

Teaching (Computational) Linguistics in Prague

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<i>CONTENTS</i>	2
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Contents

1 Introduction	3
2 About my place	7
3 Current list of courses	10
3.1 Introductory courses	11
3.2 Formal and theoretical linguistics	12
3.3 Linguistic applications, stochastic methods, corpus linguistics	13
4 Problems with the current situation	14
5 Possible solutions	15
6 Current courses as candidates for e-learning	16
7	18

1 Introduction

or "*My affairs with (computational) linguistics*"

- sorry, no active part in e-learning so far
- but this must change after Blaubeuren!

- **1980's**

- graduated from
the School of Economics (Prague)
- got involved with
Institute of Formal and Applied Linguistics (current name)
(Charles University, Faculty of Mathematics and Physics,
heads: Petr Sgall, Eva Hajičová)
- worked on a machine translation project
(APAČ: *Automatický překlad z angličtiny do češtiny*
team leader: Zdeněk Kirschner)

- **1990's**

- became staff of
Institute of Theoretical and Computational Linguistics
(head: Vladimír Petkevič)
- worked on
 - * design of computational lexica
 - * constraint-based grammar engineering
 - * issues of word order
- led courses on
 - * machine translation
 - * constraint-based grammars
 - * HPSG
- defended a thesis
(*A constraint-based approach to dependency syntax
applied to some issues of Czech word order*)

- **2000–** (including plans)
 - participation on a parallel corpus project
 - development and implementation of a grammar of Czech in TRALE
 - design and implementation of a shared grammar of Polish and Czech (with IPI PAN Warsaw)
 - introductory course in formal syntax based on a HPSG-like description of Czech
 - introduction of e-learning methods

2 About my place

Institute of Theoretical and Computational Linguistics
Faculty of Philosophy, Charles University, Prague

- 5 people, cooperation with:
 - *Institute of Czech National Corpus*
(same faculty, head: František Čermák) and
 - *Institute of Formal and Applied Linguistics*
(Faculty of Mathematics and Physics, head: Jan Hajič)

- Research:
 - formal semantics, philosophy of language
 - grammar theory
 - corpus (rule-based disambiguation of morphological tagging, identification of collocations, parallel corpora)
 - lexicon (design, valency)
 - syntax of verbal complexes, issues of word order, design and implementation of formal grammars

- Teaching/tutoring:
 - PhD. programme (*mathematical linguistics*, with the Institute of Czech National Corpus)
 - courses offered as optional subjects for M.A. or Bc. students
 - shared course offerings with Faculty of Mathematics and Physics (Institute of Formal and Applied Linguistics)
 - plans to introduce a Master's programme

3 Current list of courses

- Introductory courses
- Formal and theoretical linguistics
- Linguistic applications, stochastic methods, corpus linguistics

3.1 Introductory courses

- Introduction into general linguistics
- Introductory seminar of mathematical linguistics
- Introduction into analytical philosophy
- Introduction into theoretical semantics
- Declarative description of Czech

3.2 Formal and theoretical linguistics

- New developments in linguistic theory
- Seminar in formal description of language
- Selected chapters in contemporary syntax of Czech
- From linguistics to logic
- Introduction into constraint-based grammars
- Syntax without transformations (HPSG)
- Lexical-functional grammar

3.3 Linguistic applications, stochastic methods, corpus linguistics

- Natural language processing
- Statistics for NLP
- Linguistic aspects of AI
- Speech recognition
- Speech synthesis
- Corpus linguistics
- Machine translation
- Morphology and finite-state automata

4 Problems with the current situation

- students with different backgrounds, at different levels
- students become aware of formal linguistics too late
- inadequate schooling in linguistic theory
- missing common strategy with most other linguistic departments
- low integration of traditional linguistics, formal linguistics and computation

5 Possible solutions

- introduction of Master's programme
- better cooperation with other linguistic departments
- for some courses: partial or full substitution of traditional teaching methods by e-learning
- designing new educational modes based on e-learning

6 Current courses as candidates for e-learning

What is needed:

- maximum user-friendliness
- easy access

Then:

- all courses where some linguistic software can be used
- this would include almost all courses, but – apart from the application-oriented courses – some of them are first candidates:
 - Declarative description of Czech
 - Introductory seminar of mathematical linguistics
 - Seminar in formal description of language
 - Introduction into constraint-based grammars
 - Syntax without transformations (HPSG)
 - Lexical-functional grammar
- in other courses some e-learning methods can replace traditional classroom tasks, assignments, tests

7 ...

7 ...

How do you say e-learning in Czech?