



Orientation

Protégé Short Course
March 29 - 31, 2017
Stanford University



We'll talk about:

- ❑ Goals
- ❑ Instructors
- ❑ Resources
- ❑ Logistics

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Developing ontologies

What are they?

How do I build them?

What are useful modeling patterns?

Understanding OWL

What is OWL?

How do I use it?

What are the common pitfalls and modeling practices?

Understanding entailment and reasoning in OWL

Using Protégé for the Web Ontology Language (OWL)

How to use Protégé Desktop and WebProtégé, i.e., become familiar with the user interfaces through hands-on work

How to do “x” in Protégé?

Collaborative development

Viewing/editing in Web-based environment

Querying

Importing from databases

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How old is Protégé?



Protégé is 29 years old!

Mark Musen, MD, PhD

Director



OUR TEAM



Rafael Gonçalves, PhD

Research Staff



Josef Hardi, MSc

Research Staff



Matthew Horridge, PhD

Research Staff



Mark Musen, MD, PhD

Professor, Division Head



Csongor Nyulas, MSc

Research Staff



Samson Tu, MSc

Senior Research Scientist



Tania Tudorache, PhD

Senior Research Scientist

Samson Tu

- ❑ Senior Research Scientist
- ❑ Modeling of biomedical ontologies and clinical guidelines and protocols
- ❑ Knowledge representation and medical terminologies
- ❑ Development of knowledge-based decision support systems
- ❑ Protocol-based health care



Matthew Horridge

- ❑ Senior Software Developer
- ❑ Lead developer for Protégé and WebProtégé
- ❑ Developer of the OWL-API
- ❑ Explanation of entailments in ontologies
- ❑ Justification based metrics for ontologies
- ❑ OWL and Description Logic
- ❑ Knowledge representation and reasoning



Csongor Nyulas

- ❑ Senior Software Developer
- ❑ Author of DataMaster (import plugin for Protégé)
- ❑ WebProtégé and iCAT
- ❑ Involved in the ICD-11 development
- ❑ Various ontology-driven projects (SDIDS, FACSIMILE, Biositemaps, GLINDA, BioSTORM)



Rafael Gonçalves

- ❑ Software Developer
- ❑ Developer of ecco (ontology diff tool)
- ❑ Ontology diffing, extension and modularity
- ❑ Description logics and automated reasoning
- ❑ Reasoner performance-hot spot finding
- ❑ Protégé 5 client-server
- ❑ Organizer of OWL reasoner competitions



Josef Hardi

- ❑ Software Developer
- ❑ Developer of -ontopPro- and Cellfie (ontology-and-data related tools for Protégé)
- ❑ Developer of Semantika (Ontology-based Data Access API for Java)
- ❑ API design and backend systems
- ❑ Lucene Query plugin for Protégé 5
- ❑ Data and domain modelling



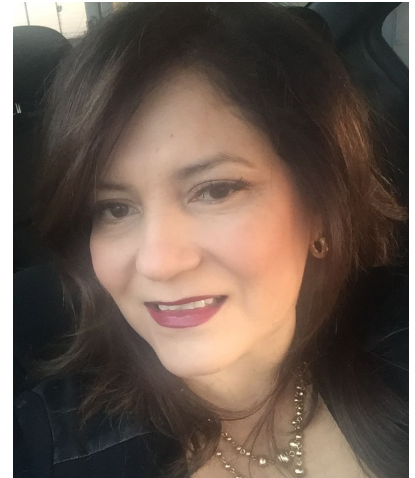
Tania Tudorache

- ❑ Senior Research Scientist
- ❑ Collaborative ontology development
- ❑ Knowledge acquisition
- ❑ Applied ontologies
- ❑ Coordinate development of ICD-11 authoring platform (iCAT)



Natasha Haulman and Marta Vitale-Soto

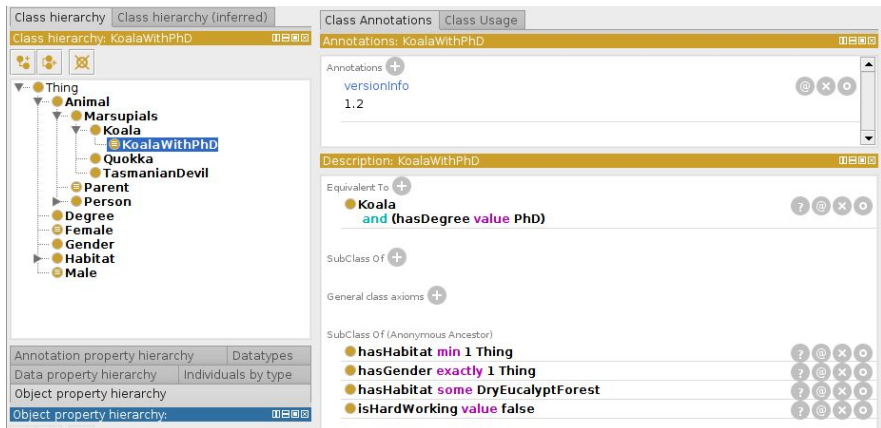
- ❑ Administrative coordinators of the short course
- ❑ Assist with logistics and organization of the course



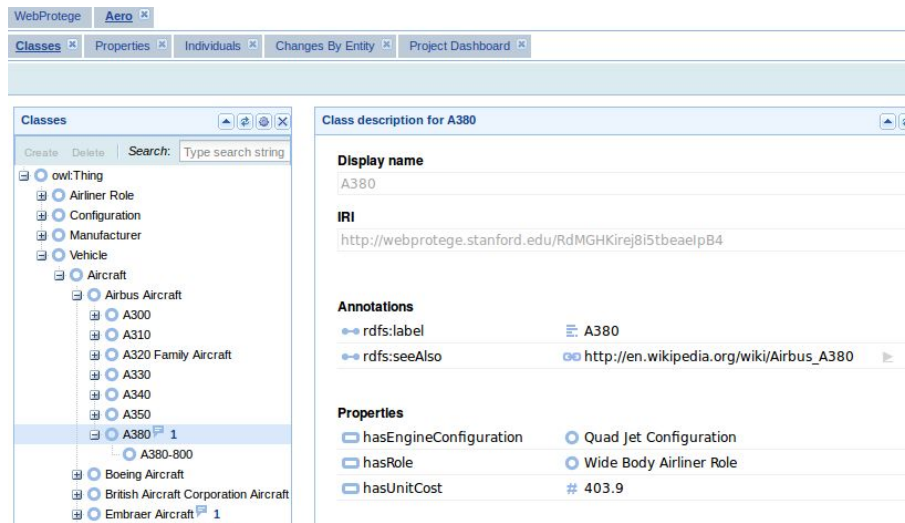
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Protégé Desktop



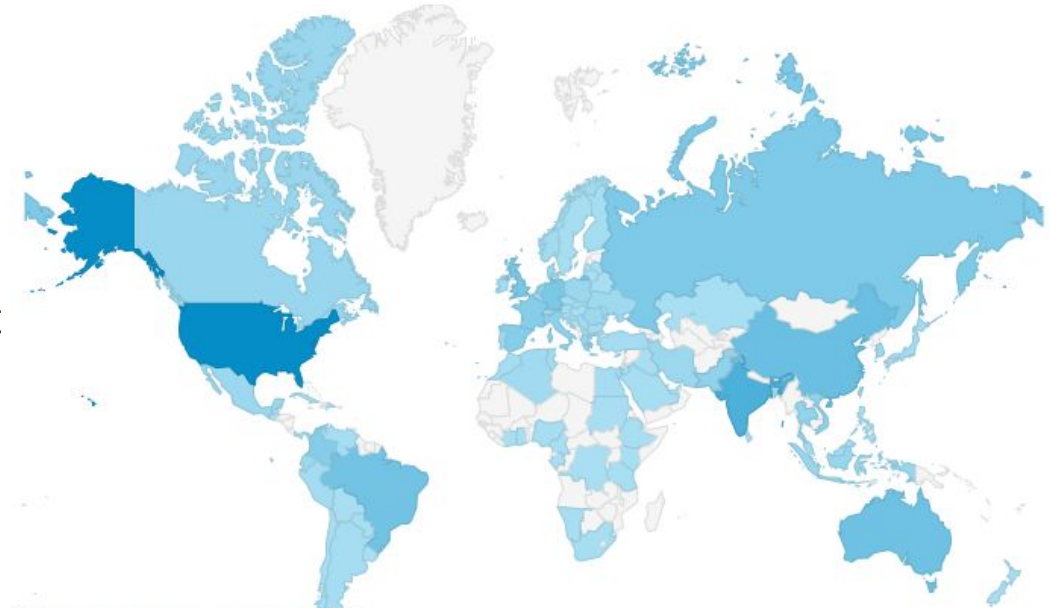
WebProtégé



Free, open source ontology editors

Protégé community

- ❑ Over 300,000 registered users
- ❑ Over 23,000 members on the mailing lists
- ❑ Academia, industry, government
- ❑ Over 40,000 downloads of Protégé 5.0.0 (May, 2016); 80,000 downloads of Protégé last year;
- ❑ 3,500 downloads of WebProtégé latest release. 27,000+ projects on webprotege.stanford.edu



Who is using Protégé?

- ❑ World Health Organization (WHO) – ICD-11
- ❑ National Cancer Institute (NCI) – NCI Thesaurus
- ❑ Oracle
- ❑ Object Mgmt. Group & Enterprise Data Mgmt. Council - FIBO
- ❑ The Open Biological and Biomedical Ontologies (OBO Foundry)
- ❑ Foundational Model of Anatomy (FMA)

Protégé Website

URL: <http://protege.stanford.edu>

- ❑ Download new versions of Protégé
- ❑ Subscribe to mailing lists
- ❑ Learn about support options
- ❑ Get links to Protégé wiki, Facebook, and Twitter

Protégé Wiki

URL: <http://protegewiki.stanford.edu>

- ❑ WebProtégé user documentation
- ❑ Protégé Desktop user documentation
- ❑ Developer documentation
- ❑ Plug-in and ontology libraries

MAILING LISTS

Get free support for all of your Protégé questions via our mailing lists. The lists are actively monitored by Stanford's Protégé team, as well as many experienced Protégé users from the community at large.

Click the Subscribe button next to the list you wish to join. Please note that you must be subscribed to a list before you can post messages.

Protégé User Support

User support for all versions of [WebProtégé](#) and [Protégé Desktop](#).

SUBSCRIBE

[ARCHIVE »](#)

Protégé Developer Support

Developer support for all versions of [WebProtégé](#) and [Protégé Desktop](#).

SUBSCRIBE

[ARCHIVE »](#)

Protégé Announcements

Low traffic, announcement-only list for new releases, availability of short courses, and information regarding Protégé Conferences.

SUBSCRIBE

[ARCHIVE »](#)

GitHub

All software (Protégé, WebProtégé, plugins, libraries, etc.) are on GitHub

<https://github.com/protegeproject>

Protégé: <https://github.com/protegeproject/protege>

WebProtégé: <https://github.com/protegeproject/webprotege>

Make feature requests and bug reports on the github issue trackers

Social media

[Facebook](#) (Protege Project)

[Twitter](#) (@protegeproject)



Protege Project

Published by Csongor Nyulas [?] · February 22 ·

Save money by registering at a reduced rate for the next Protégé Short Course by March 1st!

If you are into skiing or snowboarding, you can take a trip to Lake Tahoe after or before the course, where the amounts of snow this season are incredible!

Register here:... [See More](#)



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Connecting to the WiFi

WiFi Network: Stanford

User: protege

Password: shortcourse

Resources page

All resources used in the course are available online:

<http://tinyurl.com/posc201703>

Slides, files, exercises, etc.

Participant Interest Form

Find other participants with similar interests to yours

Linked from the Resources page

Fill out, if you didn't have a chance to

Protégé Short Course: Participant Interest Form

We use this form to get an idea about the interests of the Protégé Short Course participants, and also to help participants find others who are interested in the same topics or domains.

Filling of this form is OPTIONAL. The information will only be distributed to the participants of this Protégé Short Course.

Name

Short answer text

Learning goals

What do you hope to have learned by the end of the course?

Long answer text

Project description

Please provide a short description of your project in which you plan to use ontologies (and potentially Protégé). A link to the project website would also be useful.

Long answer text

Project Domain

What is the domain of your project (E.g., biology, engineering, education, etc.)

Long answer text

Topics of interest

What ontology-related topics are you interested in? E.g., reasoning, data integration, spreadsheet imports, collaboration, etc.

Long answer text

Protégé installation

- ❑ We'll use Protégé 5.2.0
- ❑ Needs to be installed on your laptop by Wednesday lunch time
- ❑ Ask for installation help during the breaks

The Course Folder

Materials used throughout the short course:

Cheat sheet

Dinner directions

OWL product descriptions

Lab exercise description



Dinner on Wednesday evening

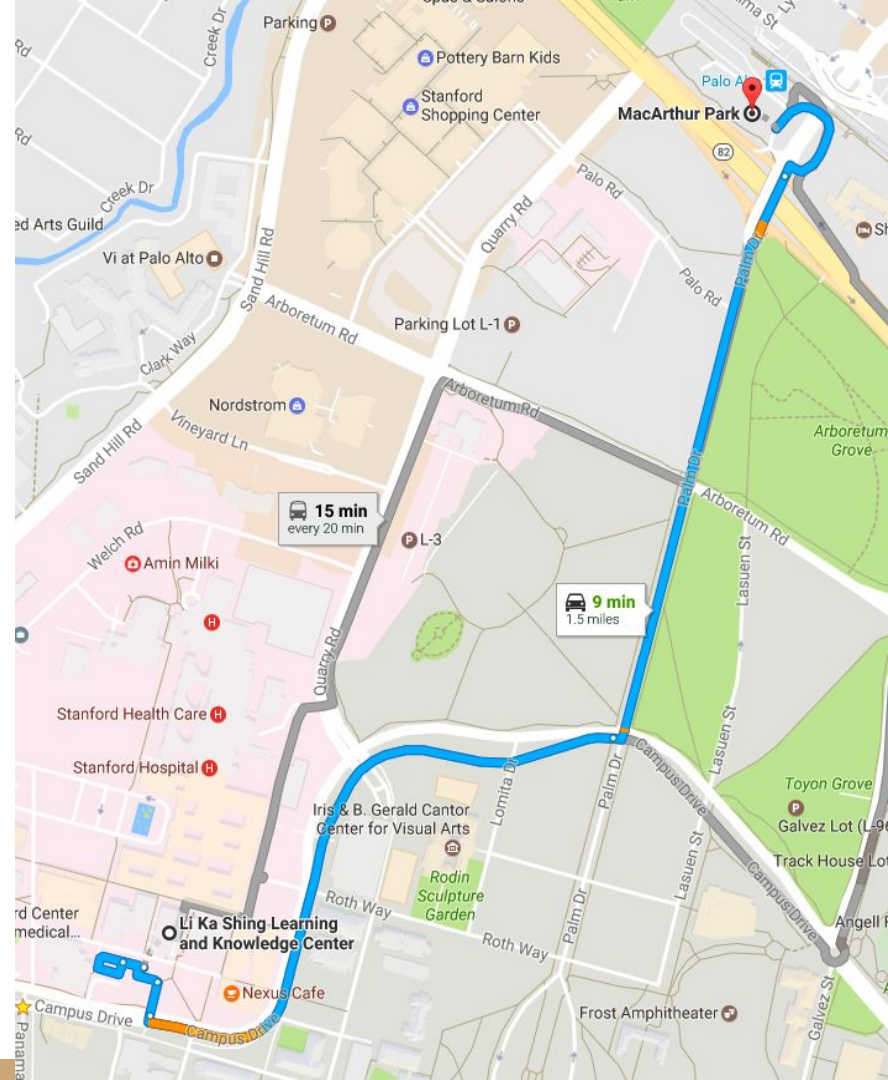
MacArthur Park

27 University Avenue
Palo Alto, CA 94301
(650) 321-9990

<http://www.macarthurparkpaloalto.com/>

Dinner starts at 7pm

Organize your own transportation to
and from the restaurant



Li Ka Shing Learning and Knowledge Centre

MacArthur Park, 27 University Ave, Palo Alto

Arrive by

7:00 PM

Wed, Mar 29

OPTIONS

Send directions to your phone

6:36 PM (Wednesday)–6:51 PM

15 min

6:39 PM from Roth @ Quarry Ext

Free 4 min

DETAILS

6:38 PM (Wednesday)–6:52 PM

14 min

6:33 PM (Wednesday)–6:47 PM

14 min

6:37 PM (Wednesday)–6:58 PM

21 min

SCHEDULE EXPLORER

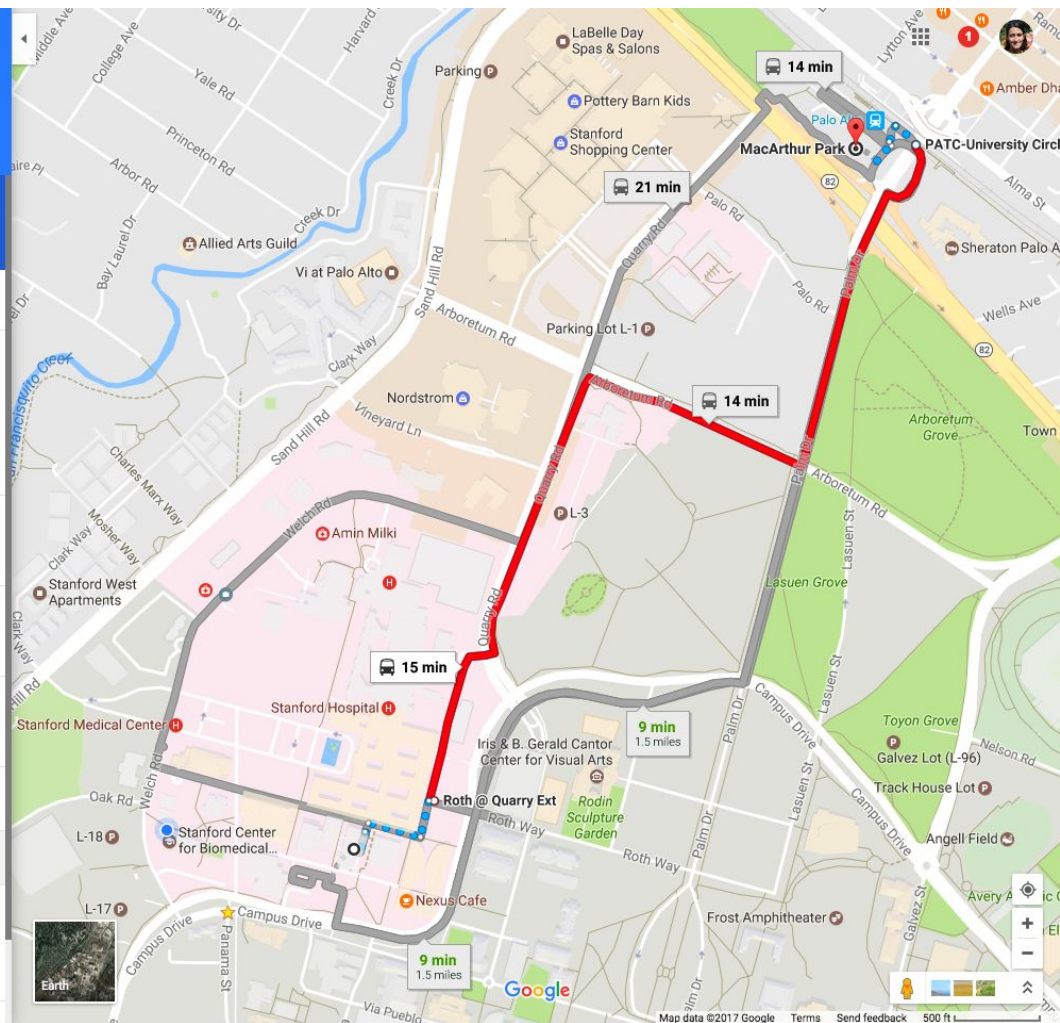
Ad

Get a ride

Uber

See price & pick-up times in the Google Maps app

BOOK WITH GOOGLE MAPS



Short surveys every day







- ❑ Please fill out the surveys at the end of each day
- ❑ The surveys are short and anonymous
- ❑ We'll have a prize drawing each day
- ❑ Winners get a \$25 Amazon gift card :)



Please feel free to give us feedback in person, as well!

Schedule for today

Wednesday, March 29

8:30-9:00am	Continental breakfast
9:00-9:45am	Orientation, course & participant introductions
9:45-10:45am	 Ontology 101: The basics of developing ontologies
10:45-11:00am	Break
11:00-12:30pm	 Ontology 101: The basics of developing ontologies cont.
12:30-1:15pm	Lunch
1:15-1:45pm	 Introduction to Protege
1:45-2:45pm	 OWL: Language, reasoning, querying
2:45-3:00pm	Break
3:00-4:15pm	 OWL: Language, reasoning, querying cont.
4:15-4:30pm	Break
4:30-5:30pm	 Lab: Modeling exercise
7:00-9:00pm	Short course dinner @ MacArthur Park 27 University Ave. Palo Alto, CA 94301