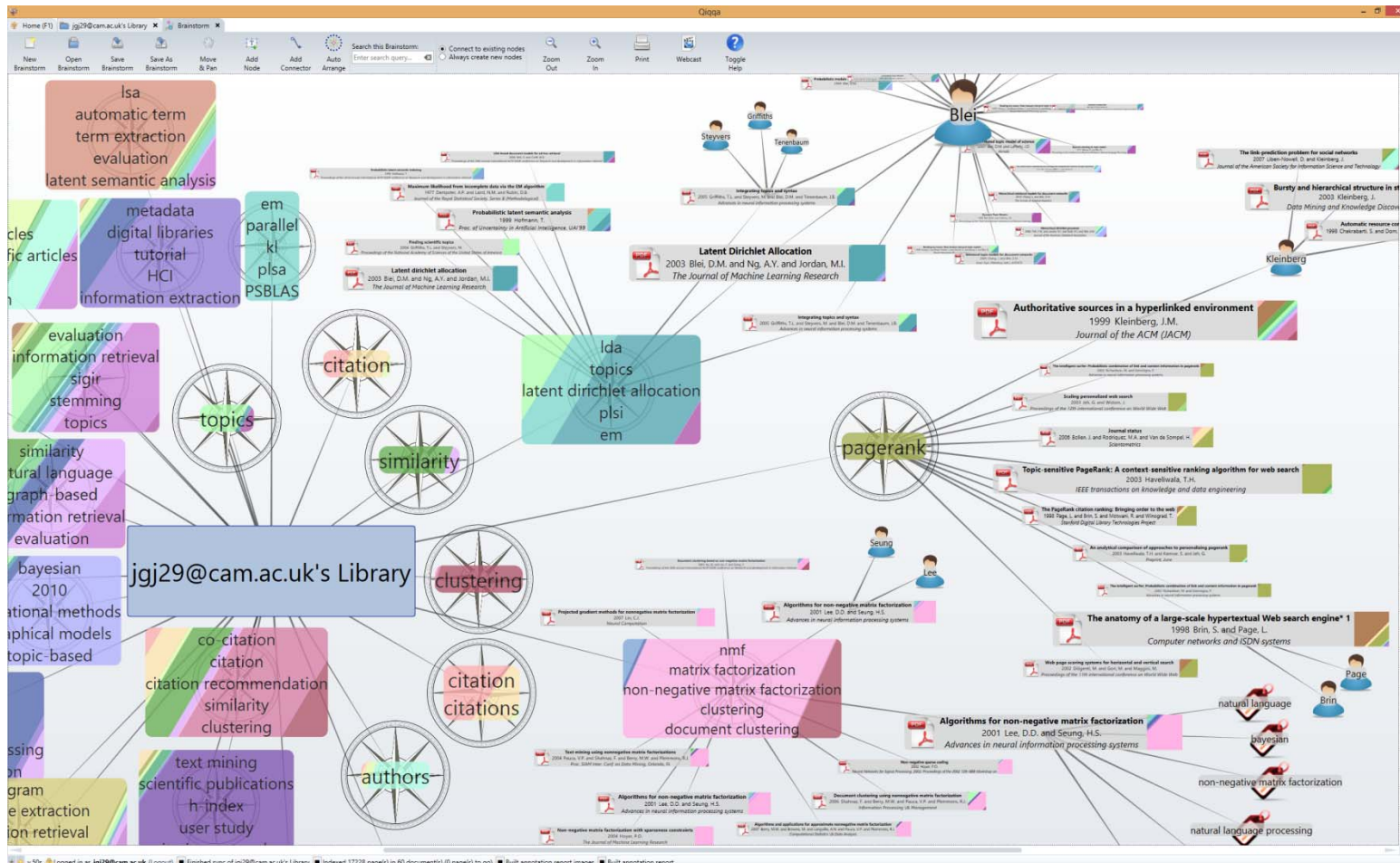# Natural Language and Information Processing group

NLIP people

- **Teaching staff:** Ted Briscoe, Stephen Clark, Ann Copestake, Simone Teufel
- **Research fellow:** Anna Korhonen
- **Postdoctoral researchers:** Diarmuid Ó Séaghdha, Laura Rimell, Mohan Ganesalingam, Dain Kaplan, Roi Reichart, Ilona Silins, Andreas Vlachos
- **Research students:** Saad Aloteibi, Awais Athar, Sandro Bauer, Frannie Chang, Yufan Guo, Felix Hill, James Jardine, Colin Kelly, Douwe Kiela, Ekaterina Kochmar, Thomas Lippincott, Stuart Moore, Marek Rei, Lin Sun, Theodosia Togia, Chris Vo, Wenduan Xu, Helen Yannakoudakis
- **Visitors and local collaborators:** Øistein Andersen, Paula Buttery, Wenhao Zhu

NLIP group

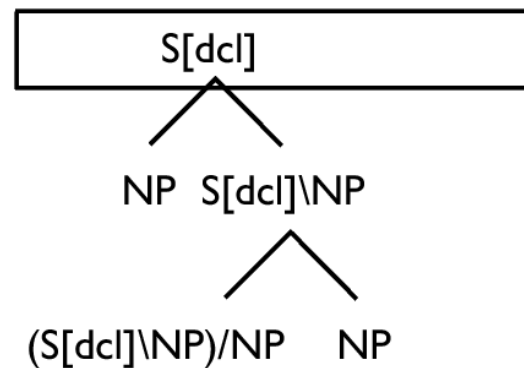# Automatically generating reading lists: Jimme Jardine
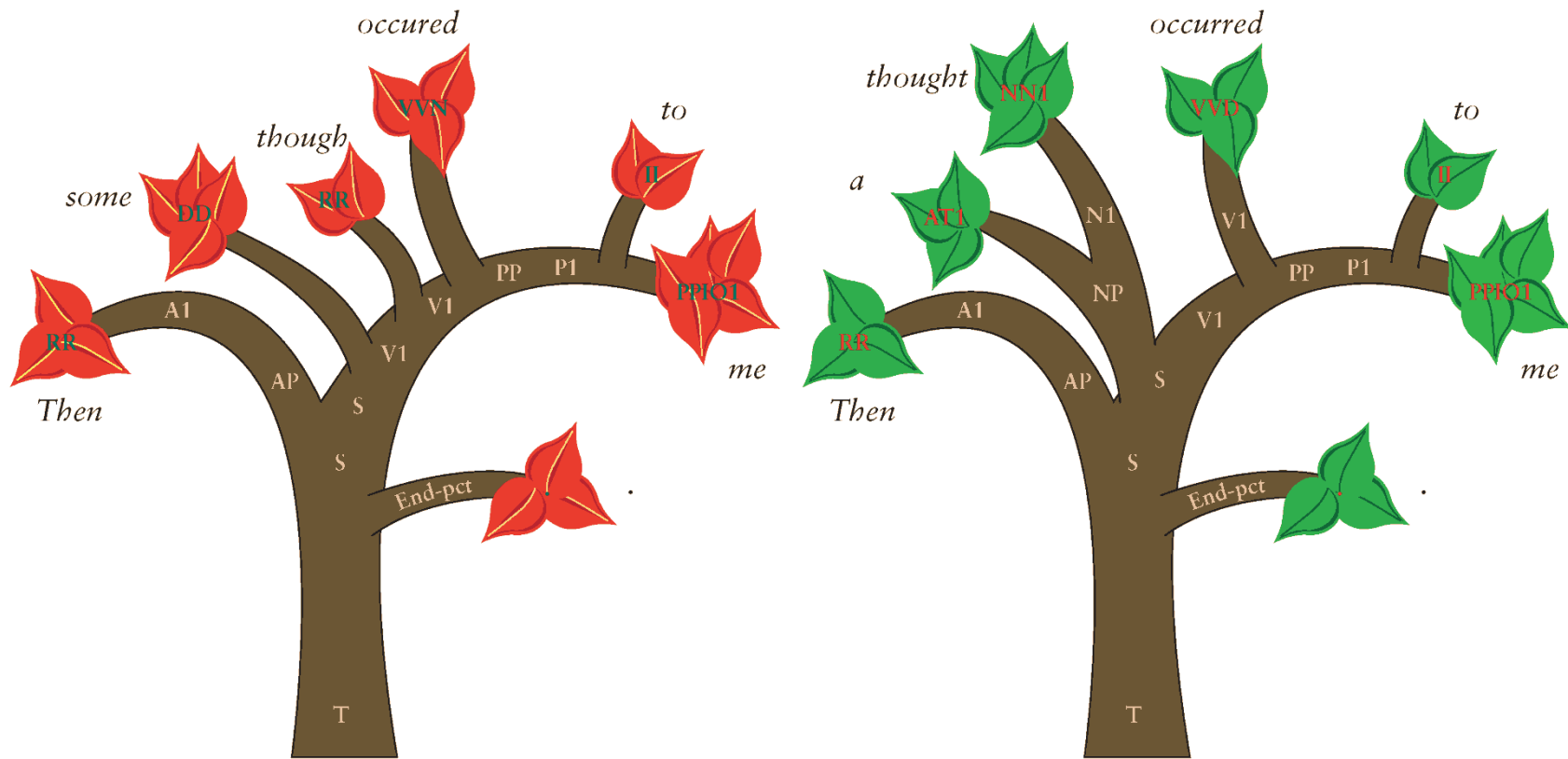
CCG parsing: Wenduan Xu

Shift-Reduce Decoding

actions: SHIFT SHIFT SHIFT
REDUCE: forward app
REDUCE: backward app

```
                S[dcl]
                  /\
           NP  S[dcl]\NP
                   /\
        (S[dcl]\NP)/NP    NP
```

Detecting errors in learner text: Øistein Andersen

Folksonomy: Theodosia Togia

"house in the countryside"

"painting by Cezanne"

"trees next to the house"

"mountains are blue"

19thcentury analytical angular annegreenleaf architecture autumn block blue bluemountains brushstroke brushstrokes calm cezanne coolcolors cottage country countryhouse countryside cubism deepgreentrees dynamic earthtones english farmhouse farmland fields france french geometric geometricmasses green hills hillside horizon house housenestledinalandscape impressionistic irish landscape layers linear modernism montsaintvictoire montstevictoire mountain mountains nature ochre orange orchard painting pastoral peace placid postimpressionism postimpressionist postimpsressionistcomposition provence quaint quite rectangularbrushstrokes reduced rugged rural scenery scottish seagreen shapes sky slategray southeuropeanstyle southoffrance strong summer trees village

tagging
vs.
language

Language of mathematics
Mohan Ganesalingam

Then $V = U \cap H$ for some U in $\mathcal{T}$, by definition of $\mathcal{T}_H$, and $U \cap H = i^{-1}(U)$, so $g^{-1}(V) = g^{-1}(i^{-1}(U)) = (i \circ g)^{-1}(U)$.

Theory: Properties of mathematics as a language.
Potential applications: `Real' mathematics in automatic theorem proving, tools for teaching maths.

PhD research in the NLIP group

- Diverse topics, theoretically- and practically-oriented research.
- Many collaborations with other groups (Lab, other Cambridge depts, worldwide).
- Some PhD research is part of larger funded projects, but most relatively independent.
- Preparation for PhD: ACS MPhil language modules and project.