Formal Language A Practical Introduction | 828ca902ecaba225be397554915c5229

Elements of Formal SemanticsIntroducing Second Language AcquisitionProblem Solving in Automata, Languages, and ComplexityA Practical Introduction to Denotational SemanticsModern Programming LanguagesLegal EnglishAn Introduction to InteractionAn Introduction to Practical Formal Methods Using Temporal LogicSemanticsA Practical Introduction to PSLIntroduction to the Theory of ComputationJFLAPFormal LanguageObjects First with JavaDiscourse Grammar of the Greek New TestamentThe B Language and MethodIntroduction to Switching and Automata TheoryType Theory and Formal ProofSpanish for VeterinariansFormal Languages and ApplicationsFormal VerificationThe Formal Complexity of Natural LanguageA Course in Formal Languages, Automata and GroupsIntroduction to Formal LanguagesSocial ResearchThe Formal Semantics of Programming LanguagesA Handbook for Writing Formal PapersExploring English GrammarAgent-Based and Individual-Based ModelingTheory of Formal Languages with ApplicationsTheory of Finite AutomataTheory of ComputationBasic Impressionistic PhoneticsIntroduction to Automata Theory, Languages, and ComputationInnovative language teaching and

learning at university: integrating informal learning into formal language educationHandbook of Formal LanguagesAnalyzing Linguistic DataA Practical Introduction to Denotational SemanticsBuilding Ontologies with Basic Formal OntologyIntroduction to Formal Languages, Automata Theory and Computation

Elements of Formal Semantics Statistical analysis is a useful skill for linguists and psycholinguists, allowing them to understand the quantitative structure of their data. This textbook provides a straightforward introduction to the statistical analysis of language. Designed for linguists with a non-mathematical background, it clearly introduces the basic principles and methods of statistical analysis, using 'R', the leading computational statistics programme. The reader is guided step-by-step through a range of real data sets, allowing them to analyse acoustic data, construct grammatical trees for a variety of languages, quantify register variation in corpus linguistics, and measure experimental data using state-of-the-art models. The visualization of data plays a key role, both in the initial stages of data exploration and later on when the reader is encouraged to criticize various models. Containing over 40 exercises with model answers, this book will be welcomed by all linguists

wishing to learn more about working with and presenting quantitative data.

Introducing Second Language Acquisition This work fills a significant need for a well-researched yet readable guide to discourse analysis. Using cross-linguistic principles and providing copious examples from both narratives and episles, Runge takes the reader from linguistic theory to practical exegetical application. Introducing a function-based approach to linguistics, Runge explores New Testament Greek grammatical conventions by focusing on the communication tasks they accomplish. His study of the ways in which words are used in texts and contexts has less to do with the specifics of speech and more to do with how humans are wired to process it. Therefore, Runge looks at how all languages operate before focusing on Greek. This examination of linguistics in general simplifies the analyticalprocess, and explains how and why we communicate as we do. Readers will learn that discourse analysis necessarily complements today's formal approaches to linguistics, as they are simultaneously led to a more accurate description of the biblical text.

Problem Solving in Automata, Languages, and Complexity

A Practical Introduction to Denotational Semantics "A CD-ROM containing the JDK and versions of BlueJ for a variety of operating systems"-- back cover

Modern Programming Languages Covers all areas, including operations on languages, context-sensitive languages, automata, decidability, syntax analysis, derivation languages, and more. Numerous worked examples, problem exercises, and elegant mathematical proofs. 1983 edition.

Legal English This engaging textbook bridges the gap between traditional and functional grammar. Starting with a traditional approach, students will develop a firm grasp of traditional tools for analysis and learn how SFG (Systemic Functional Grammar) can be used to enrich the traditional formal approach. Using a problem-solving approach, readers explore how grammatical structures function in different contexts by using a wide variety of thought-provoking and motivating texts including advertisements, cartoons, phone calls and chatroom dialogue. Each chapter focuses on a real world issue or problem that can be investigated linguistically, such as "mis"-translation or problems arising from a communication disorder. By working on these problems, students will become equipped to

understand and analyze formal and functional grammar in different genres and styles. With usable and accessible activities throughout, Exploring English Grammar is ideal for upper undergraduate and postgraduate students of English language and linguistics.

An Introduction to Interaction Business ethics has largely been written from the perspective of analytical philosophy with very little attention paid to the work of continental philosophers. Yet although very few of these philosophers directly discuss business ethics, it is clear that their ideas have interesting applications in this field. This innovative textbook shows how the work of continental philosophers – Deleuze and Guattari, Foucault, Levinas, Bauman, Derrida, Levinas, Nietzsche, Zizek, Jonas, Sartre, Heidegger, Latour, Nancy and Sloterdijk – can provide fresh insights into a number of different issues in business ethics. Topics covered include agency, stakeholder theory, organizational culture, organizational justice, moral decision-making, leadership, whistle-blowing, corporate social responsibility, globalization and sustainability. The book includes a number of features designed to aid comprehension, including a detailed glossary of key terms, text boxes explaining key concepts, and a wide range of examples from the world of business.

An Introduction to Practical Formal Methods Using Temporal Logic
Introducing some of the foundational concepts, principles and techniques in the formal semantics of natural language, Elements of Formal Semantics outlines the mathematical principles that underlie linguistic meaning. Making use of a wide range of concrete English examples, the book presents the most useful tools and concepts of formal semantics in an accessible style and includes a variety of practical exercises so that readers can learn to utilise these tools effectively. For readers with an elementary background in set theory and linguistics or with an interest in mathematical modelling, this fascinating study is an ideal introduction to natural language semantics. Designed as a quick yet thorough introduction to one of the most vibrant areas of research in modern linguistics today this volume reveals the beauty and elegance of the mathematical study of meaning.

Semantics Agent-based modeling is a new technique for understanding how the dynamics of biological, social, and other complex systems arise from the characteristics and behaviors of the agents making up these systems. This innovative textbook gives students and scientists the skills to design, implement, and analyze agent-based models. It starts with the fundamentals of modeling and provides an introduction

to NetLogo, an easy-to-use, free, and powerful software platform. Nine chapters then each introduce an important modeling concept and show how to implement it using NetLogo. The book goes on to present strategies for finding the right level of model complexity and developing theory for agent behavior, and for analyzing and learning from models. Agent-Based and Individual-Based Modeling features concise and accessible text, numerous examples, and exercises using small but scientific models. The emphasis throughout is on analysis--such as software testing, theory development, robustness analysis, and understanding full models--and on design issues like optimizing model structure and finding good parameter values. The first hands-on introduction to agent-based modeling, from conceptual design to computer implementation to parameterization and analysis Provides an introduction to NetLogo with nine chapters introducing an important modeling concept and showing how to implement it using NetLogo Filled with examples and exercises, with updates and supplementary materials at http://www.railsback-grimm-abm-book.com/ Designed for students and researchers across the biological and social sciences Written by leading practitioners Leading universities that have adopted this book include: Amherst College Brigham Young University Carnegie Mellon University Cornell University Miami University Northwestern University Old Dominion University Portland

State University Rhodes College Susquehanna University University College, Dublin University of Arizona University of British Columbia University of Michigan University of South Florida University of Texas at Austin University of Virginia

A Practical Introduction to PSL The name "temporal logic" may sound complex and daunting; but while they describe potentially complex scenarios, temporal logics are often based on a few simple, and fundamental, concepts - highlighted in this book. An Introduction to Practical Formal Methods Using Temporal Logic provides an introduction to formal methods based on temporal logic, for developing and testing complex computational systems. These methods are supported by many well-developed tools, techniques and results that can be applied to a wide range of systems. Fisher begins with a full introduction to the subject, covering the basics of temporal logic and using a variety of examples, exercises and pointers to more advanced work to help clarify and illustrate the topics discussed. He goes on to describe how this logic can be used to specify a variety of computational systems, looking at issues of linking specifications, concurrency, communication and composition ability. He then analyses temporal specification techniques such as deductive verification, algorithmic verification, and direct execution to

develop and verify computational systems. The final chapter on case studies analyses the potential problems that can occur in a range of engineering applications in the areas of robotics, railway signalling, hardware design, ubiquitous computing, intelligent agents, and information security, and explains how temporal logic can improve their accuracy and reliability. Models temporal notions and uses them to analyze computational systems Provides a broad approach to temporal logic across many formal methods - including specification, verification and implementation Introduces and explains freely available tools based on temporal logics and shows how these can be applied Presents exercises and pointers to further study in each chapter, as well as an accompanying website providing links to additional systems based upon temporal logic as well as additional material related to the book.

Introduction to the Theory of Computation Introduction to Formal Languages, Automata Theory and Computation presents the theoretical concepts in a concise and clear manner, with an in-depth coverage of formal grammar and basic automata types. The book also examines the underlying theory and principles of computation and is highly suitable to the undergraduate courses in computer science and information technology. An overview of the recent trends in the field

and applications are introduced at the appropriate places to stimulate the interest of active learners.

JFLAP This book is based on notes for a master's course given at Queen Mary, University of London, in the 1998/9 session. Such courses in London are quite short, and the course consisted essentially of the material in the ?rst three chapters, together with a two-hour lecture on connections with group theory. Chapter 5 is a considerably expanded version of this. For the course, the main sources were the books by Hopcroft and Ullman ([20]), by Cohen ([4]), and by Epstein et al. ([7]). Some use was also made of a later book by Hopcroft and Ullman ([21]). The ulterior motive in the ?rst three chapters is to give a rigorous proof that various notions of recursively enumerable language are equivalent. Three such notions are considered. These are: generated by a type 0 grammar, recognised by a Turing machine (deterministic or not) and de?ned by means of a Godel ¨ numbering, having de?ned "recursively enumerable" for sets of natural numbers. It is hoped that this has been achieved without too many ar- ments using complicated notation. This is a problem with the entire subject, and it is important to understand the idea of the proof, which is often quite simple. Two particular places that are heavy going are the proof at the end of Chapter 1 that a language

recognised by a Turing machine is type 0, and the proof in Chapter 2 that a Turing machine computable function is partial recursive.

Formal Language Now you can clearly present even the most complex computational theory topics to your students with Sipser's distinct, market-leading INTRODUCTION TO THE THEORY OF COMPUTATION, 3E. The number one choice for today's computational theory course, this highly anticipated revision retains the unmatched clarity and thorough coverage that make it a leading text for upper-level undergraduate and introductory graduate students. This edition continues author Michael Sipser's well-known, approachable style with timely revisions, additional exercises, and more memorable examples in key areas. A new first-of-its-kind theoretical treatment of deterministic context-free languages is ideal for a better understanding of parsing and LR(k) grammars. This edition's refined presentation ensures a trusted accuracy and clarity that make the challenging study of computational theory accessible and intuitive to students while maintaining the subject's rigor and formalism. Readers gain a solid understanding of the fundamental mathematical properties of computer hardware, software, and applications with a blend of practical and philosophical coverage and mathematical treatments, including advanced theorems and proofs. INTRODUCTION TO THE THEORY OF

COMPUTATION, 3E's comprehensive coverage makes this an ideal ongoing reference tool for those studying theoretical computing. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Objects First with Java Basics - Notation - Lattices - A simple language - Direct semantics - Control - Data structures and data types - A prolog semantics - Miscellaneous.

Discourse Grammar of the Greek New Testament Preliminaries; Finite automata and regular languages; Pushdown automata and context-free languages; Turing machines and phrase-structure languages; Computability; Complexity; Appendices.

The B Language and Method This book describes the Property Specification Language PSL, recently standardized as IEEE Standard 1850-2005. PSL was developed to fulfill the following requirements: easy to learn, write, and read; concise syntax; rigorously well-defined formal semantics; expressive power, permitting the specification for a large class of real world design properties; known efficient underlying algorithms in simulation, as well as formal verification. Basic features are covered, as well as advanced

topics such as the use of PSL in multiply-clocked designs. A full chapter is devoted to common errors, gathered through the authors' many years of experience in using and teaching the language.

Introduction to Switching and Automata Theory Typical undergraduate CS/CE majors have a practical orientation: they study computing because they like programming and are good at it. This book has strong appeal to this core student group. There is more than enough material for a semester-long course. The challenge for a course in programming language concepts is to help practical students understand programming languages at an unaccustomed level of abstraction. To help meet this challenge, the book includes enough hands-on programming exercises and examples to motivate students whose primary interest in computing is practical

Type Theory and Formal Proof The need for a comprehensive survey-type exposition on formal languages and related mainstream areas of computer science has been evident for some years. In the early 1970s, when the book Formal Languages by the second mentioned editor appeared, it was still quite feasible to write a comprehensive book with that title and include also topics of current research interest. This would not be possible anymore. A standard-sized book on formal

languages would either have to stay on a fairly low level or else be specialized and restricted to some narrow sector of the field. The setup becomes drastically different in a collection of contributions, where the best authorities in the world join forces, each of them concentrat ing on their own areas of specialization. The present three-volume Handbook constitutes such a unique collection. In these three volumes we present the current state of the art in formallanguage theory. We were most satisfied with the enthusiastic response given to our request for contributions by specialists representing various subfields. The need for a Handbook of Formal Languages was in many answers expressed in different ways: as an easily accessible his torical reference, a general source of information, an overall course-aid, and a compact collection of material for self-study. We are convinced that the final result will satisfy such various needs.

Spanish for Veterinarians Formal Languages and Applications provides a comprehensive study-aid and self-tutorial for graduates students and researchers. The main results and techniques are presented in an readily accessible manner and accompanied by many references and directions for further research. This carefully edited monograph is intended to be the gateway to formal language theory and its

applications, so it is very useful as a review and reference source of information in formal language theory.

Formal Languages and Applications This classic book on formal languages, automata theory, and computational complexity has been updated to present theoretical concepts in a concise and straightforward manner with the increase of hands-on, practical applications. This new edition comes with Gradiance, an online assessment tool developed for computer science. Please note, Gradiance is no longer available with this book, as we no longer support this product.

Formal Verification

The Formal Complexity of Natural Language This textbook provides an in-depth introduction to the theoretical perspectives and methods of doing conversation analysis, an approach to the study of talk in interaction which grew out of the work of Garfinkel, Sacks, Schegloff, and Jefferson. This book is unique in that it provides comprehensive instruction in both interaction in ordinary conversations in everyday life as well as talk in institutional settings and a wide range of workplace and business interactions,

while teaching both major research findings and how to conduct conversation analytic research. The book is designed to be useful for students of linguistics, sociology, and communication studies, and is written in clear and accessible prose. The Companion Website provides additional resources for instructors, such as questions and data excerpts for tests and in class exercises, audio and video clips for transcription practice, and guides for instructors on a range of topics covered in the course.

A Course in Formal Languages, Automata and Groups Basics - Notation - Lattices - A simple language - Direct semantics - Control - Data structures and data types - A prolog semantics - Miscellaneous.

Introduction to Formal Languages Automata and natural language theory are topics lying at the heart of computer science. Both are linked to computational complexity and together, these disciplines help define the parameters of what constitutes a computer, the structure of programs, which problems are solvable by computers, and a range of other crucial aspects of the practice of computer science. In this important volume, two respected authors/editors in the field offer accessible, practice-oriented coverage of these issues with an emphasis on refining core problem solving skills.

Social Research Ever since Chomsky laid the framework for a mathematically formal theory of syntax, two classes of formal models have held wide appeal. The finite state model offered simplicity. At the opposite extreme numerous very powerful models, most notable transformational grammar, offered generality. As soon as this mathematical framework was laid, devastating arguments were given by Chomsky and others indicating that the finite state model was woefully inadequate for the syntax of natural language. In response, the completely general transformational grammar model was advanced as a suitable vehicle for capturing the description of natural language syntax. While transformational grammar seems likely to be adequate to the task, many researchers have advanced the argument that it is "too adequate. " A now classic result of Peters and Ritchie shows that the model of transformational grammar given in Chomsky's Aspects [IJ is powerful indeed. So powerful as to allow it to describe any recursively enumerable set. In other words it can describe the syntax of any language that is describable by any algorithmic process whatsoever. This situation led many researchers to reasses the claim that natural languages are included in the class of transformational grammar languages. The conclu sion that many reached is that the claim is void of content, since, in their view, it says little more than that natural language syntax is doable algo rithmically and, in

the framework of modern linguistics, psychology or neuroscience, that is axiomatic.

The Formal Semantics of Programming Languages The Formal Semantics of Programming Languages provides the basic mathematical techniques necessary for those who are beginning a study of the semantics and logics of programming languages. These techniques will allow students to invent, formalize, and justify rules with which to reason about a variety of programming languages. Although the treatment is elementary, several of the topics covered are drawn from recent research, including the vital area of concurency. The book contains many exercises ranging from simple to miniprojects.Starting with basic set theory, structural operational semantics is introduced as a way to define the meaning of programming languages along with associated proof techniques. Denotational and axiomatic semantics are illustrated on a simple language of while-programs, and fall proofs are given of the equivalence of the operational and denotational semantics and soundness and relative completeness of the axiomatic semantics. A proof of Godel's incompleteness theorem, which emphasizes the impossibility of achieving a fully complete axiomatic semantics, is included. It is supported by an appendix providing an introduction to the theory of computability based on while-programs.

Following a presentation of domain theory, the semantics and methods of proof for several functional languages are treated. The simplest language is that of recursion equations with both call-by-value and call-by-name evaluation. This work is extended to lan guages with higher and recursive types, including a treatment of the eager and lazy lambda-calculi. Throughout, the relationship between denotational and operational semantics is stressed, and the proofs of the correspondence between the operation and denotational semantics are provided. The treatment of recursive types - one of the more advanced parts of the book - relies on the use of information systems to represent domains. The book concludes with a chapter on parallel programming languages, accompanied by a discussion of methods for specifying and verifying nondeterministic and parallel programs.

A Handbook for Writing Formal Papers Spanish for Veterinarians, Second Edition, is designed to help you rapidly learn working Spanish for clinical conversations. Packed with the practical vocabulary information and conversational tools found in the first edition, the new edition now includes a new chapter on exotics and expanded information on the Spanish required for pre-consultation discussion. The pronunciation exercises, available online as audio files to help veterinary team members effectively and confidently use Spanish in

their client communications, have also been revised and expanded. This new edition is a lively presentation of the Spanish that working vets increasingly need to know.

Exploring English Grammar A Handbook for Writing Formal Papers takes the student through the writing process step by step in language that is succinct and to the point. Consistent with APA format and style, the Handbook is appropriate for any graduate or undergraduate course in education or psychology requiring the development of a formal literature review or a research study. However, it has broader applications both within and beyond the academic setting, including in any business or organization requiring the preparation of reports, documents, and other pieces of formal writing. Each step in the writing process is carefully and clearly explained beginning with a five-step sequence: define, describe, detail, discuss, and determine. Following this, each section of the paper is delineated, from the title page and the abstract to the bibliography and appendixes. The process of completing the formal paper or research study is addressed in a section on conventions of formal writing. Included in the text are checklists for writers and substantive ancillary material. Students who have used the Handbook have unanimously praised it for helping them organize, write, and complete their work.

Agent-Based and Individual-Based Modeling Formal Verification: An Essential Toolkit for Modern VLSI Design presents practical approaches for design and validation, with hands-on advice to help working engineers integrate these techniques into their work. Formal Verification (FV) enables a designer to directly analyze and mathematically explore the quality or other aspects of a Register Transfer Level (RTL) design without using simulations. This can reduce time spent validating designs and more quickly reach a final design for manufacturing. Building on a basic knowledge of SystemVerilog, this book demystifies FV and presents the practical applications that are bringing it into mainstream design and validation processes at Intel and other companies. After reading this book, readers will be prepared to introduce FV in their organization and effectively deploy FV techniques to increase design and validation productivity. Learn formal verification algorithms to gain full coverage without exhaustive simulation Understand formal verification tools and how they differ from simulation tools Create instant test benches to gain insight into how models work and find initial bugs Learn from Intel insiders sharing their hard-won knowledge and solutions to complex design problems

Theory of Formal Languages with Applications JFLAP: An Interactive

Formal Languages and Automata Package is a hands-on supplemental guide through formal languages and automata theory. JFLAP guides students interactively through many of the concepts in an automata theory course or the early topics in a compiler course, including the descriptions of algorithms JFLAP has implemented. Students can experiment with the concepts in the text and receive immediate feedback when applying these concepts with the accompanying software. The text describes each area of JFLAP and reinforces concepts with end-of-chapter exercises. In addition to JFLAP, this guide incorporates two other automata theory tools into JFLAP: JellRap and Pate.

Theory of Finite Automata Semantics is an accessible and practical introduction to formal semantics, the study of linguistic meaning, for students new to the subject. Semantics: * shows how meanings are built up and interrelated * presupposes very little prior knowledge of grammar or linguistic terminology * includes a glossary of technical terms * provides a progression of exercises with answers given at the back * backs up the activities with short, clear explanations * includes an appendix on sets and functions.

Theory of Computation Type theory is a fast-evolving field at the

crossroads of logic, computer science and mathematics. This gentle step-by-step introduction is ideal for graduate students and researchers who need to understand the ins and outs of the mathematical machinery, the role of logical rules therein, the essential contribution of definitions and the decisive nature of well-structured proofs. The authors begin with untyped lambda calculus and proceed to several fundamental type systems, including the well-known and powerful Calculus of Constructions. The book also covers the essence of proof checking and proof development, and the use of dependent type theory to formalise mathematics. The only prerequisite is a basic knowledge of undergraduate mathematics. Carefully chosen examples illustrate the theory throughout. Each chapter ends with a summary of the content, some historical context, suggestions for further reading and a selection of exercises to help readers familiarise themselves with the material.

Basic Impressionistic Phonetics

Introduction to Automata Theory, Languages, and Computation B is one of the few formal methods which has robust, commercially-available tool support for the entire development lifecycle from specification through to code generation. This volume provides a comprehensive

introduction to the B Abstract Machine Notation, and to how it can be used to support formal specification and development of high integrity systems. A strong emphasis is placed on the use of B in the context of existing software development methods, including object-oriented analysis and design. The text includes a large number of worked examples, graduated exercises in B AMN specification and development (all of which have been class-tested), two extended case studies of the development process, and an appendix of proof techniques suitable for B. Based on material which has been used to teach B at postgraduate and undergraduate level, this volume will provide invaluable reading a wide range of people, including students, project technical managers and workers, and researchers with an interest in methods integration and B semantics.

Innovative language teaching and learning at university: integrating informal learning into formal language education Original, fresh and relevant this is a theoretically-informed practical guide to researching social relations. The text provides a mixed methods approach that challenges historical divisions between quantitative and qualitative research. It adopts a multidisciplinary approach to social science research, drawing from areas such as sociology, social psychology and social anthropology. Explicitly addressing the

concerns of emergent researchers it provides both a 'how to' account of social research and an understanding of the main factors that contextualize research by discussing 'why do' social scientists work this way. Throughout the twelve comprehensive chapters procedural (how to) accounts and contextual (why do) issues are usefully applied to major themes and substantive questions. These key themes include: (1) Research design (2) The practices of research and emergent researchers: Beyond ontology, epistemology and methodology (3) The impact of technology on research (4) Putting the research approach in context. A superb teaching text this book will be relished by lecturers seeking an authoritative introduction to social research and by students who want an accessible, enriching text to guide and inspire them.

Handbook of Formal Languages English is the dominant language of international business relations, and a good working knowledge of the language is essential for today's legal or business professional. Legal English provides a highly practical approach to the use of English in commercial legal contexts, and covers crucial law terminology and legal concepts. Written with the needs of both students and practitioners in mind, this book is particularly suitable for readers whose first language is not English but need to

use English on a regular basis in legal contexts. The book covers both written and oral legal communication in typical legal situations in a straightforward manner. As well as including chapters on grammar and punctuation for legal writing, the book features sections on contract-drafting, language for negotiation, meetings and telephone conversations. This edition contains additional troubleshooting tips for legal writing, guidance on good style, and new sections on writing law essays and applying for legal positions.

Analyzing Linguistic Data Formal languages provide the theoretical underpinnings for the study of programming languages as well as the foundations for compiler design. They are important in such areas as data transmission and compression, computer networks, etc. This book combines an algebraic approach with algorithmic aspects and decidability results and explores applications both within computer science and in fields where formal languages are finding new applications such as molecular and developmental biology. It contains more than 600 graded exercises. While some are routine, many of the exercises are in reality supplementary material. Although the book has been designed as a text for graduate and upper-level undergraduate students, the comprehensive coverage of the subject makes it suitable as a reference for scientists.

A Practical Introduction to Denotational Semantics This volume collects selected papers from the 2017 Innovative Language Teaching and Learning at University conference, which took place on the 16th of June at The Open University. The theme of the conference was Integrating informal learning into formal language education. The aim of the conference was to engage in productive collaboration between language professionals to further equip students to succeed in our ever-growing landscape of formal and informal learning. This is the third volume in a series of books compiling papers from the InnoConf conferences. It follows from the first two volumes in 2015 and 2016 respectively: Enhancing participation and collaboration (Goria, Speicher, & Stollhans, 2016) and Enhancing employability (Álvarez-Mayo, Gallagher-Brett, & Michel, 2017).

Building Ontologies with Basic Formal Ontology Introducing Second Language Acquisition: Perspectives andPractices represents a clear and concise introduction to themain concepts, issues, and debates in second language acquisitionstudies aimed specifically at undergraduates encountering the topicfor the first time. Follows six fictitious language learners throughout the textwhose stories serve to introduce various concepts and issues Contains specific chapters on first language acquisition andbilingualism, as well as explicit

references to the most recent andimportant research Covers key topics including acquisition contexts, theoreticalperspectives, language teaching methods, second languagedevelopment, and individual differences (such as age, aptitude, andmotivation) Grabs student attention with lighthearted cartoons thatillustrate and reinforce key ideas Features a full range of pedagogical tools to aid studentlearning, including “language learning in practice”textboxes; bolded new terms defined in the margins; an end-of-bookglossary; self-assessment and classroom discussion questions;exercise and project ideas; and further online viewingsections

Introduction to Formal Languages, Automata Theory and Computation An introduction to the field of applied ontology with examples derived particularly from biomedicine, covering theoretical components, design practices, and practical applications.