

UU/SIKS Symposium on Natural Language in Requirement Engineering



Utrecht University



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Utrecht University, the Netherlands
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Perspective #1: relevance

- ▶ NL requirements won't go away
- ▶ Context factors are key
- ▶ Industry relevance!

The Case for Context-Driven Software Engineering Research

Generalizability Is Overrated

Lionel Briand, Domenico Bianculli, Shiva Nejati, Fabrizio Pastore, and Mehrdad Sabetzadeh



RE@40

Midlife Crisis or Graceful Maturity?

Sarah Gregory

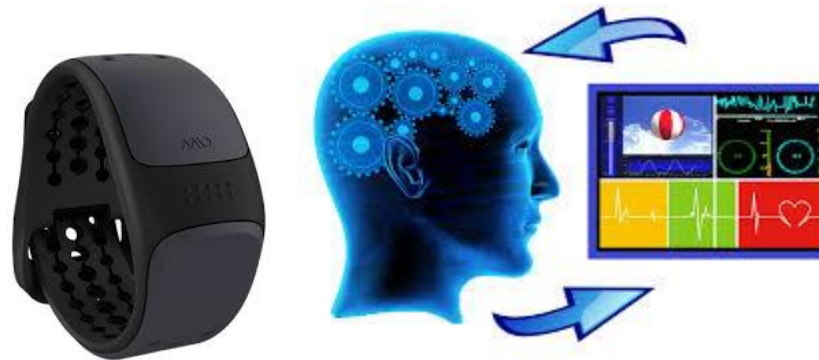


A few topics ended the session lodged firmly in the chart's "not" section, indicating that participants believe these topics' research value has been exhausted. The list included natural-language processing (NLP),

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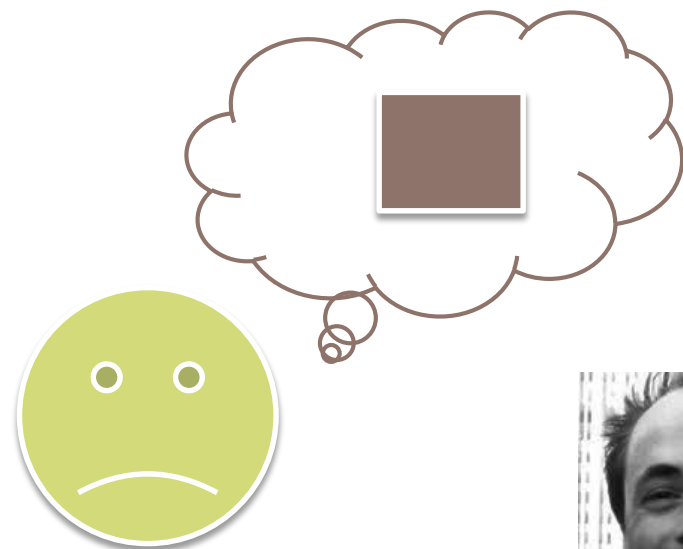
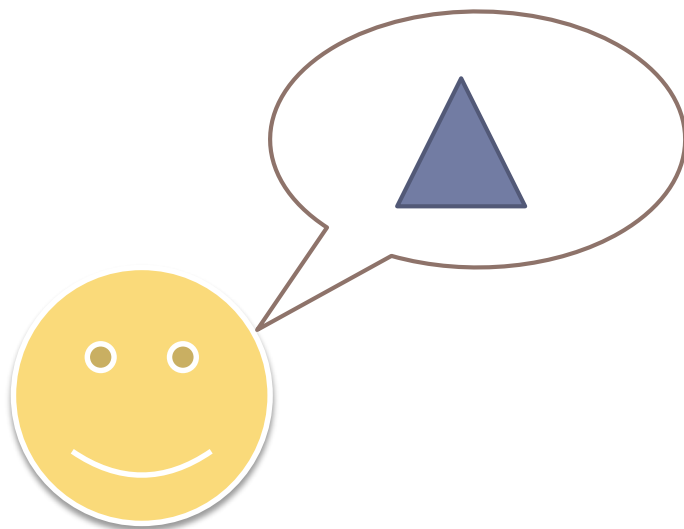
Perspective #2: humans!

- ▶ More emphasis on old-good interviews is needed!
- ▶ Mix technology and human factors
 - ▶ E.g., biofeedback and voice analysis to guide how to conduct the interview
- ▶ Links to HCI, Social sciences, Cognitive studies, Psychology



Perspective #3: communication

- ▶ Many types of ambiguity exist
 - ▶ E.g., lexical vs. pragmatic vs. ...
- ▶ During interviews, what matters is whether the ambiguity leads to a lack of understanding!



Perspective #4: the crowd



- ▶ Crowd feedback can be exploited!
- ▶ But what do we know about it so far?

Feedback Type	No. of studies	Studies
Explicit	40	S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24, S25, S26, S27, S28, S29, S31, S32, S33, S34, S35, S36, S38, S39, S40 , S41, S42
Implicit	3	S30, S37, S40

Crowdsourcing for Software Engineering

The Crowd in Requirements Engineering

The Landscape and Challenges

Eduard C. Groen, Fraunhofer Institute for Experimental Software Engineering

Norbert Seyff, University of Applied Sciences and Arts Northwestern Switzerland

Raian Ali, Bournemouth University

Fabiano Dalpiaz, Utrecht University

Joerg Doerr, Fraunhofer Institute for Experimental Software Engineering

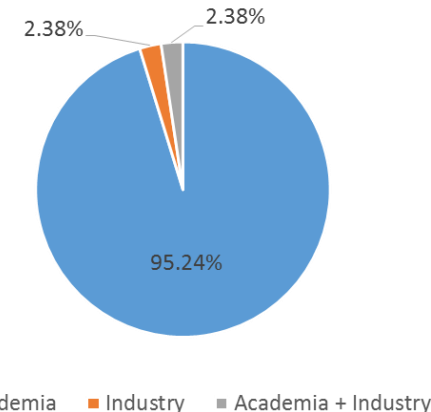
Emitza Guzman, University of Zurich

Mahmood Hosseini, Bournemouth University

Jordi Marco and Marc Oriol, Polytechnic University of Catalonia

Anna Perini, FBK Center for Information and Communication Technology

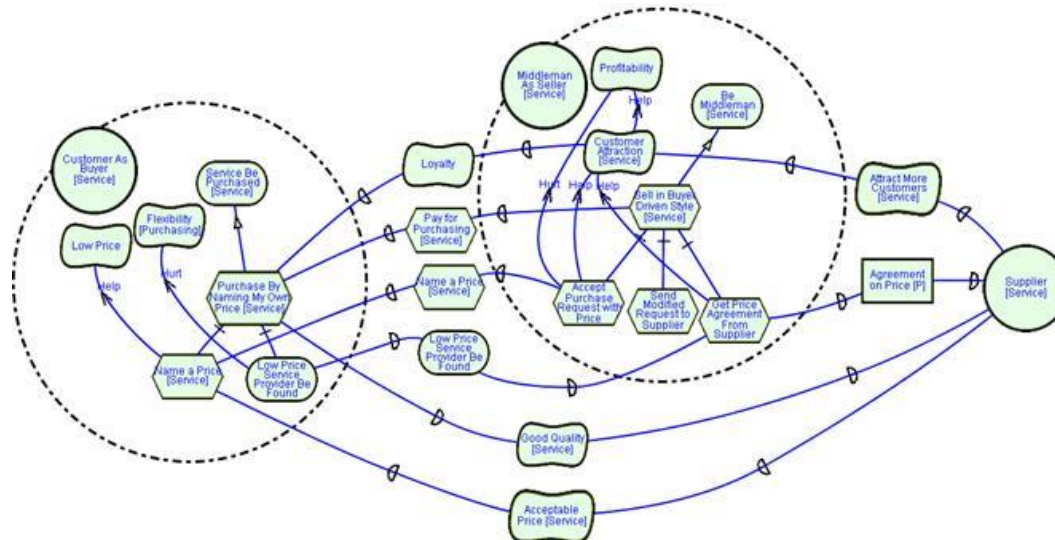
Melanie Stade, University of Applied Sciences and Arts Northwestern Switzerland



Fabiano: an academic exercise so far?

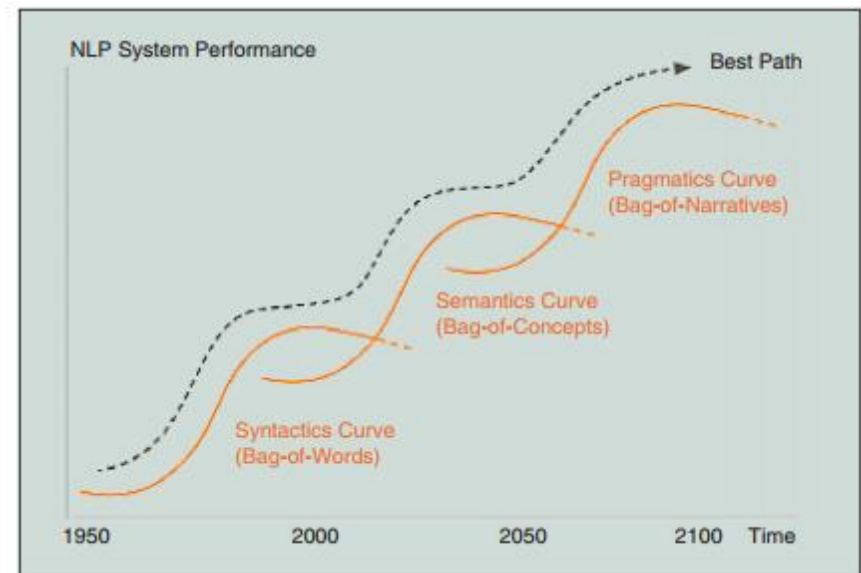
Perspective #5: modeling is useful!

- ▶ So many variations of user story templates
 - ▶ How to study them together?
- ▶ A unified model for user stories
- ▶ Building goal models to help relate user stories
- ▶ Visual models can be used for forward engineering!



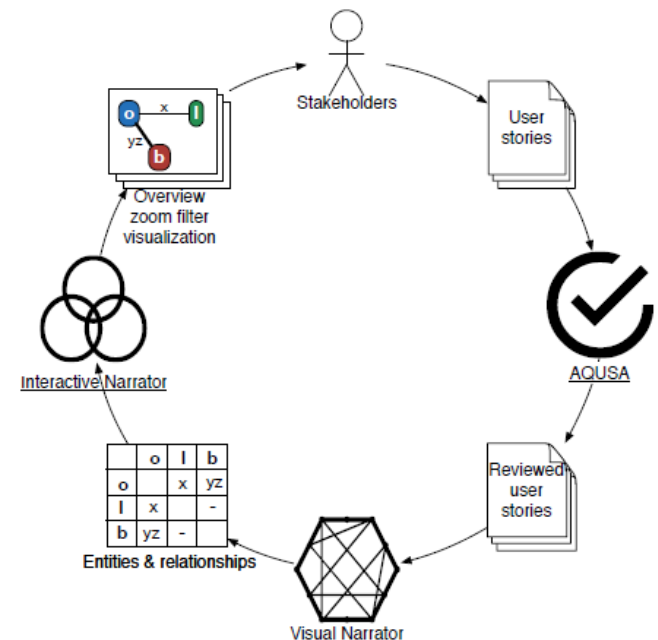
Perspective #6: more with less?

- ▶ A history of NLP approaches
 - ▶ Syntax-directed writing
 - ▶ Formal language, restricted NL
 - ▶ Information extraction
 - ▶ Plus glossaries
 - ▶ Full-fledged NLP for RE
- ▶ ... can we do more with less?



Perspective #7: **more with less!**

- ▶ First, don't ignore agile development
 - ▶ You know what, it exists!
- ▶ Second, relatively simple techniques work
 - ▶ Find quality defects
 - ▶ Automatically generate models



Invitation!

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NLP4RE

1st Workshop on Natural Language Processing for Requirements Engineering

March 19th, 2018 - Utrecht, The Netherlands

Co-located with [REFSQ'18](#)

Submit through [EasyChair](#) (Deadline: January 15th, 2018)

Natural language processing (NLP) has played an important role in several computer science areas, and **requirements engineering** (RE) is not an exception. In the last years, the advent of massive and very heterogeneous natural language (NL) RE-relevant sources, like tweets and app reviews, has attracted even more interest from the RE community.

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2017 - NLP4RE

CARDINAL THEME BY [CAGINTRANET](#)
POWERED BY [GETSIMPLE](#)

<http://fmt.isti.cnr.it/nlp4re/>



Thanks from the **Requirements Engineering Lab** at **Utrecht University!**

Fabiano Dalpiaz
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