the Conference on Health Care and Life Science, Cambridge, MA Feb 22-24, 2012. <http://www.iscb.org/cshals2012-program/cshals2012-tutorial>

DEPARTMENTAL SERVICE

The University of the Virgin Islands

Search Committee – Computer Science

Indiana University

Data Science Curriculum Committee

Honor Students Selection Committee

Pro-health Health Journeys Lab

Rensselaer Polytechnic Institute

CS Undergraduate Recruiting – volunteered to meet and greet students (Fall 2012)

CS Undergraduate Women – meet regularly, advise, discuss, and provide guidance to female undergraduate computer science students

CS Department – RPI Spring Open House

Deputy Director, Web Science Research Center, Tetherless World Constellation

RPI/TWC Web Science Observatory representative

Co-organized Elsevier / Tetherless Health and Life Science Hackathon, June 27-28, 2011. Pat's Barn, RPI, Troy, NY, USA

PROFESSIONAL SOCIETIES

Societies

American Association for the Advancement of Science

Association for Computing Machinery

International Society for Computational Biology: Finance Committee, 2002-2005; Publications Committee, 2007-2008 and 2023;

C-SHALS ISCB Scientific Advisor, Organizing Committee, 2007-2011;

CSHALS Conference Chair, 2012

Organizing Committees

- 2018 Program co-chair (Biomedicine). First IEEE International Conference on Artificial Intelligence for Industries (ai4i 2018), September 26-28, 2018, The Hills Hotel, Laguna Hills, California, USA <http://www.ai4i.org>
<https://ieeexplore.ieee.org/xpl/conhome/8656626/proceeding>
<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8665718>
- 2016 INFORMS International Session Chair
- 2013 Ontology Summit 2013; Hackathon Clinics. HC-02. The General Ontology Evaluation Framework (GOEF) & the I-Choose Use Case. April 6, 2013.
- 2012 Chair C-SHALS Clinical Semantics for Healthcare and Life Sciences (C-SHALS)
- 2012 Chair ACM Web Science 2012 Workshops (ACM Web Sci 2012), June 22-24, Evanston, Illinois <http://www.websci12.org/organization>
- 2012 2nd Health Web Science Workshop. June 22, 2012. Evanston, Illinois.
<http://www.websci12.org/workshops/health-web-science-workshop>

- 2011 Elsevier/Tetherless World Health and Life Sciences Hackathon (27-28 June 2011)
- 2011 C-SHALS Clinical Semantics for Healthcare and Life Sciences (C-SHALS)
- BioPathways Consortium (2002-2009)
- 2010 C-SHALS Clinical Semantics for Healthcare and Life Sciences (C-SHALS) Feb 24-26
2010 <http://www.iscb.org/cshals2010-home/>
- 2009 ISWC Semantic Web Applications in Scientific Discourse (SWASD)
<http://esw.w3.org/topic/HCLS/ISWC2009/Workshop>
- 2009 C-SHALS Clinical Semantics for Healthcare and Life Sciences (C-SHALS) Feb 25-27
2009 <http://www.iscb.org/cshals2009/>
- 2007 BioPAX (2002-2007)
- 2007 WWW Health Care and Life Sciences Data Integration (Banff, Canada)
- 2006 BioPAX-Manchester OWL Workshop April 4-8, U Manchester, School of Computer Science
- 2006 ISWC First International Semantic Web in Health Care and the Life Sciences

Program Committees

- 2010 OWLED OWL Experiences and Directions
- 2009 International Semantic Web Conference, (ISWC) In Use Track
(http://iswc2009.semanticweb.org/wiki/index.php/ISWC_2009_Semantic_Web_In_Use_Track/Program_Committee)
- 2009 ESWC The 6th European Semantic Web Conference Program Committee
<http://eswc2009.org/>
- 2008 SWAT4LS International Workshop on Semantic Web Applications and Tools for Life Sciences 28th November 2008, Edinburgh, UK <http://www.swat4ls.org>
- 2008 LDOW Linked Data on the Web <http://events.linkedata.org/ldow2008/>
- 2008 ESWC The 5th European Semantic Web Conference Demo
<http://www.eswc2008.org/calldemos.html>
- 2008 ESWC The 5th European Semantic Web Conference <http://www.eswc2008.org/>
- 2007 OWL-ED OWL Experiences and Directions
- 2006 ISWC Use Track
- 2006 ISWC Research Track
- 2006 OWL-ED OWL Experiences and Directions
- 2006 BioPAX-Manchester OWL Workshop
- 2005 OWL-ED OWL Experiences and Directions

PUBLICATIONS

Patents

1. *Automated Treatment Selection Method*, US Patent Number 6,063,028. Issued 5/16/00
2. *Method for Predicting the Therapeutic Outcome of a Treatment*, US Patent Number 6,317,731. Issued 11/13/01.

Books

1. **Luciano, JS**, Cumming, GP, Kahana, E, Wilkinson, MD, Brooks, EH, Jarman, H, McGuinness, DL, Levine, MS. *Health Web Science*. In *Foundations and Trends in Web Science*. Now Publishers Inc. Hanover, MA, USA (2014)

Peer-Reviewed Research Articles

1. **Luciano, Joanne S.**, Sayogo, Djoko, DePaula, Nic, Jarman, Holly, Tayi, Giri, Zhang, Jing, Hrdinova, Jana, Pardo, Theresa, Andersen, Deborah L., Andersen, David F., Luna-Reyes, Luis. Building a Certification and Inspection Data Infrastructure to Promote Transparent Markets. *Int. J. Electron. Gov. Res.* 13, 4 (October 2017), 53-75. DOI: <https://doi.org/10.4018/IJEGR.2017100104>.

2. Djoko S. Sayogo, Weijia Ran, Giri K. Tayi, **Joanne S. Luciano**, Luis Luna-Reyes, Nicolau Depaula, Holly Jarman, Jing Zhang, Graduate School of Management, Jana Hrdinova, Deborah Lines Andersen, David F. Andersen, Theresa Pardo. "Ontological Modeling of Certification and Inspection Process to Support Smart Disclosure of Product Information." *International Journal of Public Administration in the Digital Age* Volume 3 • Issue 2 • April-June 2016.
3. Grant P Cumming, Edward Morris, Paul Simpson, Tara French, Eva Kahana, **Joanne S Luciano** and David Molik. "The future of post-reproductive health - the role of the Internet, the Web, information provision and access." *Post Reproductive Health* Vol. 22(3) 123-130 (2016). DOI: 10.1177/2053369116647858
4. **Luciano, JS**, Cumming, GP, Wilkinson, MD., and Kahana, E. The Emergent Discipline of Health Web Science: *J Medical Internet Research, J Med Internet Res* 2013 (Aug 22); 15(8):e166 <http://www.jmir.org/2013/8/e166/>
5. Boyce, RD, Horn, JR, Hassanzadeh, O, de Waard, A, Schneider, J, **Luciano, JS**, Rastegar-Mojarad, M, Liakata, M. Dynamic Enhancement of Drug Product Labels to Support Drug Safety, Efficacy, and Effectiveness. *Journal for Biomedical Semantics*. 2013, 4:5 (26 January 2013). <http://www.jbiomedsem.com/content/4/1/5>
6. Matthias Samwald, Adrien Coulet, Iker Huerga, Robert L Powers, **Joanne S Luciano**, Robert R Freimuth, Frederick Whipple, Elgar Pichler, Eric Prud'hommeaux, Michel Dumontier, and M Scott Marshall, "Semantically enabling pharmacogenomic data for the realization of personalized medicine" *Pharmacogenomics*, January 2012, Vol. 13, No. 2, Pages 201-212 (doi: 10.2217/pgs.11.179)
7. **Luciano, Joanne S.**, Bosse Andersson, Colin Batchelor, Olivier Bodenreider, Tim Clark, Christine K. Denney, Christopher Domarew et al. "The Translational Medicine Ontology and Knowledge Base: driving personalized medicine by bridging the gap between bench and bedside." *J Biomed Semantics* 2, no. Suppl 2 (2011): S1.
8. Sriram, R. D.; Bock, C. E.; Neuhaus, F. M.; Wallace, E. K.; Brady, M. C.; **Luciano, J.**; Musen, M.; *NIST Workshop on Ontology Evaluation* (NISTIR 7774) Published: April 01, 2011.
9. Dr. Emek Demir, Mr. Michael Cary, Ms. Suzanne Paley, Dr. Ken Fukuda, Dr. Christian Lemer, Dr. Imre Vastrik, Dr. Guanming Wu, Dr. Peter D'Eustachio, Carl Schaefer, **Dr. Joanne Luciano**, Dr. Frank Schacherer, Dr. Irma Martinez-Flores, Dr. Zhenjun Hu, Dr. Veronica Jimenez-Jacinto, Dr. Geeta Joshi-Tope, Kumaran Kandasamy, Dr. Alejandra Lopez-Fuentes, Dr. Huaiyu Mi, Dr. Elgar Pichler, Dr. Igor Rodchenkov, Dr. Andrea Splendiani, Dr. Sasha Tkachev, Dr. Jeremy Zucker, Dr. Gopal Gopinath, Dr. Harsha Rajasimha, Ms. Ranjani Ramakrishnan, Dr. Imran Shah, Dr. Mustafa Syed, Dr. Nadia Anwar, Dr. Özgün Babur, Prof. Michael Blinov, Dr. Erik Brauner, Dr. Dan Corwin, Dr. Sylva Donaldson, Dr. Frank Gibbons, Dr. Robert Goldberg, Dr. Peter Hornbeck, Augustin Luna, Dr. Peter Murray-Rust, Dr. Eric Neumann, Mr. Oliver Ruebenacker, Dr. Matthias Samwald, Mr. Martijn van Iersel, Mrs. Sarala Wimalaratne, Dr. Keith Allen, Mr. Burk Braun, Dr. Michelle Whirl-Carrillo, Dr. Kam Dahlquist, Andrew Finney, Dr. Marc Gillespie, Dr. Elizabeth Glass, Dr. Li Gong, Dr. Robin Haw, Dr. Michael Honig, Mr. Olivier Hubaut, Mr. David Kane, Dr. Shiva Krupa, Miss Martina Kutmon, Miss Julie Leonard, Dr. Debora Marks, Mr. David Merberg, Dr. Victoria Petri, Dr. Alexander Pico, Mr. Dean Ravenscroft, Miss Liya Ren, Nigam Shah, Miss Margot Sunshine, Miss Rebecca Tang, Mr. Ryan Whaley, Dr. Stanley Letovsky, Dr. Kenneth Buetow, Dr. Andrey Rzhetsky, Dr. Vincent Schachter, Dr. Bruno Sobral, Dr. Ugur Dogrusoz, Dr. Mirit Aladjem, Dr. Shannon Mcweeney, Dr. Ewan Birney, Dr. Julio Collado-Vides, Susumu Goto, Dr. Michael Hucka, Dr. Nicolas Le Novere, Dr. Natalia Maltsev, Dr. Akhilesh Pandey, Dr. Paul Thomas, Dr. Edgar Wingender, Dr. Peter Karp, Dr. Chris Sander, Dr. Gary Bader. "The BioPAX community standard for pathway data sharing" *Nature Biotechnology*, Volume 28, Number 9, September 2010. <http://www.nature.com/nbt/journal/v28/n9/pdf/nbt.1666.pdf>
10. Matthias Samwald, Michel Dumontier, Jun Zhao, **Joanne Luciano**, M. Scott Marshall, Kei Cheung. "Integrating findings from traditional medicine into modern pharmaceutical research: the potential role of linked open data. *Chinese Medicine* 5:43 (2010). <http://www.cmjournal.org/content/pdf/1749-8546-5-43.pdf>
<http://www.cmjournal.org/content/5/1/43>

11. Brewster C, Jupp S, **Luciano J**, Shotton D, Stevens RD, Zhang Z. "Issues in learning an ontology from text." *BMC Bioinformatics*. 2009 May 6;10(Suppl 5):S1. doi:10.1186/1471-2105-10-S5-S1. PMID: 19426458; PMCID: PMC2679401.
12. Kei-Hoi Cheung, Huajun Chen, Yimin Wang, Susie Stephens, **Joanne Luciano**, Vipul Kashyap, Special Issue Editors, 2008 Special Issue of the Journal of Biomedical Informatics: Semantic BioMed Mashup. Volume 41, Issue 5, October 2008. Semantic mashup of biomedical data. Science Direct.
13. Vipul Kashyap, Kei-Hoi Cheung, Donald Doherty, Matthias Samwald, M. Scott Marshall, **Joanne Luciano**, Susie Stephens, Ivan Herman and Raymond Hookway (2008). Ontology based data integration for biomedical research. *The Semantic Web*, 97-122.
14. Lynette Hirschman, Cheryl Clark, K. Bretonnel Cohen, Scott Mardis, **Joanne Luciano**, Renzo Kottmann, James Cole, Victor Markowitz, Nikos Kyrpides, Norman Morrison, Lynn M. Schriml, Dawn Field, and the Novo Project. 2008 Habitat-Lite: A GSC Case Study Based on Free Text Terms for Environmental Metadata. *OMICS: A Journal of Integrative Biology*. June 2008, 12(2): 129-136. <http://www.liebertonline.com/doi/pdfplus/10.1089/omi.2008.0016>
15. **Luciano, Joanne S.** and Stevens, Robert D. 2007. *e-Science and biological pathway semantics*. *BMC Bioinformatics* 2007, 8(Suppl 3): S3 <http://www.biomedcentral.com/1471-2105/8/S3/S3>
16. Alan Ruttenberg, Tim Clark, William Bug, Matthias Samwald, Olivier Bodenreider, Helen Chen, Donald Doherty, Kerstin Forsberg, Yong Gao, Vipul Kashyap, June Kinoshita, **Joanne Luciano**, M Scott Marshall, Chimezie Ogbuji, Jonathan Rees, Susie Stephens, Gwendolyn T Wong, Elizabeth Wu, Davide Zaccagnini, Tonya Hongsermeier, Eric Neumann, Ivan Herman and Kei-Hoi Cheung. *Advancing translational research with the Semantic Web*. *BMC Bioinformatics* 2007 May 9, 8(Suppl 3):S2 <http://www.biomedcentral.com/1471-2105/8/S3/S2> PMID: 17493285; PMCID: PMC1892099.
17. Stephens, Susie; LaVigna, David; DiLascio, Mike; **Luciano, Joanne**. *Aggregation of Bioinformatics Data Using Semantic Web Technology*. In: *Journal of Web Semantics*, (4)3, 2006 <http://genepath.med.harvard.edu/wiki/images/a/a8/2006-JWS-StephensDiLascioLaVignaLuciano.pdf>
18. **Luciano, J.** *Drug Discovery Today* July 2005 *PAX of mind for pathway researchers (reprint)* http://genepath.med.harvard.edu/wiki/images/5/58/Luciano_DDT_July1_2005.pdf
19. Rubin, Mark A., Cohen, Michael A., **Luciano, Joanne S.**, and Samson, Jacqueline A. "Can we predict the outcome of treatment for depression?" *IEEE Control Systems Society Technical Committee on Intelligent Control Intelligent Control Newsletter* 98-3 (March 27, 1998) <http://pami.uwaterloo.ca/~karray/news15.html>
20. Schiller, Ilya, **Luciano, Joanne S.**, Draper, James S. "Flock autonomy for unmanned vehicles." *Proc. SPIE* Vol. 1831, p. 45-51, Mobile Robots VII, William J. Wolfe, Wendell H. Chun, Eds. (SPIE Homepage) Abstract Copyright: (c) 1993 SPIE--The International Society for Optical Engineering. <http://adsabs.harvard.edu/abs/1993SPIE.1831...45S>

Peer-Reviewed Conference Publications

1. James P. McCusker, Michel Dumontier, Shruthi Chari, **Joanne S. Luciano**, and Deborah L. McGuinness. "A Linked Data Representation for Summary Statistics and Grouping Criteria" in 7th International Workshop on Semantic Statistics (SemStats 2019), Auckland, New Zealand (2019).
2. Baclawski, K., Bennett, M., Berg-Cross, G., Casanave, C., Fritzsche, D., **Luciano, J.**, Schneider, T., Sharma, R., Singer, J., Sowa, J. and Sriram, R.D., 2018. Ontology Summit 2018 Communiqué: Contexts in context. *Applied Ontology*, 6 Jul. 2018, pp.1-20
3. **J. S. Luciano**, G. P. Cumming, Eva Kahana, T. French, D. Molik, Health Web Observatories: Creating preferable health outcomes through Web Science. *INFORMS Health*, Nashville TN, July 2015. https://bit.ly/JSL_2015_HWS_INFORMS

- <http://meetings2.informs.org/wordpress/healthcare2015/files/2015/07/Healthcare2015-Program.pdf>
4. DS Sayogo, **JS Luciano**, J Michaelis, N dePaula, L Luna-Reyes, G Tayi, G Begany, DF Anderson (2013). A preliminary ontology for tracking certification systems: a case study of fairtrade coffee certification. Proceedings of the 14th Annual Conference on Digital Government Research, 267-268.
 5. Samwald, M., Freimuth, R., **Luciano, J.S.**, Lin, S., Powers, R.L., Marshall, M.S., Adlassnig, K., Dumontier, M., and Boyce, R. 2013. An RDF/OWL knowledge base for query answering and decision support in clinical pharmacogenetics. Proceedings of Medical and Health Informatics 2013 (August 20-23 2013, Bella Center, Copenhagen, Denmark).
http://samwald.info/res/samwald_medinfo2013_final.pdf
 6. Gloria, MJK., McGuinness, D.L., **Luciano, J.S.**, and Zhang, Q. 2013. Exploration in Web Science: Instruments for Web Observatories. In Proceedings of WWW 2013 (May 13-17 2013, Rio de Janeiro, Brazil).
 7. Gloria, K., **Luciano, J.S.**, and McGuinness, D.L. 2013. Building Semantically-Enriched Web Observatories. Proceedings of Web Science Conference 2013 (May 2-4 2013, Paris, France).
 8. Michaelis, J., McGuinness, D.L., Chang, C., **Luciano, J.S.**, McCusker, J., and Hendler, J. 2012. Applying Multidimensional Navigation and Explanation in Semantic Dataset Summarization. In *Proceedings of ISWC 2012* (November 11-15 2012, Boston, MA).
<https://pdfs.semanticscholar.org/8433/3bc7f92e1cbc56a02df1e8d0f65aeac8a152.pdf>
 9. Matthias Samwald, PhD, Adrien Coulet, PhD, Robert R. Freimuth, PhD, Iker Huerga, MSc, **Joanne S. Luciano**, PhD, Elgar Pichler, PhD, Robert L. Powers, PhD, Eric Prud'hommeaux, PhD, Frederick Whipple, PhD, M. Scott Marshall, PhD, Michel Dumontier, PhD. "An informatics infrastructure for translating pharmacogenomic knowledge into clinical practice" *2012 AMIA Summit on Translational Bioinformatics*, 2012 Joint Summits on Translational Science, San Francisco California, Parc 55 Hotel San Francisco, March 19, 2012 - March 23, 2012 Manuscript ID AMIA-077-T2012
 10. Matthias Samwald, Holger Stenzhorn, Michel Dumontier, M. Scott Marshall, **Joanne Luciano**, Klaus-Peter Adlassnig. Towards an Interoperable Information Infrastructure Providing Decision Support for Genomic Medicine. 165-169. User Centered Networked Health Care - Proceedings of MIE 2011 DOI: 10.3233/978-1-60750-806-9-165
<http://arxiv.org/abs/1109.6626v1>
 11. EW Patton, P Wang, JG Zheng, L Fu, T Lebo, L Ding, Q Liu, **JS Luciano**, DL McGuinness (2011), Assessing health effects of water pollution using a semantic water quality portal. Proceedings of the 10th International Semantic Web Conference.
 12. P Wang, J Zheng, L Fu, EW Patton, T Lebo, L Ding, **J Luciano**, DL McGuinness. Next Generation Environmental Informatics as exemplified by the Tetherless World Semantic Water Quality Portal. *AGU Fall Meeting Abstracts* 1, 1438, 2011
 13. Elizabeth H. Brooks, Grant P. Cumming, and **Joanne S. Luciano**. 2011. Health web science: application of web science to the area of health education and health care. In *Proceedings of the second international workshop on Web science and information exchange in the medical web* (MedEx '11). Association for Computing Machinery, New York, NY, USA, 11-14. DOI:<https://doi.org/10.1145/2064741.2064746JP>
 14. McCusker, **J Luciano**, DL McGuinness. Towards an Ontology for Conceptual Modeling *Proc. of the International Conference on Biomedical Ontology*, 2011
 15. P Wang, JG Zheng, L Fu, EW Patton, T Lebo, L Ding, Q Liu, **JS Luciano**, DL McGuinness TWC-SWQP: A Semantic Portal for Next Generation Environmental Monitoring. *The 10th International Semantic Web Conference*, 2011
 16. P Wang, J Zheng, L Fu, E Patton, T Lebo, L Ding, Q Liu, **J Luciano**, D McGuinness A semantic portal for next generation monitoring systems. *The Semantic Web-ISWC 2011*, 253-268
 17. Dumontier M, Andersson B, Batchelor C, Domarew C, Jentzsch A, **Luciano J**, Pichler E, Prud'hommeaux E, Whetzel PL, Bodenreider O, Clark T, Harland L, Kashyap V, Kos P, Kozlovsky J, McGurk J, Ogbuji C, Samwald M, Schriml L, Tonellato PJ, Zhao J, Stephens S. The Translational Medicine Ontology: Driving personalized medicine by bridging the gap from

- bedside to bench. *Proceedings of the 13th ISMB'2010 SIG meeting "Bio-ontologies"* 2010:120-123. <http://www.lhncbc.nlm.nih.gov/lhc/docs/published/2010/pub2010004.pdf>
18. Tim Clark, **Joanne S. Luciano**, M. Scott Marshall, Eric Prud'hommeaux, Susie Stephens, Editors. *Proceedings of the Workshop on Semantic Web Applications in Scientific Discourse (SWASD 2009)*, collocated with the 8th International Semantic Web Conference (ISWC-2009), Washington DC, USA, October 26, 2009.
 19. **Luciano, Joanne S.** and Stevens, Robert D. 2008. *OWL: PAX of mind or the AX? Experiences of Using OWL in the Development of BioPAX*. OWL: Experiences and Directions, Gaithersburg, MD, USA, April 1-2, 2008.
http://www.webont.org/owled/2008dc/papers/owled2008dc_paper_7.pdf
 20. Ruttenberg, AR, Rees, JR and **Luciano, JS**. *DL for the Exchange of Biological Pathway Information* For the workshop 2005 OWL: Experiences and Directions, Galway, Ireland Nov. 11-12 2005 (available at www.webont.org/owled/2005/sub37.pdf)
 21. **Luciano, J.**, Cohen, M. Samson, J. "Predictive Medicine: Initial Symptoms May Determine Outcome in Clinically Treated Depressions," 1997 International Conference on Neural Networks (ICNN'97), IEEE, Piscataway, NJ, vol. I, pp71-80.
 22. **Luciano, J.**, Cohen, M., Samson, J. and Hagan, P., "A Prototype and Nonlinear Neural Network Approach to Subtyping Depressive Illness by Initial Input Data and Treatment Outcome," *Proceedings of the Irish Neural Network Conference* 1994, Dublin, Ireland
 23. **Luciano, J.**, Cohen, M., Samson, J. "A Neural Network Model of Unipolar Depression," *Proceedings of the Irish Neural Network Conference* 1994, Dublin, Ireland.

Reports, Reviews, Book Chapters, Ontologies, and Information Artifacts

1. Cumming, Grant P., French, Tara, Hogg, Jamie, Gilstad, Heidi, Molik, David, **Luciano, Joanne S.** "E-health to M-health: Use of social media by care providers and hospitals: benefits and challenges" in *Connected Health: new challenges for the 21st century*. Edited by Palgrave MacMillan. (2017)
2. Cumming, Grant P., McKendrick, Douglas, Hogg, Jamie, French, Tara, Kahana, Eva, Molik, David, **Luciano, Joanne S.** "Combining social media and big data for a better patient understanding" in *Connected Health: new challenges for the 21st century*. Edited by Palgrave MacMillan. (2017)
3. **Luciano, JS.**, Sayogo, DS, Ran, W., Depaula, N, Jarman, H, Luna-Reyes, LF, Tayi, GK et al. "Using Ontologies to Develop and Test a Certification and Inspection Data Infrastructure Building Block." In *Private Data and Public Value: Governance, Green Consumption, and Sustainable Supply Chains*. Vol. 26., pp. 89-107. Springer International Publishing, 2016.
4. Sayogo, DS., Jarman, H., Andersen, DF., **Luciano, JS.** "Labeling, Certification, and Consumer Trust." In *Private Data and Public Value: Governance, Green Consumption, and Sustainable Supply Chains*. Vol. 26., pp. 67-88. Springer International Publishing, 2016.
5. Emek Demir, Michael P Cary, Suzanne Paley, Ken Fukuda, Christian Lemer, Imre Vastrik, Guanming Wu, Peter D'Eustachio, Carl Schaefer, **Joanne Luciano**, Frank Schacherer, Irma Martinez-Flores, Zhenjun Hu, Veronica Jimenez-Jacinto, Geeta Joshi-Tope, Kumaran Kandasamy, Alejandra C Lopez-Fuentes, Huaiyu Mi, Elgar Pichler, Igor Rodchenkov, Andrea Splendiani, Sasha Tkachev, Jeremy Zucker, Gopal Gopinath, Harsha Rajasimha, Ranjani Ramakrishnan, Imran Shah, Mustafa Syed, Nadia Anwar, Özgün Babur, Michael Blinov, Erik Brauner, Dan Corwin, Sylva Donaldson, Frank Gibbons, Robert Goldberg, Peter Hornbeck, Augustin Luna, Peter Murray-Rust, Eric Neumann, Oliver Ruebenacker, Matthias Samwald, Martijn van Iersel, Sarala Wimalaratne, Keith Allen, Burk Braun, Michelle Whirl-Carrillo, Kei-Hoi Cheung, Kam Dahlquist, Andrew Finney, Marc Gillespie, Elizabeth Glass, Li Gong, Robin Haw, Michael Honig, Olivier Hubaut, David Kane, Shiva Krupa, Martina Kutmon, Julie Leonard, Debbie Marks, David Merberg, Victoria Petri, Alex Pico, Dean Ravenscroft, Liya Ren, Nigam Shah, Margot Sunshine, Rebecca Tang, Ryan Whaley, Stan Letovksy, Kenneth H Buetow, Andrey Rzhetsky, Vincent Schachter, Bruno S Sobral, Ugur Dogrusoz, Shannon

- McWeeney, Mirit Aladjem, Ewan Birney, Julio Collado-Vides, Susumu Goto, Michael Hucka, Nicolas Le Novère, Natalia Maltsev, Akhilesh Pandey, Paul Thomas, Edgar Wingender, Peter D Karp, Chris Sander and Gary D Bader. The BioPAX community standard for pathway data sharing. *Nature Biotechnology* 28, 935–942 (2010)
6. Colosimo, M., L. Hirschman, M. Keybl, **J. Luciano**, S. Mardis, and M. Peterson. "Genomics For Bioforensics: MITRE Sponsored Research Final Report." *Bedford, MA: The MITRE Corporation* (2008). <https://apps.dtic.mil/sti/pdfs/AD1107406.pdf>
 7. Kashyap, V, Cheung, KH, Doherty, D, Samwald, M, Marshall, S. **Luciano, J**, Stephens, S, Herman, I, Hookway, R. (2008). *Semantic Web and Beyond Computing for Human Experience*. 6.
 8. Christopher Brewster, Simon Jupp, **Joanne Luciano**, David Shotton, Robert Stevens, and Ziqi Zhang. Issues in learning an ontology from text. *Bio-Ontologies 2008: Knowledge in Biology*, ISMB 2008, Toronto, Canada. Phillip Lord, Nigam Shah, Susanna-Assunta Sansone, Matthew Cockerill, Editors. Pages 9-12. <http://www.bio-ontologies.org.uk/download/Bio-Ontologies2008.pdf>
 9. Vipul Kashyap, Kei-Hoi Cheung, Don Doherty, Matthias Samwald, M. Scott Marshall, **Joanne Luciano**, Susie Stephens, Ivan Herman and Ray Hookway, *An Ontology-based approach for Data Integration - An Application in Biomedical Research*, Book Chapter in Cardoso, J., Hepp, M., Lytras, M. (Eds.) *Real-world Applications of Semantic Web Technology and Ontologies*, Springer 2007. Hardcover ISBN-10: 0-387-48530-9, ISBN-13: 978-0-387-48530-0. <http://empwr.org/2007-Chapter5.pdf>
 10. **Luciano, J.** A Pathway to Pathways, *Genome Technology* June, 2006 pp15-16. <https://www2.lbl.gov/today/2006/Jun/06-Tue/GenomTech.pdf>
 11. Mirit Aladjem, Gary D. Bader, Michael P. Cary, Kam Dahlquist, Emek Demir, Peter D'Eustachio, Ken Fukuda, Frank Gibbons, Marc Gillespie, Chris Hogue, Michael Hucka, Geeta Joshi-Tope, David Kane, Peter Karp, Christian Lemer, **Joanne Luciano**, Natalia Maltsev, Eric Neumann, Suzanne Paley, Elgar Pichler, Jonathan Rees, Alan Ruttenberg, Andrey Rzhetsky, Chris Sander, Vincent Schachter, Andrea Splendiani, Mustafa Syed, Edgar Wingender, Guanming Wu, Jeremy Zucker. 2005. BioPAX – Biological Pathways Exchange Language Level 2, Version 1.0 Documentation, BioPAX Recommendation, December 30, 2005 BioPAX workgroup. <http://www.biopax.org/release/biopax-level2-documentation.pdf>
 12. Gary D. Bader, Erik Brauner, Michael P. Cary, Robert Goldberg, Chris Hogue, Peter Karp, **Joanne Luciano**, Debbie Marks, Natalia Maltsev, Eric Neumann, Suzanne Paley, John Pick, Aviv Regev, Andrey Rzhetsky, Chris Sander, Vincent Schachter, Imran Shah, Mustafa Syed, Jeremy Zucker. 2005 BioPAX – Biological Pathways Exchange Language Level 1, Version 1.4 Documentation BioPAX Recommendation Wednesday, April 27, 2005. <http://www.biopax.org/release/biopax-level1-documentation.pdf>
 13. **Luciano, J.**, Cohen, M. Samson, J. "Neural Network Modeling of Unipolar Depression," *Neural Modeling of Cognitive and Brain Disorders*, World Scientific Publishing Company, eds. J. Reggia and E. Ruppini and R. Berndt. Book cover; chapter pp 469-483.
 14. **JS Luciano**, MA Cohen, JA Samson (1996). Modeling unipolar depression recovery. *Neural Network Modeling of Brain Disorders*, 469-483.

Published Abstracts

1. **Luciano, Joanne Sylvia**, Jr. Neural network modeling of unipolar depression: Patterns of recovery and prediction of outcome. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, Vol 57(2-B), Aug 1996, 0985.
2. Matthias Samwald, William Bug, Jonathan Rees, Chris Mungall, John Barkley, Ray Hookway, Huajun Chen, Susie Stephens, Olivier Bodenreider, Kei-Hoi Cheung, Paolo Ciccarese, Tim Clark, Donald W Doherty, Kerstin Forsberg, Vipul Kashyap, June Kinoshita, **Joanne Luciano**, M Scott Marshall, Eric Neumann, Eric Prud'hommeaux, Daniel Rubin, Michael Travers, Gwen Wong, Elizabeth Wu, Alan Ruttenberg. 2007. *The Semantic Web Health Care and Life Sciences Interest Group work in progress: A large scale, OBO inspired, repository of biological*

knowledge based on Semantic Web technologies. Bio-Ontologies SIG Workshop 2007 Poster Abstract: <http://bio-ontologies.man.ac.uk/abstracts.php>

3. **Luciano, Joanne S.** 2010 Proceedings of AMIA Summit on Translational Bioinformatics. (2010) *Translational Medicine: Using Systems of Differential Equations to Identify Patterns in Symptom Remission in Response to Treatment and the Underlying Dynamics of their Interactions.*
4. Cumming, Grant P, **Joanne S Luciano**, David Molik, and Tara French. "Health Web Science: Formulating Healthcare for the 21st Century A Health Web Metadata Curation Framework to Evolve a Behavioral Model for Preferable Health Outcomes." Proceedings of the 3rd European Workshop on Practical Aspects of Health Informatics, 2015. <http://ceur-ws.org/Vol-1574/abstract5.pdf>