

Theory & Applications of Multi-Ordered Grammars

Project Lan.d.s: Lan.guages and D.omain S.yntax

<https://npapoulias.gitlab.io/lands-project/>

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LAN.D.S

LAN.GUAGES AND D.OMAIN S.YNTAX

From Programming Languages to **Dialectic Modeling Platforms**

MOGs

<Gray> ::= <Grammar> <Ray>

ASL

GrammarTraits

MOODs

modelling &
object
oriented
design for
simulation

((list (embedding)))

(ise)

Lands-Book

Lectures

Ch. 1 Why we need Multi-ordered Grammars

Where I introduce MOGs, the Gray algorithm, ASL as well as the Lan.d.s tool-set (for visualization, compilation, live exploration and testing) through the Expr and Calc languages.

Ch. 2 ObjCalc: A prototype OO Language

Where we build a JSON parser and use it to extend the Calc compiler from Ch. 1 with objects and simple prototypical inheritance.

Ch. 3 Parsing Pharo: A pure OO Language

Where we build step by step a full Pharo recognizer and parser, that can be readily byte-compiled and tested through ASL.

Ch. 4 Language Evolution: Extending Pharo


Where we use GrammarTraits to extend the Pharo parser from Ch. 3 with Classic control, Functors and Imperative-style syntax and semantics.

Ch. 5 Languages for Computational Sciences



Where I introduce MOODs and help you build two DSLs for Modeling and Simulation, in the Computational Sciences.

Ch. 6 Lise: A multi-paradigm Programming Language

Where we build Lise from scratch and explore SICP¹, with a Xerox flavor², while re-inventing some Bell labs³ utilities.



Crowd-funding !

6 Chapters ++ material & lectures for free	eBook (5 € / chapter)	pBook (10 € / chapter)	Institutional (Free or 100 € / chapter)	Consultancy (1 K€ /chapter)	Sponsorship (2 K€ / chapter)
PDF / EPUB / MOBI TOC-Board	✓	✓	✓	✓	✓
Printed Book	-	✓	-	✓	✓
On-site Lecture	-	-	✓	-	-
1 day on-site Workshop	-	-	-	✓	✓
Network Logo	-	-	✓	✓	✓
6 day consultancy	-	-	-	✓	-
12 day consultancy	-	-	-	-	✓
Sponsor Logo	-	-	-	-	✓
Totals	€30.00	€60.00	€600.00	6 K€	12 K€

Even more specialized support ? (porting / embedding etc) contact: npapoulias@gmail.com