Chapter 2 Morphological Processing Of Semitic Languages

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The Cambridge Handbook of Experimental Syntax Grant Goodall 2021-11-30 The first of its kind, this Handbook provides an in-depth overview of all current issues and trends in experimental syntax.

Case in Semitic Rebecca Hasselbach 2013-05-02 This book reconstructs the Semitic case system, based on a detailed analysis of the expression of grammatical roles and relations in the attested Semitic languages. It brings typological methods to bear on the study of comparative Semitics and includes detailed analyses of a wide range of data. The book will interest Semiticists and typologists.

Evaluation of Multilingual and Multi-modal Information Retrieval Paul Clough 2007-09-04 This book constitutes the thoroughly refereed postproceedings of the 7th Workshop of the Cross-Language Evaluation Forum, CLEF 2006, held in Alicante, Spain, September 2006. The revised papers presented together with an introduction were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections on Multilingual Textual Document Retrieval, Domain-Specifig Information Retrieval, i-CLEF, QA@CLEF, ImageCLEF, CLSR, WebCLEF and GeoCLEF.

Morphology and Computation Richard William Sproat 1992 This book provides the first broad yet thorough coverage of issues in morphological theory. This book provides the first broad yet thorough coverage of issues in morphological theory. It includes a wide array of techniques and systems in computational morphology (including discussion of their limitations), and describes some unusual applications. Sproat motivates the study of computational morphology by arguing that a computational natural language system, such as a parser or a generator, must incorporate a model of morphology. He discusses a range of applications for programs with knowledge of morphology, some of which are not generally found in the literature. Sproat then provides an overview of some of the basic descriptive facts about morphology and issues in theoretical morphology and (lexical) phonology, as well as psycholinguistic evidence for human processing of morphological structure. He takes up the basic techniques that have been proposed for doing morphological processing and discusses at length various systems (such as DECOMP and KIMMO) that incorporate part or all of those techniques, pointing out the inadequacies of such systems from both a descriptive and a computational point of view. He concludes by touching on interesting peripheral areas such as the analysis of complex nominals in English, and on the main contributions of Rumelhart and McClelland's connectionism to the computational analysis of words.

A Linguistic History of Arabic Jonathan Owens 2006-05-11 A Linguistic History of Arabic presents a reconstruction of proto-Arabic by the methods of historical-comparative linguistics. It challenges the traditional conceptualization of an old, Classical language evolving into the contemporary Neo-Arabic dialects. Professor Owens combines established comparative linguistic methodology with a careful reading of the classical Arabic sources, such as the grammatical and exegetical traditions. He arrives at a richer and more complex picture of early Arabic language history than is current today and in doing so establishes the basis for a comprehensive, linguistically-based understanding of the history of Arabic. The arguments are set out in a concise, case by case basis, making it accessible to students and scholars of Arabic and Islamic culture, as well as to those studying Arabic and historical linguists.

Case in Semitic Kasia M. Jaszczolt 2013-05-02 This book considers linguistic and mental representations of time. Prominent linguists and philosophers from all over the world examine and report on recent work on the representation of temporal reference; the interaction of the temporal information from tense, aspect, modality, temporal adverbials, and context; and the representation of the temporal relations between events and states, as well as between facts, propositions, sentences, and utterances. They link this to current research on the cognitive processing of temporal reference, linguistic and philosophical semantics, psychology, and anthropology. The book is divided into three parts: Time, Tense, and Temporal Reference in Discourse; Time and Modality; and Cognition and Metaphysics of Time. It will interest scholars and advanced students of time and temporal reference in linguistics, philosophy, anthropology, psychology, and cognitive science.

Generative Phonology Iggy Roca 2003-09-02 "Generative Phonology" offers an overview of the post-SPE theory of generative phonology and is suitable for linguists not specializing in phonology, who want to keep abreast of the latest developments in the subject. It deals with all the major trends in what has come to be known as "non-linear" phonology, including: particle phonology; dependancy phonology; government and charm phonology. Iggy Roca guides the reader through the developments of the various approaches, justifying their rationale against the background of SPE machinery, and providing the reader with the basic tools necessary to penetrate current problems and debates. This text aims to integrate the modules and proposals of what can seem a fragmentary field, into a cohesive body of living theory.

Language Engineering for Lesser-studied Languages Sergei Nirenburg 2009-01-01 Technologies enabling computers to process specific languages facilitate economic and political progress of societies where these languages are spoken. Development of methods and systems for language processing is therefore a worthy goal for national governments as well as for business entities and scientific and educational institutions in every country in the world. As work on systems and resources for the 'lower-density' languages becomes more widespread, an important question is how to leverage the results and experience accumulated by the field of computational linguistics for the major languages in the development of resources and systems for lower-density languages. This issue has been at the core of the NATO Advanced Studies Institute on language technologies for middle- and low-density languages held in Georgia in October 2007. This publication is a collection - of publication-oriented versions - of the lectures presented there and is a useful source of knowledge about many core facets of modern computational-linguistic work. By the same token, it can serve as a reference source for people interested in learning about strategies that are best suited for developing computational-linguistic capabilities for lesser-studied languages either 'from scratch' or using components developed for other languages. The book should also be quite useful in teaching practical system- and resource-building topics in computational linguistics.

The "broken" Plural Problem in Arabic and Comparative Semitic Robert R. Ratcliffe 1998 The formal aspects of non-concatenative morphology have received considerable attention in recent years, but the diachronic dimensions of such systems have been little explored. The current work applies a modern methodological and theoretical framework to a classic problem in Arabic and Semitic historical linguistics: the highly allomorphic system of 'stem-internal' or 'broken' plurals. It shows that widely-accepted views regarding the historical development of this system are untenable and offers a new hypothesis. The first chapter lays out a methodology for comparative-historical research in morphology. The next two chapters present an analysis of Arabic morphology based on contemporary formal linguistic approaches, and applies this analysis to the noun plural system. Chapter Four shows that neither semantic shift nor ablaut-type sound change account adequately for the data. The fifth chapter offers a systematic comparison of the plural systems of Semitic languages, incorporating much new research on the languages of South Arabia and Ethiopia. Chapter Six proposes a new reconstruction.

Arabic Computational Morphology Abdelhadi Soudi 2007-10-01 This is the first comprehensive overview of computational approaches to Arabic morphology. The subtitle aims to reflect that widely different computational approaches to the Arabic morphological system have been proposed. The book provides a showcase of the most advanced language technologies applied to one of the most vexing problems in linguistics. It covers knowledge-based and empirical-based approaches.

Advances of Science and Technology Mulugeta Admasu Delele 2021 This two-volume set constitutes the refereed post-conference proceedings of the 8th International Conference on Advancement of Science and Technology, ICAST 2020, which took place in Bahir Dar, Ethiopia, in October 2020.The 74 revised full papers were carefully reviewed and selected from more than 200 submissions of which 157 were sent out for peer review. The papers present economic and technologic developments in modern societies in 6 tracks: Chemical, food and bio-process engineering; Electrical and computer engineering; IT, computer science and software engineering; Civil, water resources, and environmental engineering; Mechanical and industrial engineering; Material science and engineering.

Advances in Natural Language Processing Adam Przepiórkowski 2014-09-05 This book constitutes the refereed proceedings of the 9th International Conference on Advances in Natural Language Processing, PolTAL 2014, Warsaw, Poland, in September 2014. The 27 revised full papers and 20 revised short papers presented were carefully reviewed and selected from 83 submissions. The papers are organized in topical sections on morphology, named entity recognition, term extraction; lexical semantics; sentence level syntax, semantics, and machine translation; discourse, coreference resolution, automatic summarization, and question answering; text classification, information extraction and information retrieval; and speech processing, language modelling, and spell- and grammar-checking.

Similar Languages, Varieties, and Dialects Marcos Zampieri 2021-04-30

Grammaticalization from a Typological Perspective Heiko Narrog 2018-10-29 This volume explores the way in which grammaticalization processes - whereby lexical words eventually become markers of grammatical categories - converge and differ across various types of language. While grammaticalization at its core is a unidirectional phenomenon, in which the same pathways of change are replicated across languages, certain language types and language areas have distinct preferences with respect to what they grammaticalize and how. Previous work has principally addressed this question with specific reference to languages of Southeast and East Asia that do not seem to grammaticalize paradigms of categories in the same manner as Indo-European languages, or form extensive

grammaticalization chains. This volume takes a broader approach and proceeds systematically area by area: specialists in the field address the processes of grammaticalization in languages of Africa, Europe, Asia and the Pacific, and the Americas, and in creole languages. The studies reveal a number of unique pathways of grammaticalization in each language area, as well as identifying the universal shared features of the phenomenon.

Finite-State Methods and Natural Language Processing Anssi Yli-Jyrä 2010-07-24 This book constitutes the refereed proceedings of the 8th International Workshop on the Finite-State-Methods and Natural Language Processing, FSMNLP 2009. The workshop was held at the University of Pretoria, South Africa on July 2009. In total 21 papers were submitted and of those papers 13 were accepted as regular papers and a further 6 as extended abstracts. The papers are devoted to computational morphology, natural language processing, finite-state methods, automata, and related formal language theory.

Reading Hebrew Joseph Shimron 2006-08-15 Over the last two decades, the study of languages and writing systems and their relationship to literacy acquisition has begun to spread beyond studies based mostly on English language learners. As the worldwide demand for literacy continues to grow, researchers from different countries with different language backgrounds have begun examining the connection between their language and writing system and literacy acquisition. This volume is part of this new, emerging field of research. In addition to reviewing psychological research on reading (the author's specialty), the reader is introduced to the Hebrew language: its structure, its history, its writing system, and the issues involved in being fluently literate in Hebrew. Chapters 1-4 introduce the reader to the Hebrew language and word structure and focuses on aspects of Hebrew that have been specifically researched by experimental cognitive psychologists. The reader whose only interest is in the psychological mechanisms of reading Hebrew may be satisfied with these chapters. Chapters 5-8 briefly surveys the history of the Hebrew language and its writing system, the origin of literacy in Hebrew as one of the first alphabetic systems, and then raises questions about the viability (or possibility) of having full-scale literacy in Hebrew. Together, the two sets of chapters present the necessary background for studying the psychology of reading Hebrew and literacy in Hebrew. This volume is appropriate for anyone interested in comparative reading and writing systems or in the Hebrew language in particular. This includes linguists, researchers, and graduate students in such diverse fields as cognitive psychology, psycholinguistics, literacy education, English as a second language, and communication disorders.

Morphology: Morphology: its relation to syntax Francis Katamba 2004 This six-volume collection draws together the most significant contributions to morphological theory and analysis which all serious students of morphology should be aware of. By comparing the stances taken by the different schools about the important issues, the reader will be able to judge the merits of each, with the benefit of evidence rather than prejudice.

Perspectives on Arabic Linguistics XXIX Hamid Ouali 2017-12-15 This volume features a set of selected peer-reviewed articles, which represent research by some very prominent scholars and some promising researchers in the field. The articles cover a wide range of areas in Arabic linguistics, namely Sociolinguistics, Phonetics, Phonology, Morphology, Syntax, and Language Acquisition. They also feature research on a number of Arabic dialects namely Egyptian Arabic, Emirati Arabic, Jordanian Arabic, Lebanese Arabic, Sudanese Arabic, and Syrian Arabic. Some of the contributions engage prominent issues that relate to current development in the Arabic speaking world. For example Reem Bassiouney's paper is a significant contribution in that regard. Other contributions, such as the ones by Stuart Davis, Abdel-khalig Ali, Lababidi & Park, Ntelitheos & Idrissi, present innovative studies in Arabic Morphology, Phonetics, Phonology, and Language Acquisition respectively. How Arabic can serve as a testing ground for some theoretical constructs and approaches is exemplified by Peter Hallman, Phil Crone, and Youssef Haddad's contributions in the area of Syntax and its interface with other fields.

Handbook of Arabic Literacy Elinor Saiegh-Haddad 2014-04-03 This book provides a synopsis of recently published empirical research into the acquisition of reading and writing in Arabic. Its particular focus is on the interplay between the linguistic and orthographic structure of Arabic and the development of reading and writing/spelling. In addition, the book addresses the socio-cultural, political and educational milieu in which Arabic literacy is embedded. It enables readers to appreciate both the implications of empirical research to literacy enhancement and the challenges and limitations to the applicability of such insights in the Arabic language and literacy context. The book will advance the understanding of the full context of literacy acquisition in Arabic with the very many factors (religious, historical, linguistic etc.) that interact and will hence contribute to weakening the anglocentricity that dominates discussions of this topic.

Morphological Diversity and Linguistic Cognition Andrea D. Sims 2022-05-31 Bringing together a team of well-known scholars, this book examines the link between linguistic cognition and morphological diversity.

A Theory of Distributed Number Myriam Dali 2021-08-15 The objective of this book is to develop a deeper understanding of the form and interpretation of number. Using insights from Generative syntax and Distributed Morphology, we develop a theory of distributed number, arguing that number can be associated with several functional heads and that these projections exist depending on the features they specify. In doing so, we make a strong claim for a close mapping between the syntactic structure and the semantics in the noun phrase, since each node corresponds to a different interpretation of number. Despite some technical implementations, the book is accessible to linguists working outside any particular syntax-semantic framework, since we propose generalizations that are applicable in many, if not all, models of grammar. The book focuses on Arabic, but also discusses a number of languages including English, French, Ojibwe, Blackfoot, Hebrew, Japanese, Korean, Chinese, Turkish, Persian, and Western Armenian.

Computational Nonlinear Morphology George Anton Kiraz 2001-12-17 Computational Nonlinear Morphology provides a detailed computational analysis of the complex morphophonological phenomena found in Semitic languages.

Introduction to Natural Language Processing Jacob Eisenstein 2019-10-01 A survey of computational methods for understanding, generating, and manipulating human language, which offers a synthesis of classical representations and algorithms with contemporary machine learning techniques. This textbook provides a technical perspective on natural language processing—methods for building computer software that understands, generates, and manipulates human language. It emphasizes contemporary data-driven approaches, focusing on techniques from supervised and unsupervised machine learning. The first section establishes a foundation in machine learning by building a set of tools that will be used throughout the book and applying them to word-based textual analysis. The second section introduces structured representations of language, including sequences, trees, and graphs. The third section explores different approaches to the representation and analysis of linguistic meaning, ranging from formal logic to neural word embeddings. The final section offers chapter-length treatments of three transformative applications of natural language processing: information extraction, machine translation, and text generation. End-of-chapter exercises include both paper-and-pencil analysis and software implementation. The text synthesizes and distills a broad and diverse research literature, linking contemporary machine learning techniques with the field's linguistic and computational foundations. It is suitable for use in advanced undergraduate and graduate-level courses and as a reference for software engineers and data scientists. Readers should have a background in computer programming and college-level mathematics. After mastering the material presented, students will have the technical skill to build and analyze novel natural language processing systems and to understand the latest research in the field.

Advances of Science and Technology Mulatu Liyew Berihun

Morphologies of Asia and Africa Alan S. Kaye 2007-01-01 In 1997, Eisenbrauns published the highly-regarded two-volume Phonologies of Asia and Africa, edited by Alan Kaye with the assistance of Peter T. Daniels, and the book rapidly became the standard reference for the phonologies of the Afro-Asiatic languages. Now the concept has been extended, and Kaye has assembled nearly 50 scholars to write essays on the morphologies of the same language group. The coverage is complete, copious, and again will likely become the standard work in the field. Contributors are an international Who's Who of Afro-Asiatic linguistics, from Appleyard to Leslau to Voigt. It is with great sadness that we report the death of Alan Kaye on May 31, 2007, while these volumes were in the final stages of preparation for the press. Alan was diagnosed with bone cancer on May 1 while on research leave in the United Arab Emirates and was brought home to Fullerton by his son on May 22.

Understanding Morphology Martin Haspelmath 2013-10-28 This new edition of Understanding Morphology has been fully revised in line with the latest research. It now includes 'big picture' questions to highlight central themes in morphology, as well as research exercises for each chapter. Understanding Morphology presents an introduction to the study of word structure that starts at the very beginning. Assuming no knowledge of the field of morphology on the part of the reader, the book presents a broad range of morphological phenomena from a wide variety of languages. Starting with the core areas of inflection and derivation, the book presents the interfaces between morphology and syntax and between morphology and phonology. The synchronic study of word structure is covered, as are the phenomena of diachronic change, such as analogy and grammaticalization. Theories are presented clearly in accessible language with the main purpose of shedding light on the data, rather than as a goal in themselves. The authors consistently draw on the best research available, thus utilizing and discussing both functionalist and generative theoretical approaches. Each chapter includes a summary, suggestions for further reading, and exercises. As such this is the ideal book for both beginning students of linguistics, or anyone in a related discipline looking for a first introduction to morphology.

Language Processing and Acquisition in Languages of Semitic, Root-Based, Morphology Joseph Shimron 2003-04-28 This book puts together contributions of linguists and psycholinguists whose main interest here is the representation of Semitic words in the mental lexicon of Semitic language speakers. The central topic of the book confronts two views about the morphology of Semitic words. The point of the argument is: Should we see Semitic words' morphology as "root-based" or "word-based?" The proponents of the root-based approach, present empirical evidence demonstrating that Semitic language speakers are sensitive to the root and the template as the two basic elements (bound morphemes) of Semitic words. Those supporting the word-based approach, present arguments to the effect that Semitic word formation is not based on the merging of roots and templates, but that Semitic words are comprised of word stems and affixes like we find in Indo-European languages. The variety of evidence and arguments for each claim should force the interested readers to reconsider their views on Semitic morphology.

Studies in Semitic Grammaticalization Aaron D. Rubin 2005-01-01 This groundbreaking study examines the historical development of the Semitic languages from the point of view of grammaticalization, the linguistic process whereby lexical items and constructions lose their lexical meaning and serve grammatical functions.

Arabic Natural Language Processing Nizar Y. Habash 2009-11-15 This book provides system developers and researchers in natural language processing and computational linguistics with the necessary background information for working with the Arabic language. The goal is to introduce Arabic linguistic phenomena and

review the state-of-the-art in Arabic processing. The book discusses Arabic script, phonology, orthography, morphology, syntax and semantics, with a final chapter on machine translation issues. The chapter sizes correspond more or less to what is linguistically distinctive about Arabic, with morphology getting the lion's share, followed by Arabic script. No previous knowledge of Arabic is needed. This book is designed for computer scientists and linguists alike. The focus of the book is on Modern Standard Arabic; however, notes on practical issues related to Arabic dialects and languages written in the Arabic script are presented in different chapters. Table of Contents: What is "Arabic"? / Arabic Script / Arabic Phonology and Orthography / Arabic Morphology / Computational Morphology Tasks / Arabic Syntax / A Note on Arabic Semantics / A Note on Arabic and Machine Translation

Perspectives on Arabic Linguistics XX Mustafa A. Mughazy 2007 Printbegrænsninger: Der kan printes 10 sider ad gangen og max. 40 sider pr. session
Morphological Decomposition in Arabic Mousa Qasem 2010 Traditional theories of Semitic morphology hold that two abstract morphemic units, the root (E.G., "k-t-b") and the word pattern (E.G., "--I-aa-"), are the basis for word formation (E.G., "kitaab" [book]). Previous lexical processing studies in Hebrew and Arabic have confirmed the independent morphemic status of these two units, and the root in particular, whose existence was disputed under word-based theories. To further this line of investigation, the current study asks: (1) Is root priming in Arabic caused by form and semantic overlap or is it independent of these two factors? (2) Does the Arabic lexicon impose linearity constraints on the root consonants? (3) Does higher proficiency in a second language (English) have any consequences for lexical organization and processing in the first language (Arabic) of bilingual speakers? In addressing these research questions (RQs), a masked priming experiment was designed using a within-target design. To get at rq1, the priming effects between same- root word pairs with both decreased semantic and form overlap were compared to the priming between orthographic minimal pairs. With respect to positional coding constraints (rq2), this study included transposed-letter (tl) existing words. Rq3 was investigated by comparing lexical processing in native speakers of Arabic who are highly proficient in English to processing in near monolingual speakers of Arabic. Results show that for near monolingual speakers of Arabic, there were significant priming effects between same-root words and no orthographic or tl priming effects. In contrast, native speakers of Arabic with high proficiency in English show numerical priming in the tl condition and no priming in the root condition. The results of the monolinguals are consistent with the morpheme-based/ decompositional view of Semitic morphology. On the other hand, the results of the bilinguals extend previous research on the effects of the second language on the first to the domain of lexical processing. The implications of these results are discussed. [The dissertation citations contained here are published with the permission of ProQuest llc. Further reproduction is prohibited without permission. Copies of dissertations may be obtained by Telephone (800) 1-800-521-0600. Web page: http://www.proquest.com/en-US/products/dissertations/individuals.shtml.].
Multilingual Speech Processing Tanja Schultz 2006-06-12 Tanja Schultz and Katrin Kirchhoff have compiled a comprehensive overview of speech processing from a multilingual perspective. By taking this all-inclusive approach to speech processing, the editors have included theories, algorithms, and techniques that are required to support spoken input and output in a large variety of languages. Multilingual Speech Processing presents a comprehensive introduction to research problems and solutions, both from a theoretical as well as a practical perspective, and highlights technology that incorporates the increasing necessity for multilingual applications in our global community. Current challenges of speech processing and the feasibility of sharing data and system components across different languages guide contributors in their discussions of trends, prognoses and open research issues. This includes automatic speech recognition and speech synthesis, but also speech-to-speech translation, dialog systems, automatic language identification, and handling non-native speech. The book is complemented by an overview of multilingual resources, important research trends, and actual speech processing systems that are being deployed in multilingual human-human and human-machine interfaces. Researchers and developers in industry and academia with different backgrounds but a common interest in multilingual speech processing will find an excellent overview of research problems and solutions detailed from theoretical and practical perspectives. State-of-the-art research with a global perspective by authors from the USA, Asia, Europe, and South Africa The only comprehensive introduction to multilingual speech processing currently available Detailed presentation of technological advances integral to security, financial, cellular and commercial applications
Computational Linguistics 2001
The Grammar of Words: An Introduction to Linguistic Morphology Geert Booij 2007-07-05 Geert Booij's popular textbook examines how words are formed, compounded, and inflected in different languages. It shows how, when, and why to use methods of morphological analysis and explains how morphology relates to syntax, phonology, and semantics. The author considers the universal characteristics of morphology and how these are reflected in the workings of mind. The revised edition has been revised and updated throughout; it has a full glossary and a new chapter on the field's most notorious problem: the status of the word. 'The Grammar of Words by Geert Booij covers a broad range of topics from structural questions to psycholinguistic issues and problems of language change. This introduction to morphology is thorough and accessible and, like other works by this renowned author, especially strong at showing the significance of empirical facts for theoretical reasoning.' Ingo Plag, University of Siegen 'A book that is fully comprehensive in its coverage as well as exemplary in its clarity, written by one of the major scholars of contemporary lexical theory.' Sergio Scalise, University of Bologna
Morphological Aspects of Language Processing Laurie Beth Feldman 2013-05-13 It is now well established that phonological -- and orthographic -- codes play a crucial role in the recognition of isolated words and in understanding the sequences of words that comprise a sentence. However, words and sentences are organized with respect to morphological as well as phonological components. It is thus unfortunate that the morpheme has received relatively little attention in the experimental literature, either from psychologists or linguists. Due to recent methodological developments, however, now is an opportune time to address morphological issues. In the experimental literature, there is a tendency to examine various psycholinguistic processes in English and then to assume that the account given applies with equal significance to English and to other languages. Written languages differ, however, in the extent to which they capture phonological as contrasted with morphological units. Moreover, with respect to the morpheme, languages differ in the principle by which morphemes are connected to form new words. This volume focuses on morphological processes in word recognition and reading with an eye toward comparing morphological processes with orthographic and phonological processes. Cross-language comparisons are examined as a tool with which to probe universal linguistic processes, and a variety of research methodologies are described. Because it makes the experimental literature in languages other than English more accessible, this book is expected to be of interest to many readers. It also directs attention to the subject of language processing in general -- an issue which is of central interest to cognitive psychologists and linguists as well as educators and clinicians.
The Oxford Handbook of Derivational Morphology Rochelle Lieber 2014-09-25 The Oxford Handbook of Derivational Morphology is intended as a companion volume to The Oxford Handbook of Compounding (OUP 2009) Written by distinguished scholars, its 41 chapters aim to provide a comprehensive and thorough overview of the study of derivational morphology. The handbook begins with an overview and a consideration of definitional matters, distinguishing derivation from inflection on the one hand and compounding on the other. From a formal perspective, the handbook treats affixation (prefixation, suffixation, infixation, circumfixation, etc.), conversion, reduplication, root and pattern and other templatic processes, as well as prosodic and subtractive means of forming new words. From a semantic perspective, it looks at the processes that form various types of adjectives, adverbs, nouns, and verbs, as well as evaluatives and the rarer processes that form function words. The book also surveys derivation in fifteen language families that are widely dispersed in terms of both geographical location and typological characteristics.
Natural Language Processing of Semitic Languages Imed Zitouni 2014-04-22 Research in Natural Language Processing (NLP) has rapidly advanced in recent years, resulting in exciting algorithms for sophisticated processing of text and speech in various languages. Much of this work focuses on English; in this book we address another group of interesting and challenging languages for NLP research: the Semitic languages. The Semitic group of languages includes Arabic (206 million native speakers), Amharic (27 million), Hebrew (7 million), Tigrinya (6.7 million), Syriac (1 million) and Maltese (419 thousand). Semitic languages exhibit unique morphological processes, challenging syntactic constructions and various other phenomena that are less prevalent in other natural languages. These challenges call for unique solutions, many of which are described in this book. The 13 chapters presented in this book bring together leading scientists from several universities and research institutes worldwide. While this book devotes some attention to cutting-edge algorithms and techniques, its primary purpose is a thorough explication of best practices in the field. Furthermore, every chapter describes how the techniques discussed apply to Semitic languages. The book covers both statistical approaches to NLP, which are dominant across various applications nowadays and the more traditional, rule-based approaches, that were proven useful for several other application domains. We hope that this book will provide a "one-stop-shop" for all the requisite background and practical advice when building NLP applications for Semitic languages.
Multilingual Natural Language Processing Applications Daniel Bikel 2012-05-11 Multilingual Natural Language Processing Applications is the first comprehensive single-source guide to building robust and accurate multilingual NLP systems. Edited by two leading experts, it integrates cutting-edge advances with practical solutions drawn from extensive field experience. Part I introduces the core concepts and theoretical foundations of modern multilingual natural language processing, presenting today's best practices for understanding word and document structure, analyzing syntax, modeling language, recognizing entailment, and detecting redundancy. Part II thoroughly addresses the practical considerations associated with building real-world applications, including information extraction, machine translation, information retrieval/search, summarization, question answering, distillation, processing pipelines, and more. This book contains important new contributions from leading researchers at IBM, Google, Microsoft, Thomson Reuters, BBN, CMU, University of Edinburgh, University of Washington, University of North Texas, and others. Coverage includes Core NLP problems, and today's best algorithms for attacking them Processing the diverse morphologies present in the world's languages Uncovering syntactical structure, parsing semantics, using semantic role labeling, and scoring grammaticality Recognizing inferences, subjectivity, and opinion polarity Managing key algorithmic and design tradeoffs in real-world applications Extracting information as mention detection, coreference resolution, and events Building large-scale systems for machine translation, information retrieval, and summarization Answering complex questions through distillation and other advanced techniques Creating dialog systems that leverage advances in speech recognition, synthesis, and dialog management Constructing common infrastructure

for multiple multilingual text processing applications This book will be invaluable for all engineers, software developers, researchers, and graduate students who want to process large quantities of text in multiple languages, in any environment: government, corporate, or academic.

SignGram Blueprint Josep Quer 2017-11-20 "It is common for grammars to include an introductory chapter that offers a general introduction to the language under investigation as well as its users. We encourage the grammar writer to include this type of information for the sign language to be described. If a certain variant of the sign language is described, this should be made clear at the outset. The structure of this part is fairly flexible. As can be seen from the table of contents, we suggest including information about (i) the history of the sign language, (ii) characteristics of the Deaf community, (iii) the status of the sign language, and (iv) previous linguistic work on the sign language. The last section in particular will have an impact on the content of subsequent parts, as we encourage the grammar writer to include findings from previous studies in the grammatical description of the sign language. Clearly, alternative structures are possible. The overview of previous linguistic work, for instance, could be provided under the "History" header, and Deaf culture and/or Deaf education could be discussed under dedicated first-level headers - to give just two examples. Also, depending on the available information, sub-headers could be added. Note that we adopt the convention of writing Deaf with a capital D when it refers to issues related to a community that is characterized by the use of a sign language. In contrast, deaf with a small d refers to the medical condition of not being able to hear. It is up to the grammar writer to decide whether to stick to this convention in the grammar"--

Multilingual Information Access Evaluation I - Text Retrieval Experiments Carol Peters 2010-09-03 The tenth campaign of the Cross Language Evaluation Forum (CLEF) for European languages was held from January to September 2009. There were eight main eval- tion tracks in CLEF 2009 plus a pilot task. The aim, as usual, was to test the perfo- ance of a wide range of multilingual information access (MLIA) systems or system components. This year, about 150 groups, mainly but not only from academia, reg- tered to participate in the campaign. Most of the groups were from Europe but there was also a good contingent from North America and Asia. The results were presented at a two-and-a-half day workshop held in Corfu, Greece, September 30 to October 2, 2009, in conjunction with the European Conference on Digital Libraries. The workshop, attended by 160 researchers and system developers, provided the opportunity for all the groups that had participated in the evaluation campaign to get together, compare approaches and exchange ideas.