

* indicates items since the last rank (Associate Professor) was awarded

CURRICULUM VITAE

1. **Personal Details**

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2. **Higher Education**

a. **Undergraduate and Graduate Studies**

Period of Study	Name of Institution and Department	Degree
10/88 - 07/91	Technion - Israel Institute of Technology, Faculty of Biology	B.Sc.
9/91 – 1/94	Technion - Israel Institute of Technology, Faculty of Biology	M.Sc.
3/94 – 6/99	Technion - Israel Institute of Technology, Department of Information Systems Engineering	Ph.D.

b. **Post-Doctoral Studies**

Period of Study	Name of Institution and Department/Lab	Name of host
09/99-08/03	Stanford University, Medical School, Stanford Medical Informatics	Edward Shortliffe, Samson Tu, and Russ Altman

3. Academic Ranks and Tenure in Institutes of Higher Education

Years	Name of Institution and Department	Rank/Position
2004-2005	University of Haifa, Department of Information Systems	Senior Lecturer Received tenure in 4/05
2008-2009	Stanford University, Center for Biomedical Informatics Research	Visiting Assistant Professor
2011-now	University of Haifa, Department of Information Systems	Associate Professor

4. Offices in Academic Administration

Years	Name of Institution and Department	Rank/Position
2004	University of Haifa, Department of Information Systems	Member of a consulting committee that helped the Dean of our Faculty, Prof. Rattner to manage the Information Systems Department (together with Dr. Pnina Soffer).
2005-2007	University of Haifa, Department of Information Systems	Member of a consulting committee that helped our department head, Prof. Ilan Shimshoni to manage the Information Systems Department
2010-2012	University of Haifa, Department of Information Systems	Department Chair
2015	University of Haifa, Department of Information Systems	Member of the committee for designing the new portal of the Research Authority
2016	University of Haifa, Department of Information Systems	Undergraduate advisor

5. Scholarly Positions and Activities outside the University

Years	Memberships in Academic Professional Associations
1998-2003	Institute of Electrical and Electronics Engineers (IEEE)
2000-now	American Medical Informatics Association
2002	International Society for Computational Biology
2003-now	Israeli Association for Medical Informatics
*2012	Israeli Association of Information Systems

Years	Associate Editor in Journals
*2014-now	Journal of Biomedical Informatics

Years	Member of Journal Editorial Board
2007-now	Methods of Information in Medicine
2009-now	International Journal of Computers in Healthcare
2010-now	The Open Medical Informatics Journal
*2012-2014	Journal of Biomedical Informatics

Years	Membership in Advisory Boards
*2013-now	Deontics Scientific Advisory Board. Deontics is a company that develops tools for developing decision-support systems based on clinical guidelines. See http://www.deontics.com

Years	Membership in Task Forces
2009-2014	American Association for Clinical Endocrinologists (AACE) Task Force for the Electronic Implementation of AACE Guidelines

Years	Reviewing for Refereed Journals
2003-2005	Bioinformatics
2004-2015	Journal of BioMedical Informatics
2005-2015	Methods of Information in Medicine
2006	Mathematical Biosciences
2006	Requirements Engineering
2006-2007	Nature Biotechnology
2006-2009	BMC Bioinformatics
2006-2009	BMC Systems Biology
2007	BioSystems
2007	Theory and Practice of Logic Programming
2007	International Journal of Business Process Integration and Management

2007-2013	Open Medical Informatics Journal
2007-2015	Computer Methods and Programs in Biomedicine
2007-2015	International Journal Artificial Intelligence in Medicine
2008	International Journal of Medical Informatics
2008-2013	BMC Medical Informatics and Decision Making
2008	Simulation
2010	International Journal of Human-Computer Studies
2010	Biomedical Signal Processing
2010	Data & Knowledge Engineering (DKE) Journal
2010-2015	Journal of the American Medical Informatics Association
2010-2011	Journal of the Royal society of Medicine
*2013	ACM Transactions on Intelligent Systems and Technology

Years	Reviewing for Funding Institutions
2004-2008	Galil Center on Medical Informatics, Telemedicine, and Personalized Medicine, Medical School, Technion
2006-2007	European Commission, IST Future and Emerging Technologies
2007	Israel Science Foundation
2008	Austrian Science Fund
*2011	National (UK) Awareness and Early Diagnosis (NAEDI) Scientific Committee
*2013	Natural Sciences and Engineering Research Council of Canada
*2013	Israel Cancer Association

Years	Reviewer for Conferences (not counting conferences in which I am a PC member, listed in Section 6)
2003-now, annual	American Medical Informatics Association annual Symposium
2004-now, every 2 years	International Joint Meeting of the European Centre for Medical Informatics
2004	IEEE Intl Conference on Software – Science, Technology & Engineering
2005-now	Artificial Intelligence in Medicine Europe

2006	ECAI-WS AI techniques in healthcare: evidence based guidelines and protocols
2008	International Conference on Conceptual Modeling (ER)
2009	International Symposium on Applied Sciences in Biomedical and Communication Technologies
*2013	11th International Conference on Wirtschaftsinformatik
*2013	6th World Congress on Social Media, Mobile Apps, and Internet/Web 2.0

Years	Committee Member of Graduate Students' Defense (outside the university)
2004	Ph.D. proposal defense of Avi Soffer from Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion, Israel
2004	M.Sc. thesis examiner of Robert Moskowitz from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
2005	Ph.D. proposal defense of Dizza Beimel, Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion, Israel
2005	Ph.D. proposal defense of Eran Toch from Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion, Israel
2005	M.D. thesis examiner of Avika Leibovitz, School of Medicine, Ben-Gurion University, Israel
2006	M.Sc. thesis examiner of Efrat German from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
2006	M.Sc. thesis examiner of Roman Feldman, Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion, Israel
2006	M.Sc. thesis examiner of Erez Shalom from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
2006	Ph.D. thesis examiner of Alessio Bottrighi from Dipartimento di Informatica, Università del Piemonte Orientale, Italy

2008	Ph.D. Proposal defense examiner of Erez Shalom from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
2010	Ph.D. Proposal defense examiner of Yudit Somekh, Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion, Israel
2010	Proposal defense examiner of Avner Hatzek from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
2011	Ph.D. defense examiner of Sajjad Hussain from Dalhousie University, Canada
*2011	Ph.D. proposal defense examiner of Alexander Blekhman from the Technion, Haifa
*2011	PhD proposal review for the Beta Research School for Operations Management and Logistics, Technische Universiteit Eindhoven, The Netherlands , concerning the research proposal 'Business process redesign in healthcare' under supervision of prof.dr.ir. Paul Grefen.
*2012	Ph.D. Proposal defense examiner of Ayelet Goldsteint from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
*2012	Ph.D. thesis examiner of Erez Shalom from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel
*2014	PhD thesis review for the Department of Computer Science & The Network Institute, Vrije University, Amsterdam, The Netherlands concerning the thesis "Computing Healthcare Quality Indicators Automatically: Secondary Use of Patient Data and Semantic Interoperability" under supervision of Prof. Frank van Harmelen.
*2015	PhD thesis review for the Faculty of Informatics, Vienna University of Technology, Austria , concerning the thesis "Using Time ML Annotations for an Information Extraction Approach to Support the Modeling of Clinical Guidelines" under the supervision of Prof. Silvia Miksch
*2015	Ph.D. thesis examiner of Ayelet Goldstein from Information Systems Engineering, Faculty of Engineering, Ben-Gurion University, Israel. "Automated

	Knowledge-Based Textual Summarization System for Time-Oriented Clinical Data”
*2016	PhD thesis proposal examiner of Arava Zuri from the Dept. of Information Systems, University of Haifa, Israel. “Data inaccuracies in business processes”

Years	Other activities
*2012-2014	Organizing team of the Israeli Business Process Management (BPM) Roundtable – a series of industry-academia forum on BPM issues, part of the European BPM Roundtable network. See http://bpm-haifa.rhcloud.com/

6. Participation in Scholarly Conferences

a1. International Conferences – held abroad

(PP – paper presentation; Pos- poster presentation; TP – tutorial presentation; Pan – panelist, D – system demonstration)

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion/Comments	Role
April 19-25, 1998	Intl Conf of Software Engineering (ICSE98)	Kyoto, Japan,	Modeling Complex Dynamic Systems through the Object-Process Methodology (Doctoral Symposium)	PP
June 14-15, 1999	Fourth CAiSE/IFIP8.1 Intl Workshop on Evaluation of Modeling Methods in System Analysis and Design (EMMSAD99)	Heidelberg, Germany,	Experimenting with Real-time Specification Methods: The Model Multiplicity Problem	PP
May 2000	2000 Annual Meeting of the American Telemedicine Association	Phoenix, Arizona,	GuideLine Interchange Format (GLIF): Extensions and Practical Applications Workshop	Pos
October 28, 2000	Biomedical Computation @ Stanford Symposium (BCATS)	Stanford, CA	Guideline Interchange Format: a Representation for Sharable, Computer-interpretable Guidelines	Pos
November 4-8, 2000	American Medical Informatics Association Annual Symposium	Los Angeles, CA	1) GLIF3: The Evolution of a Guideline Representation Format (Paper Presentation)	PP TP

	(AMIA Symp)		2) An Introduction to Modeling and Representation of Clinical Guidelines	
September 2-5, 2001	10th World Congress on Medical Informatics (MedInfo)	London, UK,	Handling Expressiveness and Comprehensibility Requirements in GLIF3	PP
August 3-7, 2002	10th International Conference on Intelligent Systems for Molecular Biology	Edmonton, Canada	Modeling Mutations, Abnormal Processes, and Disease Phenotypes, using a Workflow/Petri Net Model	Pos
August 8, 2002	Fifth Annual Bio-Ontologies Meeting	Edmonton, Canada	Integrating bio-ontologies with a Workflow/Petri Net model to qualitatively represent and simulate biological systems	PP
October 26, 2002	Biomedical Computation @ Stanford Symposium (BCATS)	Stanford, CA	1) Modeling Mutations, Abnormal Processes, and Disease Phenotypes Using a Workflow/Petri Net Model 2) Support for Guideline Development through Error Classification and Constraint Checking	Pos Pos
November 9-13, 2002	AMIA Symp	San Antonio, Texas	Support for Guideline Development through Error Classification and Constraint Checking	PP
November 8-12, 2003	AMIA Symp	Washington, DC	Approaches for guideline versioning using GLIF	PP
April 12-14, 2004	International Joint Meeting of the European Centre for Medical Informatics	Prague, Czech Republic	1) Modeling Guideline Medical Knowledge for Content-based Indexing and Comparison 2) Diversity and Standardization in the Development of Clinical Guideline Models	PP Panel
September 7-11, 2004	Medinfo 2004/AMIA 2004	San Francisco, CA	Simulating and Analyzing Biomedical Processes using Workflow/Petri Net Models and Tools	PP
November 11-15, 2006	AMIA Symp	Washington DC	Eliciting and characterizing scenarios of disclosure of private health data	Pos
August 29, 2006	The biennial European Conference on Artificial Intelligence (ECAI) Workshop: AI techniques in healthcare: computerized	Riva del Garda, Italy	Adaptation of Practice Guidelines for Clinical Decision Support: A Case Study of Diabetic Foot Care	PP

	guidelines and protocols			
June 7-8, 2007	Second Conference on Human Factors Engineering in Health Informatics	Aarhus, Denmark	A multi-perspective methodology for studying user interactions with a decision-support system	PP
September 24, 2007	Business Process Management (BPM) Conference Workshop: 1st International Workshop on Process-oriented Information Systems in Healthcare (PROhealth)	Brisbane, Australia	<ol style="list-style-type: none"> 1) Towards Flexibility in Clinical Guideline Modelling Languages 2) Mining Process Execution and Outcomes 3) Learning Business Process Models: A case study 	PP PP PP
November 10-14, 2007	AMIA Symp	Chicago, IL	Characterization of the Knowledge Contained in Diagnostic Problem Oriented Clinical Practice Guidelines	Pos
November 8-12, 2008	AMIA Symp	Washington DC	<ol style="list-style-type: none"> 1) Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines 2) Comparing the Context and the SitBAC models for Privacy Preservation in terms of model understanding and synthesis 	TP Pos
July 19, 2009	Knowledge Representation for Healthcare Workshop (KR4HC), in Conjunction with Artificial Intelligence in Medicine	Verona, Italy	<ol style="list-style-type: none"> 1) The Knowledge-Data Ontology Mapper (KDOM): a Tool for Mapping Clinical Guidelines to EMRs 2) Querying Radiology Appropriateness Criteria from a virtual Medical Record using GELLO 	PP D PP
November 14-18, 2009	AMIA Symp.	San Francisco, CA	SitBACReasoner: Reasoning about access-control situations with OWL	Pos
February 16, 2010	MHPW 2010: Making Healthcare Processes Work Information Systems meet Scheduling Theory Eurandom	Eindhoven University of Technology, The Netherlands	Making Healthcare Processes Work Information Systems meet Scheduling Theory	Panel

September 12-15, 2010	13th World Congress on Medical Informatics (MedInfo 2010)	Cape Town, South Africa	Sharing guidelines knowledge: can the dream come true?	Panel
November 13-17, 2010	AMIA Symp.	Washington, DC	1) Extending the GuideLine Implementability Appraisal (GLIA) instrument to identify problems in control flow 2) Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines	PP TP
*July 2-6, 2011	AIME Conference	Bled, Slovenia		PC Chair
*July 6, 2011	KR4HC Workshop	Bled, Slovenia	Reasoning with Effects of Clinical Guideline Actions using OWL: Amyloidosis as a Case Study	PP
*August 28-Sept. 1, 2011	ProHealth Workshop and BPM Conference	Clermont-Ferrand, France		Co-chair
* 22-26 October, 2011	AMIA Symp.	Washington DC	Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines	TP
* September 3, 2012	Joint KR4HC/ProHealth Workshop, Tallinn, Estonia	Tallinn, Estonia		Co-chair
* 3-7 November, 2012	AMIA Symp.	Chicago, Illinois	1) How Does Personal Information Affect Clinical Decision Making? Eliciting Categories of Personal Context and Effects. 2) Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines	Pos TP
*August 20-23, 2013	Medinfo	Copenhagen	1) Reusable Knowledge for Best Clinical Practices: Why We Have Difficulty Sharing And What We Can Do 2) How to detect and exploit non-adherence to guidelines?	Panel
*November 16-20, 2013	AMIA Annual Symp.	Washington DC	Expanding the Autism Ontology to DSM-IV Criteria (poster presentation)	Pos
*November 15-19, 2014	AMIA Annual Symp.	Washington DC	1) A Layered context model: a basis for customized treatment – a GDM patient case study 2) Meet the Expert (I was the expert)	Pos Discussion
*June 20, 2015	Joint KR4HC/ProHealth workshop	Pavia, Italy	1) The MobiGuide Distributed and Personalized Clinical-guideline-based Decision-support System for Patients	D

			and their Care Providers: demonstration and tool report 2) Integrating Organizational Workflows into MobiGuide Clinical Guidelines	PP
*August 12-23, 2015	Medinfo	Sao Paolo, Brazil	1) Demonstration of the MobiGuide Distributed and Personalized Clinical-guideline-based Decision-support System for Patients and their Care Providers 2) Distributed and Personalized Clinical-guideline-based Decision-support System for Patients and their Care Providers: the MobiGuide System	D Work shop
* November 14-18, 2015	AMIA Annual Symp.	Washington DC	Meet the Expert (I was the expert)	Discussion
* June 22 - 25, 2016	Knowledge Management Conference	Lisbon, Portugal	Evaluating Ontology Formalisms for Representing the Knowledge Model of the SitBAC Framework	PP
* November 12-16, 2016	AMIA Annual Symp.	Chicago, Illinois	The MobiGuide Distributed & Personalized Patient Guidance System	D

a2. International Conferences held in Israel

None

a3. Local Conferences

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
March 30-April 3, 1998	1998 IEEE Conference and Workshop: Engineering of Computer Based Systems (ECBS98)	Jerusalem	Reactive System Specification through the Object-Process Methodology	PP
July 5-7, 1999	Next Generation Information Technologies and Systems (NGITS'99)	Zikhron Yaacov	From Object-Process Diagrams to a Natural Object-Process Language	PP
February 2-3, 2004	The Value of Information in Networked Contexts: An International Conference	Haifa	Describing the Quality of Knowledge Contained in Biological and Medical Knowledge Bases	PP
June 2, 2004	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	Defining types of changes among versions of clinical guidelines and their representation in GLIF3	PP
May 17, 2006	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	Characterizing Situation-based Access Control of Patient Data	Co-author

March 20-23, 2007	International Conference on Systems Engineering and Modeling-ICSEM'07	Haifa	Classifying and Modeling Exceptions through Object Process Methodology	Co-author
December 20, 2010	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	Using Incremental Search Technique to Standardize Reporting of Mammography Reports	Co-author
June 9, 2014	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	1) Architecture for a Ubiquitous Decision Support System for Patients and Care Providers 2) Personalization of Computer-interpretable Clinical Guidelines	PP Co-author
*June 8, 2015	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	A layered customized decision model for clinical decision making	Co-author
*June 14, 2016	The Israeli Association for Medical Informatics Annual Symposium	Tel-Aviv	1) Does the MobiGuide decision-support system help patients and doctors? 2) A layered model supporting update of computer-interpretable clinical guidelines	Presentation Co-author

b. Organization of Conferences or Sessions

Date	Name of Conference	Place of Conference	Subject of Conference	Role
November 8-12, 2003	American Medical Informatics Association Annual (AMIA) Symposium	Washington, DC	Medical Informatics	Poster committee
April 12-14, 2004	Symposium on Computerized Guidelines and Protocols, part of Intl Joint Meeting of the European Centre for Medical Prague, Czech Republic Informatics	Prague, Czech Republic	Medical Informatics	Program committee
September 7-11, 2004	Medinfo /AMIA	San Francisco, CA	Medical Informatics "Management and Maintenance of Clinical Knowledge Sources"	Session chair
22-23 Feb. 2005	IEEE International Conference on Software – Science, Technology and	Herzeliya, Israel	Software Engineering	Program committee

	Engineering (SwSTE05)			
July 24 - 27, 2005	Artificial Intelligence in Medicine (AIME)	Aberdeen, United Kingdom	Medical Informatics	Program committee
May 15, 2006	Workshop on Medical Informatics: Artificial Intelligence and cognitive perspectives	University of Haifa	Medical Informatics	Organizer
August 29, 2006	Workshop on "AI techniques in healthcare: evidence-based guidelines and protocols", in Conjunction with the biannual European Conference on Artificial Intelligence (ECAI)	Riva del Garda, Italy	Medical Informatics	Program committee
July 7 - 10, 2007	AIME 2007	Amsterdam, The Netherlands	Medical Informatics	Program committee
24 September 2007	1st International Workshop on Process-oriented Information Systems in Healthcare (ProHealth)	Brisbane, Australia	Medical process support	Co-Chair
30-31 October, 2007	IEEE International Conference on Software Science, Technology & Engineering (SwSTE07)	Herzelia, Israel	Software Engineering	Program committee
October 20-24, 2008	27th International Conference on Conceptual Modeling (ER 2008)	Barcelona, Spain	Software Engineering	Program committee
18-22 July 2009	AIME 2009	Verona, Italy	Medical Informatics	Program committee
1 September 2008	2nd ProHealth	Milan, Italy	Medical process support	Co-Chair
7 September 2009	3d ProHealth	Ulm, Germany	Medical process support	Co-Chair
July 19, 2009	Workshop on Knowledge Representation for Health-Care (KR4HC)	Verona, Italy	Medical Informatics	Organizing committee

	in conjunction with AIME 2009			
November 24-27, 2009	2nd International Symposium on Applied Sciences in Biomedical and Communication Technologies, co sponsored by IEEE.	Bratislava, Slovak Republic	Medical IT	Technical program committee
August 2009-ongoing	AIME		Medical Informatics	Board Member
May 3-4, 2010	Workshop on Software Engineering in Health Care (SEHC 2010). In conjunction with ICSE	Cape Town, South Africa	Software Engineering in healthcare	Program committee
August 17, 2010	The Second Workshop Knowledge Representation for Health Care (KR4HC-2010), in conjunction with ECAI 2010	Lisbon, Portugal	Medical Informatics	Organizing Committee
13 to 16 September , 2010	Medinfo 2010, the 13th World Congress on Medical Informatics	Cape Town, South Africa	Medical Informatics	Scientific program committee
2010-2012	AMIA Annual Symposium	Washington DC	Medical Informatics	AMIA awards committee member
July 2011	AIME 2011	Bled, Slovenia	Medical Informatics	Program Committee Chair
*July 2011	KR4HC Workshop	Bled, Slovenia	Medical Informatics	Program Committee
*August 2011	ProHealth Workshop	Clermont-Ferrand, France	Medical process support	Co-chair
* June 20-22, 2012	25th International Symposium on (CBMS)	Rome, Italy	Computer-Based Medical Systems	Program Committee
*May 2013	AIME 2013	Murcia, Spain	Medical Informatics	Program Committee
*September 2012	Joint KR4HC/ProHealth Workshop	Tallinn, Estonia	Medical Informatics	Program Committee Chair
*June 2013	Joint KR4HC/ProHealth Workshop	Murcia, Spain	Medical Informatics	Program Committee Chair
*November 2013	AMIA Annual Symposium	Washington DC	Medical Informatics	AMIA Student Paper Competition

				Committee Member
*July 2014	Inconsistency Robustness	Stanford, CA	Logic	Program Committee
*September 2014	12th International Conference on Business Process Management	Haifa, Israel	Business Process Management	General co-Chair
*September 2014	ProHealth Workshop	Haifa, Israel	Medical process support	Co-Chair
*November 2014	American Medical Informatics Association (AMIA) Annual Symposium	Washington DC	Medical Informatics	Scientific Program Committee and Student Paper Competition Committee (for a conference with over 2000 participants)
*June, 2015	Joint KR4HC/ProHealth Workshop	Pavia, Italy	Medical Informatics	Program co-chair
*June, 2015	Artificial Intelligence in Medicine	Pavia, Italy	Medical Informatics	Scientific Program Committee
*September	Joint KR4HC/ProHealth Workshop	Munich, Germany	Medical Informatics	Scientific Program Committee
*June, 2017	Joint KR4HC/ProHealth Workshop	Vienna, Austria	Medical Informatics	Program co-chair
*March 2017	Roles of Logic and Collaboration in Intelligent Applications	Stanford, CA	Informatics	Scientific Program Committee

7. Invited Talks and Semi-plenary talks

Abroad

Semi-plenary Talks/keynotes

Year	Name of Forum	Place of Lecture	Subject of Lecture	Role
2010	German National Medical Informatics Conference	Mannheim Germany	Making Healthcare Processes Work: Clinical-guidelines based Decision-Support Systems	Semi-plenary Speaker
* 2011	3 rd Louhi workshop - Text and Data Mining	Bled, Slovenia	Futuristic Usage of EHR Content by Clinical-Guideline based Decision-support Systems	Keynote speaker

	of Health Documents			
* 2014	AAAI Fall Symposium on Expanding the Boundaries of Health Informatics Using AI	Arlington, Virginia	MobiGuide: Guiding patients any time, everywhere in a personalized way	Keynote speaker
*2017	EuroMISE International Conference: Systems for Medical Decision Support and Forensic Identification	Prague, Czech Republic	The MobiGuide Patient Guidance System: principles, methods, and assessment	Keynote Speaker
*2017	Joint AAAI Workshop on Health Intelligence	San Francisco, CA	Engaging patients in their health care: experiences from the MobiGuide Project	Keynote Speaker

Invited Talks

Year	Name of Forum	Place of Lecture	Subject of Lecture	Role
2000	Towards Representations for Sharable Guidelines	Boston, Massachusetts	Contrasts Between Modeling Approaches for Clinical Guidelines and Medical Decision Rules	Speaker
2001	Workshop on Clinical Guideline Representation Methods	London, UK	1) The GuideLine Interchange Format, version 3 2) A comparison of computer-interpretable guideline models	Speaker
2006	Symposium "Informatievoorziening in de gezondheidszorg"	Eindhoven, The Netherlands	Balancing standardization and flexibility in computerized clinical guidelines	Speaker
2008	Protégé Meeting	Stanford University	Using Protege-OWL and SWRL to represent and reason with situation-based access control policies	Speaker
2009	American Association of Clinical	Phoenix, AZ	A clinical-guideline Based decision-support system for Diabetic Foot	Speaker

	Endocrinologists Executive Council Meeting			
2009	Protégé short-course	Stanford University	Real World Applications with OWL: Access Control Policies	Speaker
2010	MHPW 2010: Making Healthcare Processes Work Information Systems meet Scheduling Theory Eurandom	Eindhoven University of Technology The Netherlands	Making healthcare processes work	Speaker
2010	10th AME National Congress. Italian Association of Clinical Endocrinologists	Naples, Italy	Creating a computer-interpretable guideline: The Thyroid Nodule Algorithm	Speaker
*2011	Pavia Stroke Update: Le nuove tecnologie XXI Ottorino Rossi Award	Pavia, Italy	Technologies for Clinical Guideline Implementations	Speaker
*2014	Inconsistency Robustness Conference	Stanford University, CA	Inconsistency Robustness of a Distributed IS	Speaker
*2015	Medical Informatics course	University of Pavia, Italy	Clinical guideline based Decision-support systems and the MobiGuide project - presentation and demonstration	Speaker
*2016	Protégé Research Meeting	Stanford University, CA	An ontology for Autism Spectrum Disorder (ASD) to infer ASD phenotypes from Autism Diagnostic Interview-Revised data	Speaker

In Israel
Invited Talks

Year	Name of Forum	Place of Lecture	Subject of Lecture	Role
2005	Fifth Galil Center Symposium	Technion Medical	Clinical guidelines: from paper-based guidelines to guideline application	Speaker

		School, Haifa, Israel		
*2011	Medicine 2.0	Haifa, Israel	Patient-specific Clinical Decision-support systems: Matching Clinical Guideline-based Knowledge with Patient Medical Records	Speaker
*2013	Information Systems Engineering: Past, Present, Future	Beer Sheva, Israel	New Progress in Medical Decision Support Systems and the MobiGuide Project	Speaker
*2013	T2med: Social-Mobile-Cloud Meets Medicine @ Technion	Technion, Haifa, Israel	The MobiGuide Project: Guiding Patients Any Time, Everywhere in a Personalized Way	Speaker
*2013	10x10 Medical Informatics Course	Tel Hashomer, Israel	Clinical Guideline Based Decision Support Systems	Speaker
*2014	Europe Day	University of Haifa, Israel	MobiGuide: Guiding Patients Anytime Everywhere	Speaker
*2014	Informatics Approaches for Healthcare Workshop	University of Haifa, Israel	The MobiGuide Project: Guiding Patients Any Time, Everywhere in a Personalized Way	Speaker
*2014	10x10 Medical Informatics Course	Tel Hashomer, Israel	Clinical Guideline Based Decision Support Systems	Speaker
*2015	Open Day	University of Haifa, Israel	The MobiGuide Project: Guiding Patients Any Time, Everywhere in a Personalized Way	Speaker
*2015	Israeli Bioinformatics Association Annual Meeting	Tel Aviv University, Israel	From evidence to practice: The MobiGuide system for guiding patients any time, everywhere	Speaker
*2016	Israeli association for Artificial Intelligence Annual Symposium	Ben Gurion University, Israel	Guideline-based clinical decision support: The MobiGuide Project	Speaker
*2016	Ruppin Conference of Industrial Engineering and Management	Ruppin College, Israel	דפוסי שימוש של חולים במערכת מוביגייד והשפעת המערכת על קבלת החלטות Patterns of Patients' Usage of the MobiGuide Decision-support System	Speaker

*2016	First RAMBAM Healthcare Campus Symposium	Technion, Israel	Challenges of the knowledge engineers /eClinicians in the MobiGuide Project	Speaker
*2016	CODATA Workshop	Tel Aviv, Israel	Using ontologies for sharing and semantic integration of health data	Speaker

8. Colloquium Talks

Abroad

Year	Name of Forum	Place of Lecture	Presentation/Comments
1999	Stanford Medical Informatics (SMI) Colloquium	Stanford University	Modeling System Dynamics through the Object-Process Methodology
2003	Stanford Medical Informatics (SMI) Colloquium	Stanford University	Modeling Bio-medical Systems: Challenges and Solutions
2004	Department of Biomedical Informatics Colloquium	Columbia University, NY	Common Themes in Modeling and Analyzing Changing Biological & Medical Systems
2006	Department of Technology Management Colloquium	Technical University of Eindhoven, The Netherlands	Common Themes in Modeling and Analyzing Bio & Medical Systems
2006	Stanford Medical Informatics (SMI) Colloquium	Stanford University	Use of ontologies and system analysis in medical domains
2008	Biomedical Informatics Research (BMIR) Colloquium	Stanford University	Combining clustering analysis and ontological methods for identifying groups of comorbidities for developmental disorders
2008	Department of Biomedical Informatics (BMI) Colloquium	Arizona State University	Conceptual modeling and design of clinical decision-support systems
2008	National Center for Integrative Biomedical Informatics Tools and Technology Seminar Series	University of Michigan	Using the BioWorkflow model to represent and reason with biological systems

*2012	Biomedical Informatics Research (BMIR) Colloquium	Stanford University	MobiGuide: Guiding patient any time everywhere
*2013	Biomedical Informatics Research (BMIR) Colloquium	Stanford University	Personalizing Decision Support within the MobiGuide Project: Guiding Patients Any Time Everywhere
*2014	Computer Science Colloquium	Vrije Universiteit Amsterdam	Personalizing Decision Support within the MobiGuide Project: Guiding Patients Any Time Everywhere
*2015	Biomedical Informatics research talk	University of Pavia, Italy	Clinical guideline based Decision-support systems and the MobiGuide project
*2016	Biomedical Informatics Research (BMIR) Colloquium	Stanford University	What Makes a Patient-centered Decision-support System Effective? Results and Lessons Learned from the MobiGuide Project

In Israel

Year	Name of Forum	Place of Lecture	Presentation/Comments
1994	Faculty of Biology Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	DNA Triple Helices Inhibits DNA Unwinding by the SV40 Large T-Antigen Helicase
1999	Department of Information Systems Engineering Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	Modeling System Dynamics through the Object-Process Methodology"
2000	Faculty of Computer Science Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	GLIF: a Language for Sharing and Executing Clinical Guidelines
2002	Faculty of Computer Science Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	Modeling Biological Processes Using Workflow and Petri Net Models
2002	Faculty of Medicine Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	GLIF: a Language for Sharing and Executing Clinical Guidelines
2002	Department of Information	Tel Aviv University, Israel	Modeling Biological Processes Using

	Systems Colloquium		Workflow and Petri Net Models
2002	Cell Research and Immunology Colloquium	Tel Aviv University, Israel	GLIF: a Language for Sharing and Executing Clinical Guidelines
2004	Forum of the School of Public Health	University of Haifa, Israel	Computer-interpretable Clinical Guidelines: Challenges and Solutions
2004	Computer Science Colloquium	University of Haifa, Israel	Modeling Clinical Guidelines: Challenges and Solutions
2004	Information Systems Colloquium	Ben Gurion University, Beer-Sheva, Israel	Challenges in Modeling Computer-interpretable Clinical Guidelines
2004	Information Systems Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	Challenges in Modeling Computer-interpretable Clinical Guidelines
2005	Research Center for Work Safety and Human Engineering Colloquium	Technion – Israel Institute of Technology, Haifa, Israel	Challenges in Modeling Computer-interpretable Clinical Guidelines
2010	Computer Engineering Dept. Colloquium	Ort Braude, Karmiel, Israel	A Practical Method for Transforming Free-Text Eligibility Criteria into Computable Criteria
*2012	Health Informatics & Analytics Study Group	IBM, Haifa	Futuristic Usage of EHR Content by Clinical Guideline-based Decision-support Systems

9. Research Grants

a. Grants Awarded

Role	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Amount: Total (sum awarded to researcher)	Years
PI	Dan Peled (PI), Daphne Getz (PI), Avi Raveh (PI)	Short- and long-term effects of the foundations program on the ministry of science	Ministry of Science and Mosad Neaman ^C	300,000 NIS (62,640 NIS)	2005
PI	Tsvi Kuflik (PI) Mitchell Schertz (Clinical expert)	Applying Clustering Analysis and	Caesarea Edmond Benjamin de Rothschild	40,000 NIS (20,000 NIS)	2005-6

		Ontological Methods for Developmental Disorders Diagnosis	Foundation Institute for Interdisciplinary Applications of Computer Science		
Coordinator and PI	See list below	MobiGuide: Guiding Patients Anytime Everywhere	EU FP7-ICT ^C	€5,387,000 (€600,000)	2011-5
* PI	Other Pis: Andrey Rzhetsky, Nancy Cox, (Uni of Chicago), Russ Altman (Stanford), Issac Kohane (Harvard), Edwin Cook (Uni of Illinois at Chicago), Richard Morimoto (Northwestern), Raul Rabadan (Columbia Uni)	Conte Center for Computational Systems Genomics of Neuropsychiatric Phenotypes	NIH ^C	(\$135,500)	2011-14
*PI	Dr. Irit Hochberg, RAMBAM (PI)	Goal-oriented ontology-supported methodology for integrating computer-interpretable clinical guidelines and medical knowledge to support comorbidity management	Israel Science Foundation (ISF) ^C	200,000 Shekels	2016-19

*Other Pis: Pnina Soffer (HU), Yuval Shahar (BGU), Silvana Quaglini, Riccardo Bellazi, Hermie Hermens, Val Jones, Silvia Mkisch (Vienna University of Technology), Tom Broens (MobiHealth Co.), Carlo Napolitano (Fondazione Salvatore Maugeri Clinica del Lavoro e Della Riabilitazione), Elena Hernando (Universidad Politécnica de Madrid), Mercedes Rigla (Hospital de Sabadel), Alberto Crespo, Blanca Jordan (Atos Origin), Jan-Marc Verlinden (ZorgGemak BV)

b. Submission of Research Grants – Proposals Pending

Role	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Years
PI	Prof. Doron Kliger (PI), Dr. Shira Zelber-Sagi (PI)	Mobile Behavioral-Economics (MoBEcon): a rule-based framework for pre-teens health behavior enhancement, employing behavioral economics incentives	Israeli Ministry of Science ^C	2017-2020

c. Submission of Research Proposals – Not Funded

Role	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Years
PI	Andrey Rzhetsky (PI)	Modeling Disease Processes using Fuzzy Petri Net Models	BSF ^C	2004
PI		A Conceptual Model for Change and Evolution: of Computer-interpretable Clinical Guidelines	GIF Young Scientists' Program ^C	2005
PI	Dov Dori (PI), Yaron Denekamp (PI)	Identifying and Representing Design Patterns of Computer-Interpretable Guidelines	Technion-Haifa Fund	2006
PI	Pnina Soffer (PI) and Manfred Reichert (PI)	Automated Business Process Learning and Adaptation	GIF	2007
PI	Coordinator: John Fox; co-PIs: Silvia Miksch, Yuval Shahr, Paolo Terenziani, Frank van Hermelen	Executable Content in Medicine using Proprietary and Open Standards Engineering (eCOMPOSE)	EU FP7 CAPACITIES - Research Infrastructures ^C	2007
PI	Pnina Soffer (PI)	Automated Business Process Learning and Adaptation	ISF ^C	2008
PI	Andrey Rzhetsky (PI)	Modeling Disease Processes using Fuzzy Petri Net Models	BSF ^C	2008

PI	Pnina Soffer (PI)	Automated Business Process Learning and Adaptation	ISF ^C	2008
PI	Yaron Denekamp (PI)	The Impact of a Diagnostic Process Support System on Quality Safety and Efficiency Measurements in the Hospital and in Community Practices	Preliminary grant proposal to the Israel National Institute for Health Policies and Health Services Research ^C	2009
PI	Pnina Soffer	Automated Business Process Learning and Adaptation	ISF ^C	2009
PI	Co-PIs: Dan Peled, Jukka Ojasalo, Stelios C. A. Thomopoulos, Pablo García Bringas	Role-based approach to interoperability in crises and emergencies (ROSIE).	FP7-SEC-2010-1 ^C	2009
PI	Coordinator: Dr. Tsipi Heart, co-PIs: Prof. Zilla Sinuany-Stern, Prof. Yuval Shahr, Prof. Yosi Pliskin, Dr. Dizza Beimel, Prof. Shai Linn, Prof. Eddy Karnieli, and Dr. Yaron Denekamp	Healthcare Informatics and Decision Support	I-CORE ^C	2011
PI and Work Package leader	Coordinator: Gianna Tsakou (Singular Logic); co-PIs: John Fox (Oxford University), Dr. A Mayer and V Patkar (University College London and The Royal Free Hospital), (Dove Press and BiomedCentral), Paul de Clerck and	MEC4DEC - MEDical Content for DECision making at the point of Care	EU FP7 ^C	*2011

	Niels Piek (MEDECS), (Vidavo), Guy Wood-Gush (Deontics)			
PI	Co-PIs: Sarit Krauss (PI), Yuval Shahr (PI)	Israeli National Center for Artificial Intelligence and Machine Learning: Joining forces for stronger Israel	MOST ^C	*2012
PI and Work Package leader	Coordinator: Carlos Parra. Co-PIs: Francisco Núñez, Christian Lovis, Adolfo Muñoz, Chris Chatwin, Rafael Ordóñez, Tom Broens, Rong Chen, Alberto Borghese, Pier Mannuccio Mannucci, Sander Smit, Bruce Guthrie, Alessandro Nobili	European Patient – Chronic Affections Reliable Environment (epCARE)	European Union ^C	*2013
Coordinator and PI	Coordinator: Carlos Parra. Co-PIs: Francisco Núñez, Christian Lovis, Chris Chatwin, Alberto Borghese, John Fox	Diabetics Empowerment: Mobile Self-management (DEMOS)	European Union ^C	*2014
Coordinator and PI	PIs: John Fox, Haddas Lewy, Eran Segal, Carlos Marcos	Self-Predict: Unleashing the power of predictive modelling and evidence-based clinical guidelines for self-management decision making in Diabetes Mellitus type 2	European Union ^C	*2015

PI	Coordinator: Carlos Parra. Co-PIs: Francisco Núñez, Christian Lovis, Chris Chatwin, Alberto Borghese, John Fox	HEALthcare delivery network for INtegrated care based on complex patient's Guidelines (HEALING)	European Union ^C	*2015
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10. Scholarships, Awards and Prizes

Scholarships

- 1992 Received the Milton and Lilian Edwards Fellowship, 1992-1993 (MSc degree)
- 1999 Received a post-doctoral Fellowship from the Pearl Fund, which is managed by the Public Custodian of Israel's Ministry of Justice, for the academic year 1999-2000, \$10,000

Distinguished Awards recognizing outstanding achievements

- 1990 Knesset (Israeli Parliament) excellent student award
- 1998 The Wolf Foundation prize for excellent doctoral students, 1997/8
- 2005 Awarded the New Investigator Award by the American Medical Informatics Association. This award recognizes an individual for early informatics contributions and significant scholarly contributions on the basis of scientific merit and research excellence. The criteria for nomination include significant scientific productivity in informatics prior to reaching eligibility for fellowship in the College of Informatics; multiple significant scientific publications and demonstrated commitment to AMIA.
- *2013 Elected International **Fellow** of the American College of Medical Informatics. Only 8% of the current 220 ACMI fellows are international fellows.
- *2014-2015 Appeared on "Meet the Expert" series of AMIA
- *2016 Elected member of the Executive Committee of the American College of Medical Informatics

Awards and Prizes

- 1990, 1991 Outstanding Honors (President's List), Department of Biology, Technion-Israel Institute of Technology
- 1995-6 Excellent teacher-assistant, Technion-Israel Institute of Technology

- 1995 First place in the Dashed Line Detection Contest, held at Pennsylvania State University, State College, Pennsylvania, August 10-11, as part of the Workshop on Graphics Recognition 1995, sponsored by the International Association for Pattern Recognition. Obtained 100% recognition rate
- 2003, 2004, 2010 Papers (D5, D8, D10) included in the International Medical Informatics Association Yearbook. The IMIA Yearbook includes original papers that have been selected as best papers of the recent year. These papers are selected based on an international review process, taking into account their significance, their quality, their originality, and their clarity and organization.
- 2007 Excellent Research Award from the Israeli Association for Medical Informatics, received at the Annual Israeli Conference on Medical Informatics. June 4, 2007 (paper H2- 11)

Recognition

* Elected Chair of the American Medical Informatics Association's Awards Committee

11. Teaching

a. Courses Taught in Recent Years

Year	Name of Course	Type of Course	Level	NumberStudents
2004-7, 2010-2012	Information systems analysis	Lecturer	BSc	90
2004-5	Information systems analysis for economics	Lecturer	B.Sc.	30
2004-7, 2009-	Information System analysis and design projects	Advisor	B.Sc.	10
2006-7, 2009-	Knowledge Representation and decision-support systems	Lecturer	B.Sc. +M.Sc.	30
2010-	Medical Informatics Seminar	Lecturer	MSc	16

b. Supervision of Graduate Students

Name of Student	Name of other mentor	Title of Thesis	Degree	Year	Students' Achievements
MSc Students					
Sagi Keren	--	Mapping Computerized Clinical Guidelines to Electronic Medical Records: Knowledge-Data Ontological Mapper (KDOM)	M.Sc., CS Dept., University of Haifa	5/07	D19, E5 Working in industry
Nuaman Asbeh	Tsvi Kuflik	Applying clustering analysis and ontological methods for identifying groups of comorbidities for developmental disorders	M.Sc., Statistics Dept., University of Haifa	8/07	D21, F2-7 Completed Ph.D. at Ben-Gurion University and now doing a post doc at the Technion
Yudit Somekh	Dov Dori	Modeling Exceptions in Real Time Systems through Object-Process Methodology	M.Sc., Faculty of IE & Management, Technion	11/07	*D24, F2-9 Recently completed Ph.D. at Technion
*Sasha Berdichevsky		Applying User-modeling to Standardize Reporting of Mammography Reports	MSc Project	*06/13	Paper in preparation, working in industry
Inna Pimus		Temporal analysis of comorbid neurodevelopmental disorders	MSc	3/15	D38 working in industry
*Omri Mugzach		An ontology for Autism Spectrum Disorder (ASD) to infer ASD phenotypes from Autism Diagnostic Interview – Revised data	MSc	3/15	D40, H2-26, H2-27
*Ashraf Haib		A telemedicine intervention to improve the adherence of asthma patients to clinical guideline recommendations	MSc candidate	In progress	
PhD Students					

Dizza Beimel	Dov Dori	Situation-based Access Control: privacy management via modeling of scenarios of access to patient for accessing Electronic Health Record Data	Ph.D., Faculty of IE and Management, Technion	6/08	*D20, D27, D29 F2-19, H2-14, H2-16, H2-17, H2-19 Senior Lecturer with tenure at Ruppin College and Chair, Dept. of Industrial Eng.
Johny Ghattas	Pnina Soffer	Business Process Learning	Ph.D. proposal was approved on: 3/09	*08/12	*D33, E9, F2-11, F2-12, F2-13, F2-16, F2-17, H6 Working in industry
*Adi Fux	Pnina Soffer	A Layered Context-based Decision Model: Formulating clinical decisions based on primary clinical context and secondary personal context	PhD	In progress	F15, F2-23, H10
*Ludmila Murga		To be determined	PhD candidate	In progress	
Post-doctorate students					
*Arturo Gonzalez-Ferrer		Semantic data-knowledge integration for ubiquitous clinical decision support	postdoc	11/11 – 8/14	E10, F2-22, F2-26
*Judith Somekh		Modeling autism disease mechanisms via Petri Net models	postdoc	1/14 – 7/14	

12. Miscellaneous

07/07-09/08 - On Sabbatical at Stanford University

10/08-09/09 - On Leave of Absence from the university – at Stanford University

PUBLICATIONS

Notes:

For joint publications, the order of the listed authors appears according to their relative contribution, unless mentioned otherwise.

In papers with students, students are first

Index:

I.F. = Impact Factor (Source & Year)

V = Vatat List (The Council for Higher Education)

R = Ranking (Source & Year)

= Student

P = post-doc student

C = clinical collaborator

Cited = Citation counts are from Publish or Perish

*** = indicates items since the last rank (Assoc. Prof.) was awarded**

A. Ph.D. Dissertation

Title: Modeling System Dynamics through the Object-Process Methodology

Date of submission: June 1999

Number of Pages: 257

Language: English

Name of Supervisor: Prof. Dov Dori

University: Technion – Israel Institute of Technology

Publications: D2, D3, D4, F1-1, F2-2, F2-3, F2-4

B. Scientific Books (Refereed)

Authored Books

None

Edited Books and Special Journal Issues

Published

1. Annette ten Teije, David Riano, Silvia Miksch, **Mor Peleg**. Lecture Notes in Artificial Intelligence 5943: Knowledge Representation for Healthcare, AIME 2009 Workshop, Springer, 2010. 187 pages. **Co-editors have equal contribution and are listed in alphabetical order**
2. David Riano, Annette ten Teije, Silvia Miksch, **Mor Peleg**. *Lecture Notes in Artificial Intelligence* 6512: Knowledge Representation for Healthcare, ECAI 2010

Workshop, Springer, 2010. 154 pages. **Co-editors have equal contribution and are listed in alphabetical order**

- * 3. **Mor Peleg**, Nada Lavrač, Carlo Combi. *Lecture Notes in Artificial Intelligence*, Vol. 6747: 13th Conference on Artificial Intelligence in Medicine, AIME 2011, Springer, 2011. 355 pages. **Co-editors have equal contribution and are listed in alphabetical order**
- * 4. Richard Lenz, **Mor Peleg**, Manfred Reichert. Special issue of *International Journal of Knowledge-Based Organizations on Process Support in Healthcare – Part I*. Volume 2 Issue 4, 2012. IGI Global. 37,000 words. Includes the editorial "Healthcare Process Support: Achievements, Challenges, Current Research". **Co-editors have equal contribution and are listed in alphabetical order.** (Cited:10)
- * 5. Richard Lenz, **Mor Peleg**, Manfred Reichert. *Special issue of International Journal of Knowledge-Based Organizations on Process Support in Healthcare – Part II*. Volume 3 Issue 1, 2013. IGI Global. 16,000 words. **Co-editors have equal contribution and are listed in alphabetical order**
- *6. Richard Lenz, Silvia Miksch, **Mor Peleg**, David Riano, Manfred Reichert, Annette ten Teije. *Lecture Notes in Artificial Intelligence* Vol. 7738. Process Support and Knowledge Representation in Health Care: BPM 2012 Joint Workshop ProHealth 2012/KR4HC 2012, Tallinn, Estonia, September 2012, Revised Selected Papers. Springer-Verlag Berlin Heidelberg 2013. **Co-editors have equal contribution and are listed in alphabetical order.**
- *7. **Mor Peleg** and Carlo Combi. Special Issue of Artificial intelligence in medicine AIME 2011, *Artificial Intelligence in Medicine* **V**, 2013; 57(2):87-9. **Co-editors have equal contribution and are listed in alphabetical order. I.F.(ISI 2014): 2.019, R (ISI 2014): 9/24.**
- * 8. Niels Peek, Roque Marín Morales, **Mor Peleg**. *Lecture Notes in Artificial Intelligence* Vol. 7885: 14th Conference on Artificial Intelligence in Medicine, AIME 2013, Springer, 2013. 355 pages. **Co-editors have equal contribution and are listed in alphabetical order**
- * 9. **Mor Peleg**. Computer-interpretable Clinical Guidelines. Virtual Issue No. 1, *Journal of Biomedical Informatics* **V**, October, 2013, <http://www.journals.elsevier.com/journal-of-biomedical-informatics/virtual-special-issues/computer-interpretable-clinical-guidelines/>. **I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24.** This is a short version of D31.
- *10. David Riano, Richard Lenz, Silvia Miksch, **Mor Peleg**, Manfred Reichert, Annette ten Teije. *Lecture Notes in Artificial Intelligence* Vol. 8268. Process Support and Knowledge Representation in Health Care: BPM 2013 Joint Workshop ProHealth 2013/KR4HC 2013, Murcia, Spain, September 2013, Revised Selected Papers. Springer-Verlag Berlin Heidelberg 2014. **Co-editors have equal contribution and are listed in alphabetical order**

C. Monographs

None

D. Articles in Refereed Journals

Published Journal Papers

1. **Mor Peleg**, Vered Kopel, James A. Borowiec and Haim Manor, "Formation of DNA Triple Helices Inhibits DNA Unwinding by the SV40 Large T-Antigen Helicase". *Nucleic Acids Research*^V, Vol. 23, No. 8, 1995, pp. 1292-1299. I.F.(ISI 2014): 9.112, R (ISI 2014): 20/290. Cited: 21).
2. **Mor Peleg** and Dov Dori, "Representing Control Flow Constructs in Object-Process Diagrams", *JOOP-Journal of Object Oriented Programming*, Vol. 11, No. 3, June 1998, pp. 58-71 (Cited: 8).
3. **Mor Peleg** and Dov Dori, "Extending the Object-Process Methodology to Handle Real-Time Systems", *JOOP-Journal of Object-Oriented Programming*, Vol. 11, No. 8, January 1999, pp.53-58 (Cited: 41)
4. **Mor Peleg** and Dov Dori, "The Model Multiplicity Problem: Experimenting with Real-Time Specification Methods", *IEEE Transactions on Software Engineering*^V, Vol. 26, No. 8, August 2000, pp. 742-759 (I.F.(ISI 2012): 2.588, R (ISI 2012): 3/20 Computer Science Software Engineering journals. Cited: **105**) (see also F2-4 for a partial version of this paper).
5. **Mor Peleg**, Aziz A. Boxwala, Elmer Bernstam, Samson Tu, Robert A. Greenes, and Edward H. Shortliffe. "Sharable Representation of Clinical Guidelines in GLIF: Relationship to the Arden Syntax". *Journal of Biomedical Informatics*^V Vol 34, No. 3, June 2001, pp. 170-181. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24. Cited: 61.
6. Aziz A. Boxwala, Samson Tu, **Mor Peleg**, Qing Zang, Omolola Ogunyemi, Robert A. Greenes, Edward H. Shortliffe, and Vimla L. Patel. "Towards a representation format for sharable clinical guidelines". *Journal of Biomedical Informatics*^V Vol 34, No. 3, June 2001, pp. 157-169. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 63).
7. Vimla L. Patel, Timothy Branch, Dongwen Wang, **Mor Peleg**, and Aziz A. Boxwala. "Analysis of the Process of Encoding Guidelines: An Evaluation of GLIF3". *Methods of Information in Medicine*^V, Vol 41, No. 2, 2002, pp. 105-113. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24, Cited: 22.
8. **Mor Peleg**, Iwei Yeh, and Russ Altman, "Modeling biological processes using Workflow and Petri Nets models". *Bioinformatics*^V, Vol. 18, No. 6, June 2002, pp. 825-837 (IF (ISI 2012): 5.323. R(ISI 2012):2/47 Mathematical and computational biology journals. Cited: **178**.
9. Dongwan Wang, **Mor Peleg**, Samson W. Tu, Aziz A. Boxwala, Robert A. Greenes, Vimla L. Patel, and Edward H. Shortliffe. "Representation primitives, process models and patient data in computer-interpretable clinical practice guidelines: A literature review of guideline representation models". *International Journal of*

- Medical Informatics*^V, Vol. 68, No. 1-3, December 2002, pages 59-70. I.F. (ISI 2013): 2.716. R(ISI 2013): 4/24, Cited: 149.
10. **Mor Peleg**, Irene S. Gabashvili, and R. B. Altman. "Qualitative models of molecular function: linking genetic polymorphisms of tRNA to their functional sequelae". (invited paper) *Proceedings of the IEEE*^V. Special Issue on Bioinformatics, M. Akay, ed., Vol. 90, No. 12, December 2002, pp. 1875-1886. I.F.(ISI 2012): 6.911, R(ISI 2012):2/243 Engineering Electrical and Electronic journals. Cited: 21. (See also E3).
 11. **Mor Peleg**, Samson Tu, Jonathan Bury, Paulo Ciccarese, John Fox, Robert A. Greenes, Richard Hall, Peter D. Johnson, Neill Jones, Anand Kumar, Silvia Miksch, Silvana Quaglini, Andreas Seyfang, Edward H. Shortliffe, and Mario Stefanelli, "Comparing Computer-interpretable Guideline Models: A Case-study Approach". *Journal of the American Medical Informatics Association*^V, Vol. 10, No. 1, Jan-Feb 2003, pp. 52-68. I.F.(ISI 2013): 2.932, R(ISI 2013):2/24, Cited: **575**.
 12. **Mor Peleg**, Aziz A. Boxwala, Samson Tu, Qing Zeng, Omolola Ogunyemi, Dongwen Wang, Vimla L. Patel, Robert A. Greenes, Edward H. Shortliffe. "The InterMed Approach to Sharable Computer-interpretable Guidelines: A Review". *Journal of the American Medical Informatics Association*^V, Vol. 11, No. 1, Jan-Feb 2004, pp. 1-10. **Lead paper**. I.F.(ISI 2013): 2.932, R(ISI 2013):2/24, Cited: 73.
 13. Aziz A. Boxwala, **Mor Peleg**, Samson Tu, Omolola Ogunyemi, Qing T. Zeng, Dongwen Wang, Vimla L. Patel, Robert A. Greenes, Edward H. Shortliffe. "GLIF3: A Representation Format for Sharable Computer-Interpretable Clinical Practice Guidelines". *Journal of Biomedical Informatics*^V, Vol. 37, No. 3, 2004, pp. 147-161. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: **233**. (see also F1-2 for a partial version of this paper).
 14. Dongwen Wang, **Mor Peleg**, Samson W. Tu, Aziz A. Boxwala, Omolola Ogunyemi, Qing Zeng, Robert A. Greenes, Vimla L. Patel, and Edward H. Shortliffe. "Design and Implementation of the GLIF3 Guideline Execution Engine". *Journal of Biomedical Informatics*^V, Vol. 37, No. 5, 2004, pp. 305-318. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 108.
 15. **Mor Peleg**, Daniel Rubin, and Russ B. Altman, "Using Petri Net Tools to Study Properties and Dynamics of Biological Systems" *Journal of the American Medical Informatics Association*^V, Vol. 12, No. 2, 2005, 181-199. I.F.(ISI 2013): 2.932, R(ISI 2013):2/24, Cited: **111**.
 16. **Mor Peleg**, Lily Gutnik, Vincenza Snow, and Vimla L. Patel, "Interpreting procedures from descriptive guidelines", *Journal of Biomedical Informatics*^V, Vol. 39, No. 2, 2006, pp. 184-195. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 24.
 17. **Mor Peleg** and Samson W. Tu. "Decision Support, Knowledge Representation and Management in Medicine" (invited paper). *Methods of Information in Medicine*^V 2006;45 Suppl 1:72-80. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24, Cited: 79.
 18. Nataliya Mulyar[#], Wil M.P. van der Aalst, **Mor Peleg**. "A Pattern-based Analysis of Clinical Computer-Interpretable Guideline Modeling Languages". *Journal of the*

- American Medical Informatics Association*^V, 2007, 14(6): 781-787. I.F.(ISI 2013): 2.932, R(ISI 2013):2/24, Cited: 89.
19. **Mor Peleg**, Sagi Keren[#], and Yaron Denekamp^C "Mapping Computerized Clinical Guidelines to Electronic Medical Records: Knowledge-Data Ontological Mapper (KDOM)", *Journal of Biomedical Informatics*^V, 2008 41(1):180-201. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 72.
 20. **Mor Peleg**, Dizza Beimel[#], Dov Dori, Yaron Denekamp^C. "Situation-based Access Control: privacy management via modeling of patient data access scenarios". *Journal of Biomedical Informatics*^V, 2008 41(6):1028–1040. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 54.
 21. **Mor Peleg**, Nuaman Asbeh[#], Tsvi Kuflik, and Mitchell Schertz^C. "Onto-clust - A methodology for combining clustering analysis and ontological methods for identifying groups of comorbidities for developmental disorders", *Journal of BioMedical Informatics*^V, 2009 42(1):165-75. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 5).
 22. **Mor Peleg**, Aviv Shachak^P, Dongwen Wang, and Eddy Karnieli^C. "Using multi-perspective methodologies to study user interactions with the front-end of a guideline-based decision-support system for diabetic-foot care", *International Journal of Medical Informatics*^V, Vol. 78, No. 7, 2009, pp. 482-493. I.F. (ISI 2013): 2.716. R(ISI 2013): 4/24, Cited: 30).
 23. **Mor Peleg** and Samson W. Tu. "Design Patterns for Clinical Guidelines. *Artificial Intelligence in Medicine*^V, Vol 47, No. 1, 2009, pp. 1-24. IF(ISI 2014): 2019. R(ISI 2014): 9/24, Cited: 35).
 24. **Mor Peleg**, Yudit Somekh[#], and Dov Dori. "A Methodology for Eliciting and Modeling Exceptions". *Journal of Biomedical Informatics*^V 2009 42(4):736-747. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited:26. (see also F2-9 for a partial version of this paper).
 25. Yaron Denekamp^C and **Mor Peleg**. "TiMeDDx – A Multi Phase Anchor-based Diagnostic Decision-support Model. *Journal of Biomedical Informatics*^V 2010 43:111-124. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 4). (**Authors are written in alphabetic order. Equal contribution**).
 26. Adela M. Grando^P, **Mor Peleg**, and David Glasspool. "A goal-oriented framework for specifying clinical guidelines and handling medical errors", *Journal of Biomedical Informatics*^V 2010 1(2): 287-299. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 39).
 27. Dizza Beimel[#] and **Mor Peleg**. "The Context and the SitBAC models for Privacy Preservation – An experimental comparison of model understanding and synthesis". *IEEE Transactions on Knowledge and Data Engineering*^V 2010 22(10): 1475-1488 I.F.(ISI 2012): 2.000. R(ISI 2012): 58/256, Cited: 8)
 28. Samson Tu, **Mor Peleg**, Simona Carini, Michael Bobak, Jessica Ross, Daniel Rubin, and Ida Sim. A Practical Method for Transforming Free-Text Eligibility

- Criteria into Computable Criteria. *Journal of Biomedical Informatics*^V 2011; 44(2):239-50. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: 66).
- *29. Dizza Beimel[#] and **Mor Peleg**. Using OWL and SWRL to Represent and Reason with Situation-based Access Control Policies. *Data and Knowledge Engineering Journal*^V 2011 Volume 70, Issue 6, Pages 596-615. I.F.(ISI 2012): 1.519. R(ISI 2012): 34/132 computer Science Information Systems journals. Cited: 43.
 - *30. Adela Grando^P, **Mor Peleg**, Marc Cuggia, and David Glasspool. Patterns for collaborative work in health care teams. *Artificial Intelligence in Medicine*^V, 2011 Nov;53(3):139-60. IF(ISI 2014): 2019. R(ISI 2014): 9/24, Cited: 20.
 - *31. **Mor Peleg**. Computer-interpretable Clinical Guidelines: a Methodological Review. *Journal of Biomedical Informatics*^V, Vol. 46 No. 4, pp. 744–763, 2013. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24, Cited: **82**.
 - *32. John Fox, Ioannis Chronakis, David Glasspool, Vivek Patkar, **Mor Peleg**, Matt South, Jeff Garber. Integrating clinical decision support and smart guidelines: a new approach to evidence based medicine. *Junior Doctor Journal* (new Journal, launched in 2011). 2013;(3), 3 pages.
 - *33. Johny Ghattas[#], Pnina Soffer, **Mor Peleg**, Yaron Denekamp^C. "Data Requirements for Process Learning ". In *International Journal of Knowledge-Based Organizations, Special issue on Process Support in Healthcare – Part II*. Volume 3 Issue 1, 1-18, 2013. IGI Global. (New journal, launched in 2011). (Cited: 1).
 - *34. Gema García-Sáez, Mercedes Rigla, Inaki Martínez-Sarriegui[#], Erez Shalom, **Mor Peleg**, Tom Broens, Belen Pons, E Caballero-Ruiz, EJ Gómez, Maria Elena Hernando ME. "Patient-oriented Computerized Clinical Guidelines for Mobile Decision Support in Gestational Diabetes". *J Diabetes Sci Technol*. 2014 Mar 6;8(2):238-246. Cited: 4. 2014. SJR (SCImago Journal Rank) Score: 0.700 | 89/214 Endocrinology, Diabetes and Metabolism (Scopus®)
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- *38. Carlos Marcos, Arturo González-Ferrer^P, **Mor Peleg**, and Carlos Cavero. Solving the interoperability challenge of a distributed complex patient guidance system: A data integrator based on HL7's Virtual Medical Record standard. *Journal of the American Medical Informatics Association*^V 2015; 22(3):587-99. I.F.(ISI 2013): 2.932, R(ISI 2013):2/24.
- * 39. Arturo Gonzalez Ferrer^P and **Mor Peleg**. "Understanding requirements of clinical data standards for developing interoperable knowledge-based DSS: a case study". *Computer Standards & Interfaces*^V 2015; 42:125-36. I.F.(ISI 2013): 1.177. R(ISI 2013): 38/105 Computer Science Software Engineering journals).
- *40. Omri Mugzach[#], **Mor Peleg**, Steven C. Bagley^P, Stephen J. Guter^P, Edwin H. Cook^C, Russ B. Altman. "An ontology for Autism Spectrum Disorder (ASD) to infer ASD phenotypes from Autism Diagnostic Interview–Revised data". *Journal of BioMedical Informatics*^V 2015;56:333-47. I.F.(ISI 2013): 2.482, R (ISI 2013): 6/24.
- *41. Inna Pimus[#], **Mor Peleg** and Mitchel Schertz^C. Sequence Mining of Comorbid Neurodevelopmental Disorders using the SPADE Algorithm. *Methods of Information in Medicine*, 2016: 55(3):223-33. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24
- *42. Arturo González-Ferrer^P, **Mor Peleg**, Mar Marcos, Jose Alberto Maldonado. Analysis of the process of representing clinical statements for decision-support applications: a comparison of openEHR archetypes and HL7 virtual medical record. *Journal of Medical Systems*^V, 2016; 40(7):163-174. I.F.(ISI 2014): 2.213, R (ISI 2014): 7/24.
- *43. Amnon Shabo (Shvo)^P, **Mor Peleg**, Enea Parimbelli[#], Silvana Quaglini, Carlo Napolitano^C. Interplay between Clinical Guidelines and Organizational Workflow Systems: Experience from the MobiGuide project. *Methods of Information in Medicine*^V, 2016; Jul 13;55(4). I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24.
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E. Articles or Chapters in Scientific Books **(which are not Conference Proceedings)**

Published

1. Robert A. Greenes, Samson Tu, Aziz Boxwala, **Mor Peleg**, Edward H. Shorliffe "Toward a Shared Representation of Clinical Trial Protocols: Application of the GLIF Guideline Modeling Framework", In: Cancer Informatics - Essential Technologies for Clinical Trials, New York, Springer-Verlag, Chapter 16, pages 212-228, JS Silva, MJ Ball, CG Chute, JV Douglas, CP Langlotz, JC Niland, and WL Scherlies, (eds.), 2002 (Cited: 4).
2. **Mor Peleg**. "Chapter 13. Guideline and Workflow Models". In: "Clinical Decision Support - The Road Ahead", Robert A. Greenes (ed.), Elsevier/Academic Press, 2006 (Cited: 20).
3. **Mor Peleg**, Irene S. Gabashvili, and Russ B. Altman. Chapter 1: "Qualitative knowledge models in Functional Genomics and Proteomics". In: Genomics and Proteomics Engineering in Medicine and Biology (Akay, M., ed), Wiley-IEEE Press, 2007 (See also D10 for a less comprehensive version of this paper).
4. Manfred Reichert, **Mor Peleg**, and Richard Lenz. "Introduction to the First International Workshop on Process-Oriented Information Systems in Healthcare (ProHealth 2007)", In Furthermore, A. ter Hofstede, B. Benatallah, and H.-Y. Paik (Eds.): Business Process Management 2007 Workshops, Lecture Notes in Computer Science, Vol. 4928, 2008, pp. 319-320, Springer Berlin / Heidelberg (Cited: 6).
5. **Mor Peleg**, Dongwen Wang, Adriana Fodor, Sagi Keren and Eddy Karnieli. "Lessons Learned from Adapting a Generic Narrative Diabetic-Foot Guideline to an Institutional Decision-Support System". In: Computer-based Medical Guidelines and Protocols: A Primer and Current Trends. Studies in Health Technology and Informatics Edited by: A. Ten Teije, S. Miksch and P. Lucas, July 2008, Vol. 139 pp. 243-252. (see also F2-8) Cited: 21.
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7. **Mor Peleg**. Sharable Appropriateness Criteria in GLIF3 using standards and the Knowledge-Data Ontology Mapper. Lecture Notes in Artificial Intelligence: Knowledge Representation for Healthcare, Vol. 5943, Heidelberg: Springer, 2010. pp. 64-75 (see also F2-8, F2-15. Cited: 4)
8. **Mor Peleg**, Richard Lenz, Paul A. de Clercq. "Introduction to the Third International Workshop on Process-Oriented Information Systems in Healthcare (ProHealth 2009)", In: Stefanie Rinderle-Ma, Shazia Wasim Sadiq, Frank Leymann (Eds.): Business Process Management Workshops, BPM 2009 International Workshops, Ulm, Germany, September 7, 2009. Revised Papers.

Lecture Notes in Business Information Processing Vol. 43 2010, pp. 535-538, Springer.

- *9. Pnina Soffer, Johny Ghattas[#], and **Mor Peleg** . A Goal-based Approach for Learning in Business Processes. In: *Intentional Perspectives on Information Systems Engineering*, Camille Salinesi, Carine Souveyet, Jolita Ralyte editors. Springer. Chapter 13, pp. 239-256, 2010 (Cited: 11).
- *10. **Mor Peleg** and Arturo Gonzalez Ferrer^P. "*Chapter 16. Guideline and Workflow Models*". In: "*Clinical Decision Support – Second Edition*", Robert A. Greenes (ed.), Elsevier/Academic Press, 2013

F. Articles in Conference/Workshop Proceedings

F1. Articles in international conferences

Published

1. **Mor Peleg** and Dov Dori, "Specifying Reactive Systems through the Object-Process Methodology". *Proceedings of the 1998 IEEE Conference and Workshop: Engineering of Computer Based Systems (ECBS98)*, March 30- April 3, 1998, Jerusalem, Israel, IEEE Computer Society Press, ISBN 0-8186-8463-1, pp. 29-36 (Cited:44).
2. **Mor Peleg**, Aziz A. Boxwala, Omolola Ogunyemi, Qing Zeng, Samson Tu, Ronilda Lacson, Elmer Bernstam, Nachman Ash, Peter Mork, Lucila Ohno-Machado, Edward H. Shortliffe, and Robert A. Greenes. "GLIF3: The Evolution of a Guideline Representation Format". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, J. Marc Overhage, MD, Ph.D., ed., American Medical Informatics Association, Los Angeles, CA, November 4-8, 2000, (20 Suppl):645-649 (Cited: 319) (see also D13 for a full version of this paper).
3. Elmer Bernstam, Nachman Ash, **Mor Peleg**, Samson Tu, Aziz A. Boxwala, Peter Mork, Edward H. Shortliffe, and Robert A. Greenes. "Guideline Classification to Assist Modeling, Authoring, Implementation and Retrieval". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, J. Marc Overhage, MD, Ph.D., ed., American Medical Informatics Association, Los Angeles, CA, November 4-8, 2000, (20 Suppl):66-70 (Cited: 37)
4. **Mor Peleg**, Aziz A. Boxwala, Samson Tu, Robert A. Greenes, Edward H. Shortliffe, and Vimla L. Patel, "Handling Expressiveness and Comprehensibility Requirements in GLIF3", *Proceedings of the 10th World Congress on Medical Informatics (MedInfo 2001)*, London, September 2-5, 2001, 241-245 (Cited: 19).
5. Robert A. Greenes, **Mor Peleg**, Aziz Boxwala, Samson Tu, Vimla Patel, and Edward H. Shortliffe. "Sharable Computer-based Clinical Practice Guidelines: Rationale, Obstacles, Approaches, and Prospects", *Proceedings of the 10th World Congress on Medical Informatics (MedInfo 2001)*, London, September 2-5, 2001, 201-205 (Cited: 43).

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9. **Mor Peleg** and Rami Kantor. "Approaches for guideline versioning using GLIF". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. Mark A. Musen, MD, Ph.D., ed., American Medical Informatics Association, Washington, DC, November 8-12, 2003, 509-513 (Cited: 21).
10. Dongwen Wang, **Mor Peleg**, David Bu, Michael Cantor, Giora Landesberg, Eitan Lunenfeld, Samson W Tu, Gail E Kaiser, George Hripcsak, Vimla L Patel, Edward H Shortliffe. "A Generic Execution Model for Sharing of Computer-interpretable Clinical Practice Guidelines". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. Mark A. Musen, MD, Ph.D., ed., American Medical Informatics Association, Washington, DC, November 8-12, 2003, 694-698 (Cited: 27).
11. **Mor Peleg**, Samson Tu, Abhijit Mahindroo, and Russ B. Altman. "Modeling and Analyzing Biomedical Processes using Workflow/Petri Net Models and Tools". *Proceedings of Medinfo 2004 / American Medical Informatics Association annual Symposium 2004 (Joint Medinfo/AMIA)*, Edward H Shortliffe, MD, Ph.D., ed., San Francisco, CA, September 7-11, 2004, pp. 74-8 (Cited: 28).
12. Samson Tu, **Mor Peleg**, Simona Carini, Michael Bobak, Daniel Rubin, Ida Sim. "A Practical Method for Transforming Free-Text Eligibility Criteria into Computable Criteria". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. American Medical Informatics Association, San Francisco, CA, November 14-18, 2009, pp. 655-659.
13. Adela M. Grando^P, **Mor Peleg**, and David Glasspool. "Goal-based design pattern for delegation of work in health care teams". *Studies in Health Technology and Informatics* Vol. 160, Edited by C. Safran, S. Reti, H.F. Marin, IOS Press, *Proceedings of the 13th World Congress on Medical Informatics (Medinfo 2010)*, Cape Town, South Africa, Sept. 12-15, 2010. pp. 299-303 (Cited: 7).

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- *15. Lucia Sacchi^P, Adi Fux[#], Carlo Napolitano, Silvia Panzarasa, **Mor Peleg**, Silvana Quaglini, Erez Shalom, Pnina Soffer, Paolo Tormene^P. "Patient-tailored Workflow Patterns from Clinical Practice Guidelines Recommendations", *Proceedings of the 14th World Congress on Medical Informatics (Medinfo 2013)*, Copenhagen, Denmark, August 20-23, 2013, pp. 392-6. Cited: 5.
- * 16. Silvana Quaglini, Silvia Miksch, Yuval Shahrar, **Mor Peleg**, Carlo Napolitano, Mercedes Rigla, Angels Pallàs, Enea Parimbelli[#], Lucia Sacchi^P. "Supporting Shared Decision Making within the MobiGuide Project". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*. American Medical Informatics Association, Washington DC, 2013, November 16-20, 2013, pp. 1175–1184. Cited: 6.

F2. Articles in workshops or short conference papers/panels

Published

1. Dov Dori, Liu Wenying and **Mor Peleg**, "How To Win a Dashed Line Detection Contest". In: Graphics Recognition - Methods and Application. First International Workshop, University Park PA, USA, August 1995. Lecture Notes in Computer Science, Vol. 1072, pages 286-300, Springer-Verlag, Rangachar Katsuri and Karl Tombre (eds.), 1996 (Cited:46).
2. **Mor Peleg**, "Modeling Real-Time Systems through the Object-Process Methodology". Proceeding of the 20th International Conference on Software Engineering (ICSE98) Doctoral Symposium. April 19-25, 1998, Kyoto, Japan, ACM Press, 4 pages.
3. **Mor Peleg** and Dov Dori. "Experimenting with Real-time Specification Methods: The Model Multiplicity Problem", Proceedings of the Fourth CAiSE/IFIP8.1 International Workshop on Evaluation of Modeling Methods in System Analysis and Design (EMMSAD99), Heidelberg, Germany, June 14-15 1999, 13 pages (see also D4 for a full version of this paper).
4. **Mor Peleg** and Dov Dori, "From Object-Process Diagrams to a Natural Object-Process Language", In: Next Generation Information Technologies and Systems Fourth International Workshop, NGITS'99, Zikhron Yaacov, Israel, July 1999. Lecture Notes in Computer Science, Vol. 1649, pages 221-228. Springer-Verlag, Ron Y. Pinter and Shalom Tsur (eds.), 1999 (Cited: 3).
5. **Mor Peleg**, Irene S. Gabashvili, and Russ B. Altman, "Integrating bio-ontologies with a Workflow/Petri Net model to qualitatively represent and simulate biological systems", *Fifth Annual Bio-Ontologies Meeting*, Edmonton, Canada, August 8, 2002, 33-36 (see also D10 for a full version of this paper).

6. **Mor Peleg**, Rory Steele, Richard Thomson, Vivek Patkar, and John Fox, "Open-source Publishing of Medical Knowledge", Tenth Conference on Artificial Intelligence in Medicine, Aberdeen, UK, July 24-27, 2005, Lecture Notes in Computer Science, Volume 3581, pp. 156-160 (Cited: 6).
7. Nuaman Asbeh[#], Mor Peleg, Mitchell Schertz^C, and Tsvi Kuflik, "Creating Consistent Diagnoses List for Developmental Disorders Using UMLS", Proceeding of Next Generation Information Technologies and Systems, Kibbutz Shefayim, Israel, July 4-6, 2006, Lecture Notes in Computer Science, Springer Berlin / Heidelberg, vol. 4032, pp. 333-336 (Cited: 5).
8. **Mor Peleg**, Dongwen Wang, Adriana Fodor^C, Sagi Keren[#], and Eddy Karnieli^C, "Adaptation of Practice Guidelines for Clinical Decision Support: A Case Study of Diabetic Foot Care". Proceeding of the biennial European Conference on Artificial Intelligence (ECAI) 2006 Workshop: AI techniques in healthcare: computerized guidelines and protocols, Riva del Garda, Italy, August 29, 2006, pp. 57-61 (see also E5) (Cited: 12).
9. Yudit Somekh[#], Mor Peleg, and Dov Dori. "Classifying and Modeling Exceptions through Object Process Methodology", International Conference on Systems Engineering and Modeling-ICSEM'07, Haifa, Israel, pp. 60-70, March 20-23, 2007 (see also D24 for a full version of this paper) (Cited: 8).
10. Nataliya Mulyar[#], Maja Pesic[#], Wil M.P. van der Aalst, and **Mor Peleg**. "Towards Flexibility in Clinical Guideline Modelling Languages" (conference title). "Declarative and procedural approaches for modelling clinical guidelines: addressing flexibility issues" (book chapter title). Business Process Modeling Conference Workshop: 1st International Workshop on Process-oriented Information Systems in Healthcare, Brisbane, Australia. 24-29 September 2007. Lecture Notes in Computer Science, Vol. 4928, pp. 335-46, Springer Berlin / Heidelberg, 2008. (Cited: 12+50 = 62 (citation of conference paper and book chapter)).
11. **Mor Peleg**, Pnina Soffer, Johnny Ghattas[#]. "Mining Process Execution and Outcomes". Business Process Modeling Conference Workshop: 1st International Workshop on Process-oriented Information Systems in Healthcare, Brisbane, Australia. 24-29 September 2007, Manfred Reichert, Mor Peleg, Richard Lenz, Editors, Lecture Notes in Computer Science, Vol. 4928, pp. 395-400, Springer Berlin / Heidelberg (Cited: 7).
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13. Johnny Ghattas[#], Pnina Soffer, **Mor Peleg**. "A Goal-based approach for business process learning". Workshop on Business Process Modeling, Development, and

Support (BPMDS'08), in conjunction with CAISE'08, 16-17 June 2008, Montpellier, France, pp. 76-85, 2008.

14. **Mor Peleg** and Daniel L. Rubin. "Querying Radiology Appropriateness Criteria from a virtual Medical Record using GELLO". Proc. Workshop on Knowledge Representation for Health-Care: Patient Data, Processes and Guidelines, in conjunction with Artificial Intelligence in Medicine Europe, Verona Italy, pp. 75-77, July 19, 2009 (Cited: 4).
15. **Mor Peleg** and Sagi Keren[#]. "The Knowledge-Data Ontology Mapper (KDOM): a Tool for Mapping Clinical Guidelines to EMRs". Workshop on Knowledge Representation for Health-Care: Patient Data, Processes and Guidelines, in conjunction with Artificial Intelligence in Medicine Europe, Verona Italy, pp. 51-53, July 19, 2009.
16. Johny Ghattas[#], **Mor Peleg**, Pnina Soffer, and Yaron Denekamp^C. "Learning the Context of a Clinical Process". Third International Workshop on Process-Oriented Information Systems in Healthcare (ProHealth 2009), in conjunction with Business Process Management 2009, Ulm, Germany, September 7, 2009, 12 Springer, Lecture Notes in Business Information Processing Vol. 43, pp. 545-556, Springer, 2010 (Cited: 33) .
17. Johny Ghattas[#], Pnina Soffer, **Mor Peleg**. "A Formal model for Process Context Learning". The Fifth International Workshop on Business Process Intelligence (BPI), in conjunction with Business Process Management 2009, Ulm, Germany, September 7, 2009, Springer, Lecture Notes in Business Information Processing Vol. 43, pp. 140-157, Springer, 2010 (Cited: 30).
18. **Mor Peleg**, John Fox, Robert Greenes, Sheizaf Rafaeli. "Sharing guidelines knowledge: can the dream come true?" (panel) *Medinfo* 2010. Studies in Health Technology and Informatics Vol. 160, Edited by C. Safran, S. Reti, H.F. Marin, IOS Press, Medinfo 2010 - Proceedings of the 13th World Congress on Medical Informatics, Cape Town, South Africa, Sept. 12-15, 2010, 2 pages.
19. **Mor Peleg** and Dizza Beimel. "Using closed-world reasoning with OWL to implement policy-based classification". Proc. Third International Conference on Model-Based Systems Engineering, Fairfax, Virginia, September 27-28, 2010. 10 pages.
- * 20. **Mor Peleg**, Samson W. Tu, Giorgio Leonardi[#], Silvana Quaglini, Paola Russo[#], Giovanni Palladini, and Giampaolo Merlini. Reasoning with Effects of Clinical Guideline Actions using OWL: Amyloidosis as a Case Study. Third Knowledge Representation for Health Care Workshop, Bled, Slovenia, July 6, 2011, LNAI 6924; 2011:65-79 (Cited: 5).
- * 21. Dizza Beimel and **Mor Peleg**. Guiding Criteria for Building Valuable Ontology: Examining Situation-based Access Control (SitBAC) Ontology in the Light of these Criteria, 6th Mediterranean Conference on Information Systems, IS: Crossroads of Technology, People, Organizations and Markets, 13 pages, Cyprus, September 3-5, 2011.

- * 22. Arturo González-Ferrer^P, **Mor Peleg**, Bert Verhees, Jan-Marc Verlinden, and Carlos Marcos. "Data Integration for Clinical Decision Support Based on openEHR Archetypes and HL7 Virtual Medical Record". Joint KR4HC/ProHealth Workshop, Tallinn, Estonia, September 3, 2012. Lecture Notes in Artificial Intelligence, Vol. 7738, pp. 71-84, Springer Berlin / Heidelberg (Cited: 17).
- * 23. Adi Fux[#], **Mor Peleg**, and Pnina Soffer. "How Can Personal Context Improve Adherence to Clinical Guidelines". Joint KR4HC/ProHealth Workshop, 6 pages, Tallinn, Estonia, September 3, 2012.
- * 24. Robert A. Greenes, **Mor Peleg**, Alan Rector, Jerome Osheroff (panel). "Reusable Knowledge for Best Clinical Practices: Why We Have Difficulty Sharing And What We Can Do". Medinfo, Copenhagen, Denmark, August 20-23, 2013.
- * 25. Vimla L. Patel, Ameen Abu-Hanna, **Mor Peleg**, Silvana Quaglini (panel). "How to detect and exploit non-adherence to guidelines?". Medinfo, Copenhagen, Denmark, August 20-23, 2013.
- * 26. **Mor Peleg**, Tom Broens, Arturo González-Ferrer[#], Erez Shalom. "Architecture for a Ubiquitous Context-aware Clinical Guidance System for Patients and Care Providers. Joint International Workshop KR4HC/ProHealth Workshop, Murcia, Spain, June 1, 2013. Cited: 5.
- * 27. G. García-Sáez, M. Rigla, E. Shalom, **Mor Peleg**, E. Caballero, E. J. Gómez, M. E. Hernando. Parallel workflows to personalize clinical guidelines recommendations: Application to Gestational Diabetes Mellitus. Medicon 2013, u13th Mediterranean Conf on Medical and Biological Engineering and Computing, Sevilla, Spain, September 25-28, 2013
- * 28. Arturo González-Ferrer^P, **Mor Peleg**, Enea Parimbelli[#], Erez Shalom, Carlos Marcos, Guy Klebanov[#], Iñaki Martínez-Sarriegui[#], Nick Lik San Fung[#], Tom Broens. Use of the Virtual Medical Record Data Model for Communication among Components of a Distributed Decision-support System. IEEE-EMBS International Conferences on Biomedical and Health Informatics, Valencia, Spain, 1-4 June, 2014
- * 29. Enea Parimbelli[#], Lucia Sacchi, Roxana Budasu^C, Carlo Napolitano^C, **Mor Peleg**, Silvana Quaglini. The role of nurses in e-health: the MobiGuide project experience. *13th International Congress in Nursing Informatics*, Geneva, June 25-29, 2016, 5 pages.
- * 30. **Mor Peleg**, Yuval Shahar, Silvana Quaglini. The MobiGuide Distributed & Personalized Patient Guidance System (demonstration). American Medical Informatics Association Annual Symposium, Chicago, IL, November 12-16, 2016.
- * 31. Ludmila Murga[#], **Mor Peleg** and Anna Zamansky. Toward IT-based Self-reporting Methods for Better Compliance to Computer-interpretable Guidelines. Joint 8th Knowledge Representation in HealthCare/9th ProHealth Workshop, Munich, Germany, Sept. 2, 2016.

G. Entries in Encyclopedias

1. **Mor Peleg**. "Executable Knowledge". In: *Encyclopedia of Database Systems*. Özsu, M. Tamer; Liu, Ling (Eds.) June 2009, Approx. 4000 p. 60 illus. ISBN: 978-0-387-49616-0
2. **Mor Peleg** and Arturo Gonzalez Ferrer. "Executable Knowledge". In: *Encyclopedia of Database Systems, 2nd Edition*. Özsu, M. Tamer; Liu, Ling (Eds.) 2015, Approx. 4000 p. 60 illus. ISBN-13: 978-1461482666

H. Other Scientific Publications

Articles in non-refereed journals/magazines

1. Peter Elkin, **Mor Peleg**, Ronilda Lacson, Elmer Bernstam, Samson Tu, Aziz Boxwala, Robert Greenes, and Edward Shortliffe. "Toward Standardization of Electronic Guidelines" MD Computing, Vol. 17, No. 6, 2000, pp. 39-44 (Cited: 58).
2. Karsten Ploesser, **Mor Peleg**, Pnina Soffer, Michael Rosemann, and Jan Recker "Learning from Context to Improve Business Processes" BPtrrends, January 2009, pp. 1-9 (Cited: 40).
- * 3. **Mor Peleg**, Yuval Shahr, and Silvana Quaglini. "Making healthcare more accessible, better, faster, and cheaper: the MobiGuide Project". European Journal of ePractice: Issue on Mobile eHealth, Num. 20, November, 2013, pp. 5-20. Cited: 6.

Invited Editorials

4. **Mor Peleg**. The Role of Modeling in Clinical Information System Development Life-Cycle. (**Invited editorial**). *Methods of Information in Medicine* 2011;50(1):7-10. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24, Cited: 2.
- * 5. M. Brochhausen, A. Burgun, W. Ceusters, A. Hasman, T. Y. Leong, M. Musen, J. L. Oliveira, **M. Peleg**, A. Rector, S. Schulz. Discussion of "Biomedical Ontologies: Toward Scientific Debate" (**invited editorial**). *Methods of Information in Medicine* 2011; 50(3):217-36. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24, Cited: 13.
- * 6. David W. Bates, M T Baysari, M Dugas, W . Haefeli, A W Kushniruk, C U Lehmann, J Liu, J Mantas, A Margolis, K Miyo, Christian Nohr, **Mor Peleg**, F G B de Quiros, S P Slight, J Starmer, K Takabayashi, J I Westbrook. "Discussion of "Attitude of Physicians Towards Automatic Alerting in Computerized Physician Order Entry Systems" (**invited editorial**). *Methods of Information in Medicine* Vol. 52, Issue 2, 109-127, 2013. **Authors listed in alphabetic order**. I.F.(ISI 2014): 2.248, R (ISI 2014): 6/24, Cited: 1.

Letters and comments

- * 7. **Mor Peleg**, Nataliya Mulyar[#], Wil M.P. van der Aalst. Pattern-based analysis of computer-interpretable guidelines: Don't forget the context. **Invited comment** on A formal approach to the analysis of clinical computer-interpretable guideline modeling languages. *Artificial Intelligence in Medicine*^V, 2012 54(1):73-74 (IF: 1.355; 5-year IF: 1.767, 17 of 23 Medical Informatics journals; 50 of 115 Computer Science Artificial Intelligence journals 2012. Cited: 3).
- *8. Adi Fux[#], **Mor Peleg**, Pnina Soffer, Sagit Zolotov^C, Eddy Karnieli^C. "Adding personal knowledge to clinical guidelines for improving chronic treatment and compliance". Letter to the Editor. *Journal of the Israeli Medical Association*^V, 2013 152(12):748-9 (in Hebrew).

H2. Abstracts published in conference Proceedings (not reported in Section 6a or student papers)

1. Aziz A. Boxwala, **Mor Peleg**, M., Qing Zeng, Samson Tu, Ronilda Lacson, Elmer Bernstam, Omolola Ogunyemi, Nachman Ash, Lucila Ohno-Machado, Robert A. Greenes, and Edward H. Shortliffe. "GuideLine Interchange Format (GLIF): Extensions and Practical Applications Workshop", (poster presentation), *2000 Annual Meeting of the American Telemedicine Association*, Phoenix, Arizona, May 2000.
2. Aziz A. Boxwala, Purvi Mehta, **Mor Peleg**, Ronilda Lacson, Nachman Ash, Jonathan Bury, Edward H. Shortliffe, and Robert A. Greenes. "Modeling guidelines using domain-level knowledge representation components" (poster-presentation). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Los Angeles, CA, November 4-8, 2000, p. 974 (Cited: 5).
3. Qing Zeng, Samson Tu, Aziz A. Boxwala, **Mor Peleg**, Robert A. Greenes, and Edward H. Shortliffe. "A Three-Layer Domain Ontology for Guideline Representation and Sharing" (poster-presentation). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Los Angeles, CA, November 4-8, 2000, p. 1164 (Cited: 7).
4. Irene S. Gabashvili, **Mor Peleg**, and Russ Altman, "Modeling Molecular Function and Failure: Misreading of Genetic Code by the Ribosome". *Biomedical Computation @ Stanford Symposium (BCATS)*, (poster presentation), David Paik, Jonathan Dugan, eds., October 20, 2001, p. 54.
5. Elmer Bernstam, Nachman Ash, **Mor Peleg**, Samson Tu, Edward H. Shortliffe, and Robert A. Greenes. "Preliminary Evaluation of Guideline Classification System", (poster-presentation). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 3-7, 2001, p. 863.
6. James Q. Yin, **Mor Peleg**, Aziz A. Boxwala, and Robert A. Greenes. "Combining a Document Model and an Execution Model for Clinical Guidelines", (poster-presentation). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 3-7, 2001, p. 1064 (cited: 2).
7. Irene S. Gabashvili, **Mor Peleg**, and Russ B. Altman, "Modeling Molecular Function and Failure: Misreading of Genetic Code by the Ribosome", (poster presentation), *Biophysical Journal*, January 2002, 82(1), part 2, p. 167a.

8. Irene S. Gabashvili, **Mor Peleg**, and Russ B. Altman, "Ontology of ribosomal function and failure: the case of translational misreading". Proceedings of the Triennial International Conference on the Ribosome. Queenstown, New Zealand, January 27- February 1, 2002. p.127.
9. **Mor Peleg**, Dongwen Wang, Adriana Fodor^C, Sagi Keren[#], Ahron Kulater, and Eddy Karnieli^C. "Early Steps in Implementation of a Diabetes Foot Disorders Guideline for Clinical Decision Support". *The Annual Conference of the Israeli Society for Diabetic Foot*; 2004 (mis.hevra.haifa.ac.il/~morpeleg/pubs/Diabetic_Conf.html)
10. Dizza Beimel[#], **Mor Peleg**, Dov Dori, and Jacob Slonim. "Eliciting and characterizing scenarios of disclosure of private health data". (poster-presentation). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 11-15, 2006, p. 853.
11. Nuaman Asbeh[#], **Mor Peleg**, Tsvika Kuflik, Mitchell Schertz^C, "Development of a knowledge-based and machine-learning based methodology for finding clusters of developmental disorders". Annual Israeli Conference on Medical Informatics, Tel-Aviv, Israel, June 4, 2007
12. Dongwen Wang and **Mor Peleg**. "Using GLIF and GLEE to Facilitate Knowledge Management in Development of Clinical Decision Support Systems". Proceedings of Medinfo 2007, Brisbane, Australia, August 20-24 (Cited: 1).
13. Yaron Denekamp, Osama Nasreldeen[#], and **Mor Peleg**. "Characterization of the Knowledge Contained in Diagnostic Problem Oriented Clinical Practice Guidelines", *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Chicago, IL, November 10-14, 2007, p. 929 (Cited: 1).
14. Dizza Beimel[#] and **Mor Peleg**. "Comparing the Context and the SitBAC models for Privacy Preservation in terms of model understanding and synthesis". *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 8-12, 2008, p. 874 (Cited: 2).
15. Ida Sim, Ben Olasov, Simona Carini, Michael Bobak, Samson Tu, **Mor Peleg**, Daniel Rubin, Sean Falconer, Maleh Hernandez, Chris Callendar, Paul Jenkins, Margaret-Anne Storey, Berry de Bruijn, Svetlana Kiritchenko, Joel Martin. "The Trial Bank Project". Clinical Research Informatics Working Group Expo, part of the American Medical Informatics Association (AMIA) Annual Symposium, Washington DC, November 8-12, 2008.
16. Dizza Beimel[#], **Mor Peleg**, and Timothy Redmond "Reasoning about Access-Control-Situations with OWL". *The 11th International Protégé Conference*, Amsterdam, Netherlands, June 23-26, 2009 (Cited: 2).
17. Dizza Beimel[#] and **Mor Peleg**. "SitBACReasoner: Reasoning about access-control situations with OWL". American Medical Informatics Association (AMIA) Annual Symposium, San Francisco, CA, November 14-18, 2009.
- *18. Alexander Berdichevsky[#], Mor Peleg, Daniel Rubin. Using Personalization methods for standardization of mammography reports. Annual conference of the Israeli Association for information systems in medicine, Tel-Aviv, December 2010.

- *19. Dizza Beimel[#], and **Mor Peleg**. Implementing SitBAC as a Knowledge Framework Using OWL and SWRL, 5th annual ILAIS (Israel Association for Information Systems) conference, 3 pages, June 29, 2011, the Open University of Israel, Raanana, Israel.
- *20. Adi Fux[#], **Mor Peleg**, Pnina Soffer, Silvana Quaglini, Matteo Gabetta. Eliciting Knowledge for an Ontology for Personalizing Medical Decision-Making. International Congress on Personalized Medicine, Florence, Italy, February 2-5, 2012.
- *21. Dizza Beimel and **Mor Peleg**. Comparing ontology languages for model representation of the SitBAC Ontology via a controlled experiment- research design. The annual Conference of ILAIS, the Israel Association for Information Systems, Haifa, Israel, July 2, 2012.
- *22. Adi Fux[#], **Mor Peleg**, and Pnina Soffer. Personalizing Clinical Decision-support Systems: Eliciting Categories of Personal Context and Effects. The annual Conference of ILAIS, the Israel Association for Information Systems, Haifa, Israel, July 2, 2012.
- *23. Adi Fux[#], **Mor Peleg**, and Pnina Soffer. How Does Personal Information Affect Clinical Decision Making? Eliciting Categories of Personal Context and Effects. *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Chicago, IL, November 3-7, 2012.
- *24. Adi Fux[#], Mor Peleg, Pnina Soffer, Sagit Zolotov^C, Eddy Karnieli^C. Standardization and Impact of Clinical Guidelines Personalization. Annual conference of the Israeli Association for information systems in medicine, Tel-Aviv, June 17, 2013.
- *25. Adi Fux[#], **Mor Peleg**, Pnina Soffer, Sagit Zolotov^C, Eddy Karnieli^C. Personal Context Profile for Personalizing Clinical Guidelines. Israeli Association for Information Systems Annual Symposium, Ruppin College, July 1, 2013.
- *26. Omri Mugzach[#], **Mor Peleg**, Steven C. Bagley[#], Russ B. Altman. "Modeling DSM-IV Criteria in the Autism Ontology". Annual Conference of the Israeli Association of Information Systems, Ruppin Academic Center, Israel, July 1, 2013.
- *27. Omri Mugzach[#], **Mor Peleg**, Steven C. Bagley[#], Russ B. Altman. "Expanding the Autism Ontology to DSM-IV Criteria". AMIA Annual Symp., Washington DC, 2013, November 16-20, 2013.
- *28. Adi Fux[#], **Mor Peleg**, Pnina Soffer, Mercedes Rigla^C. "A Layered context model: a basis for customized treatment – a GDM patient case study". AMIA Annual Symp., Washington DC, 2014, November 15-19, 2014.

Technical Reports

1. **Mor Peleg**, Samson Tu, Jonathan Bury, Paolo Ciccarese, John Fox, Robert A. Greenes, Richard Hall, Peter D. Johnson, Neill Jones, Anand Kumar, Silvia Miksch, Silvana Quaglini, Andreas Seyfang, Edward H. Shortliffe, and Mario Stefanelli, "Comparing Models of Data and Knowledge for Guideline-based Decision Support:

a Case-Study Approach (Part 1 of 2). SMI Technical Report number SMI-2002-0922 (Cited: 1).

2. **Mor Peleg**, Samson Tu, Jonathan Bury, Paolo Ciccarese, John Fox, Robert A. Greenes, Richard Hall, Peter D. Johnson, Neill Jones, Anand Kumar, Silvia Miksch, Silvana Quaglini, Andreas Seyfang, Edward H. Shortliffe, and Mario Stefanelli, "Comparing Models of Decision and Action for Guideline-based Decision Support: a Case-Study Approach (Part 2 of 2)". SMI Technical Report number SMI-2002-0923 (Cited: 1).

I. Other Works and Publications

1. **Mor Peleg**, Aziz Boxwala, Samson Tu, Dongwen Wang, Omolola Ogunyemi, and Qing Zeng. "The GLIF3 User's Guide", InterMed Collaboratory, November 2000 http://www.smi.stanford.edu/projects/intermed-web/guidelines/GLIF_TECH_SPEC_May_4_2004.pdf (Cited GS: 19).
2. **Mor Peleg** and Aziz A. Boxwala. "An Introduction to Modeling and Representation of Clinical Guidelines" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Los Angeles, CA, November 4-8, 2000.
1. **Mor Peleg** and Aziz A. Boxwala. "Modeling Clinical Guidelines in a Sharable and Computer-interpretable Way: Development, Implementation, and Use Requirements" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 3-7, 2001.
2. Samson Tu, **Mor Peleg**, Susana Martins, Mary Goldstein. "Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 8-12, 2008.
3. Samson Tu, **Mor Peleg**, Susana Martins, Mary Goldstein. "Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 13-17, 2010.
- * 4. Samson Tu, **Mor Peleg**, Susana Martins, Mary Goldstein. "Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Washington DC, November 13-17, 2011.
- * 5. Samson Tu, **Mor Peleg**, Susana Martins, Mary Goldstein. "Knowledge-based Decision-Support Systems for Implementing Clinical Practice Guidelines" (tutorial). *Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium*, Chicago, IL, November 3-7, 2012.

J. Submitted Publications

- * 1. **Mor Peleg**, Yuval Shahr, Silvana Quaglini, Tom Broensd, Roxana Budasue, Nick Fungf, Adi Fux[#], Gema García-Sáez, Ayelet Goldstein[#], Arturo González-Ferrer^P, Hermie Hermensf, M. Elena Hernandog, Val Jonesf, Guy Klebanova, Denis Klimov[#], Daniel Knoppel, Nekane Larburu[#], Carlos Marcos, Iñaki Martínez-Sarriegui[#], Carlo Napolitano^C, Àngels Pallàs[#], Angel Palomares, Enea Parimbelli[#], Belén Pons^C, Mercedes Rigla^C, Lucia Sacchi^P, Erez Shalom[#], Pnina Soffer, and Boris van Schooten. Assessment of a Personalized and Distributed Patient Guidance System. Revision submitted to *International Journal of Medical Informatics*^V, I.F. (ISI 2013): 2.716. R(ISI 2013): 4/24, Cited: 30.

K. Summary of my Activities and Future Plans

Since my post-doctoral work that started at Stanford in 1999, I have been internationally-known in the area of clinical-guideline-based decision-support systems (CDSS). I was the lead developer for GLIF3, which is notable for its object-oriented layered approach to modeling and execution of the knowledge encoded in clinical guidelines. In recognition of this work I received the New Investigator Award by the American Medical Informatics Association (AMIA), in 2005.

I have continued to expand my work in this area to include patterns for exception handling, understanding the lifecycle stages of guideline development, methods for identifying implementation barriers of clinical algorithms, ontology-mapping and data integration that facilitates knowledge sharing via guidelines, and user-centered design of CDSSs that use computer-interpretable guidelines. I have over 60 publications on this topic alone, with an h-index of 30.

In 2011-2015, I have led the FP7 ICT MobiGuide project, with over 60 researchers, clinicians and engineers, from 13 different organizations in five countries, in the revolutionary area of guideline-based personalized medicine. MobiGuide is a scalable, secure, ubiquitously accessible, and user-friendly mobile solution for designing, deploying, and maintaining a DSS for patients and their care providers. The novelty of the approach is in patient-centrality, personalization, and distribution of decision-support for patients who use a mobile CDSS that includes a Smartphone and wearable biosensors that interacts with the main web-based CDSS of the physicians. The CDSS is based on clinical guidelines and personal health records, provides personalized evidence-based clinical recommendations, and has demonstrated in our proof of concept implementation (gestational diabetes patients in a hospital in Spain and atrial fibrillation patients in Italy) an increase in patients' satisfaction and in their compliance to evidence-based clinical guidelines.

My systems biology work that started at Stanford relied on BPM -Business Process Management- formalisms including workflows and Petri Nets as well as on ontologies. I have continued this work in collaboration with Prof. Wil van der Aalst and as PI in an NIH Center for Computational Neuropsychiatric Genomics, focused on autism.

In recognition of my scientific accomplishments I was elected as International Fellow of the American College of Medical Informatics (ACMI) and appeared in AMIA 2014 and 2015 Meet the Expert series. My guidelines work has led to operational CDSS in several countries in Europe and in the USA and I have been a strong contributor and organizer of international conferences (AMIA, Medinfo, Artificial Intelligence in Medicine) and over ten workshops dedicated to knowledge representation in healthcare (KR4HC) and process support for healthcare (ProHealth, within the BPM community). I am Associate editor of the Journal of Biomedical Informatics – the best methodological journal in our field.

My future plans include combining semantic web ontologies (OWL) with computational methods for reasoning, knowledge discovery, and intelligent data analysis, including machine learning. I plan to apply such methods for integrating clinical guidelines for patients with comorbidities (topic of my submitted ISF grant), and for scalable semi-automated methods for evolving ontologies.

I have already started to research this topic in two directions. First, by using machine-learning methods to learn knowledge about comorbidities from patient phenotypic data and integrate this data-based knowledge with literature-based knowledge into an OWL ontology (D21, J2). Second, I have applied natural language processing algorithms that parse textual clinical trial eligibility criteria according to an ontology that we have developed (D28, D34). In this way, study authors could potentially compare criteria across different studies and investigators could screen electronic health records for eligible patients.

Field of Research: developing methodologies and software tools for representing, analyzing, and reasoning with complex systems. In particular, I am interested in two domains: (1) clinical decision-support systems for patients and care providers, based on evidence-based guidelines, and (2) biological process modeling for understanding and simulating cellular processes (including metabolic and regulatory processes). My work combines knowledge representation (ontologies) with computational methods for knowledge discovery and data analysis.

Summary of four main publications:

1. *Solving the interoperability challenge of a distributed complex patient guidance system: A data integrator based on HL7's Virtual Medical Record standard*, Carlos Marcos, Arturo González-Ferrer, **Mor Peleg**, and Carlos Cavero, *Journal of the American Medical Informatics Association* 2015; 22(3):587-99.

In 2011-2015, Peleg led the FP7 ICT MobiGuide project, with over 60 researchers, clinicians and engineers, from 13 different organizations in five countries, in the revolutionary area of guideline-based personalized medicine. MobiGuide is a scalable, secure, ubiquitously accessible, and user-friendly mobile solution for designing, deploying, and maintaining a decision-support system (DSS) for patients and their care providers. The scientific novelty of the approach is in devising new artificial intelligence ontological representations and reasoning algorithms for patient-based personalization, semantic data integration, and distribution of decision-support, based on evidence-based clinical guidelines. Patients use a mobile DSS that includes a smartphone and wearable biosensors that interacts with the backend web-based DSS of the physicians. The DSS matches the formalized and customized clinical guideline knowledge with patient data integrated into a personal health record (PHR), in order to provide in real time personalized evidence-based clinical recommendations. Patients can thus lead their regular lives in their regular environments while being monitored and advised by the system to maintain their safety. MobiGuide has demonstrated in our proof of concept multi-national evaluation study (with gestational diabetes patients in a hospital in Spain and atrial fibrillation patients in Italy) an increase in patients' and clinicians' compliance to evidence-based clinical guidelines, in the quality of care as

well as an increase in patients' satisfaction and in their quality of life. Thus, in addition to the novel scientific innovation, we have demonstrated technological innovation in integrating together over twenty different knowledge and data based components into a single operating system, and translational innovation by turning the paper-based clinical guidelines into an effective real-time DSS that improves the quality of care by preventive medicine that replaces hospitalization and is cost saving.

The focus of the paper is on the PHR and its two important functionalities. First, by conforming to the HL7 virtual medical record standard, a small set of insertion/retrieval methods corresponding to vMR class structure could be used to allow different system components (e.g., DSS, patient or care provider's GUI, hospital EHR data exporter) to easily insert data into the PHR. Second, the PHR implements a notification service that informs subscribed components when specific data patterns are stored in the PHR. This allows the MobiGuide system to operate in a data-driven proactive mode, responding to external events and patterns found in patient data that require changing treatment plans.

The second author was a post-doctoral student at Peleg's lab. The first and fourth author are from the Atos integration company, who implemented Peleg's standards-based integration idea.

2. [*Using OWL and SWRL to Represent and Reason with Situation-based Access Control Policies*](#). Dizza Beigel and **Mor Peleg**. *Data and Knowledge Engineering Journal* 2011; 70(6):596-615.

This work uses semantic web methods and technologies towards solving the major challenge of today's big-data era – protecting the privacy of individuals, and specifically patients' data. This study conceptualized a new approach and developed a new knowledge model and mechanism to maintain privacy, while allowing access to data according to the situation that characterizes the data request scenario. The current approaches for data access policies allow access according to the organizational role of the data requestor (e.g., nurse, physician, secretary). However, in certain situations, for the benefit of the patient (patient receiving care from an intern on ward after hours), access could be granted even to roles that otherwise would not be granted permission to access the patient's data. To solve this problem we developed the SitBAC knowledge framework, a formal healthcare-oriented, context-based access-control framework that formalizes situation-based access control policies using Web Ontology Language (OWL) and Semantic Web Rule Language (SWRL) and uses a description-logics reasoner to infer authorization of data access requests based on OWL definitions of Situation classes. This is the first access control model that is context-centered rather than an extension of a role-based model.

The paper is part of the PhD research of Peleg's student, Dizza Beigel.

3. [*An ontology for Autism Spectrum Disorder \(ASD\) to infer ASD phenotypes from Autism Diagnostic Interview-Revised data*](#). Omri Mugzach, **Mor Peleg**, Steven C. Bagley, Stephen J. Guter, Edwin H. Cook, Russ B. Altman. *Journal of BioMedical Informatics* 2015;56:333-47.

Understanding the disease processes of complex neurodevelopmental disorders (NDDs), such as Autism Spectrum Disorder (ASD) has been a focus of research for many years. An ability to organize and semantically integrate subject data concerning phenotypic manifestations as well as genetic and environmental risk factors among cohorts of ASD subjects could yield important new knowledge regarding commonalities and differences that characterize subtypes of ASD, and also help elucidate the processes underlying the development of the disorder, whose mechanisms are still unknown. We took a step toward this goal by developing a semantic web (OWL and SWRL) ontology for autism that allows automatic inference of ASD phenotypes and Diagnostic & Statistical Manual of Mental Disorders (DSM) criteria based on patients' Autism Diagnostic Interview-Revised (ADI-R) assessment data. Evaluation showed that the ontology allows automatic inference of subjects' disease phenotypes and diagnosis with high accuracy. The ontology is planned to benefit future studies by serving as a knowledge base for ASD. The knowledge base could support the automatic inference of additional knowledge mined by machine learning algorithms, on related neurodevelopmental disease phenotypes, commonalities and differences in manifestations and risk factors, contributing to the continuous discovery of ASD and neurodevelopmental disease pathophysiology.

The paper is part of the MSc thesis of Peleg's student, Omri Mugzach in collaboration with psychiatrists from the laboratories of Edwin Cook (University of Illinois at Chicago) and Russ Altman (Stanford).

4. *Computer-interpretable Clinical Guidelines: a Methodological Review*. **Mor Peleg**. *Journal of Biomedical Informatics*, Vol. 46 No. 4, pp. 744–763, 2013

Clinical guideline based decision-support systems provide effective ways to bring evidence-based recommendations to the point of care during patient encounters, thus having the ability to support and impact clinicians' decision making, improve healthcare outcomes, lower unjustified care variability, and save costs. Being one of the leading experts on clinical guideline based decision support systems, Peleg wrote this review paper ten years after publishing the highly cited (592 citations) review on computer-interpretable guidelines (CIG) that was published in JAMIA in 2003. The new paper reviews the literature on CIG-related methodologies since the inception of CIGs. The review defines and considers ten themes that span the entire life-cycle of CIG development and suggests futuristic themes, such as patient-centric CIGs and distributed CIGs.

This paper, published in August 2013, has already been cited 82 times by January 2016 (2.5 years after publication).

Journal Papers in preparation

- * 1. **Mor Peleg**, Yuval Shahr, Silvana Quaglin, Adi Fux[#], Gema García-Sáez, Ayelet Goldstein[#], M. Elena Hernando, Val Jones, Guy Klebanov[#], Denis Klimov[#], Tom Broens, Daniel Knoppel, Nekane Larburu, Carlos Marcos, Inaki Martínez-Sarriegu[#], Carlo Napolitano^C, Àngels Pallàs, Angel Palomares, Enea

Parimbelli[#], Mercedes Rigla^C, Lucia Sacchi^P, Erez Shalom, Pnina Soffer, and Boris van Schooten. The MobiGuide Patient Guidance System: Guiding Patients and Their Care Providers Any Time Everywhere. In preparation for *International Journal of Medical Informatics*^V, I.F. (ISI 2013): 2.716. R(ISI 2013): 4/24.

Conference papers in preparation:

- * 2. Szymon Wilk, Adi Fux[#] Martin Michalowski, **Mor Peleg**, Pnina Soffer. Using Constraint Logic Programming for the Verification of Customized Decision Models for Clinical Guidelines. Artificial Intelligence in Medicine, June 21-24, 2017, Vienna, Austria.