

A NETWORK ANALYSIS OF THE IMPRECISE PROBABILITY COMMUNITY BASED ON ISIPTA ELECTRONIC PROCEEDINGS

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o. Data and Goals

We investigate the electronic proceedings from the ISIPTA conferences 1999 - 2009.

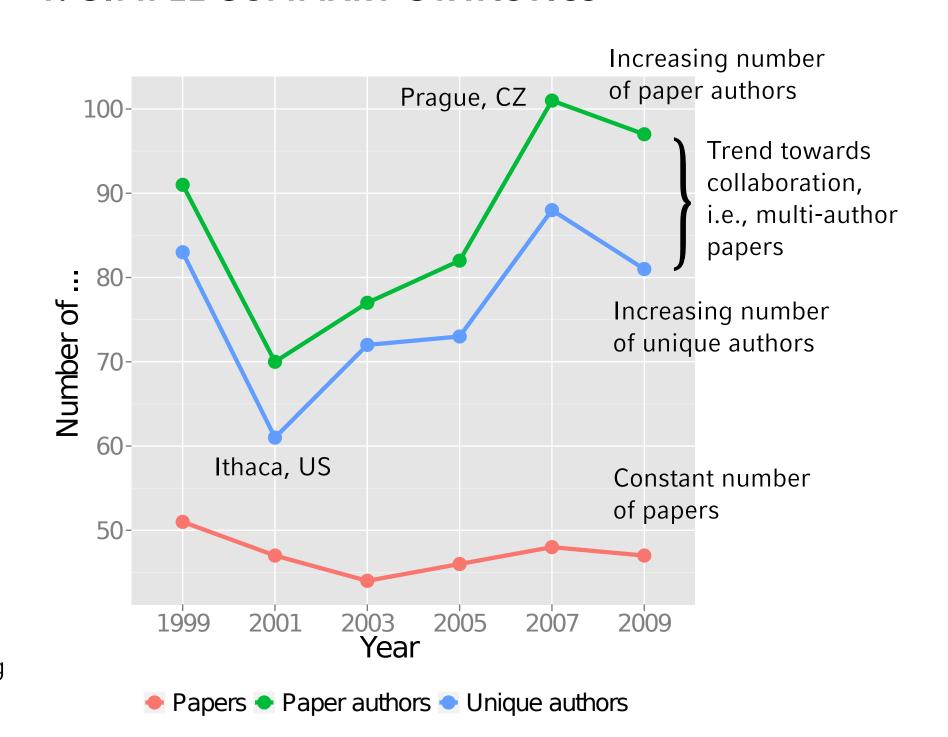
The data are read from the individual proceeding websites; location information are estimated by the authors' e-mail address domains. In a post-processing step we inspected and corrected the data by hand.

This poster is the first step towards a comprehensive analysis of the IP community and its evolution. Here, we present selected interesting facts, from simple summary statistics to a summary graph of different social network analyses.

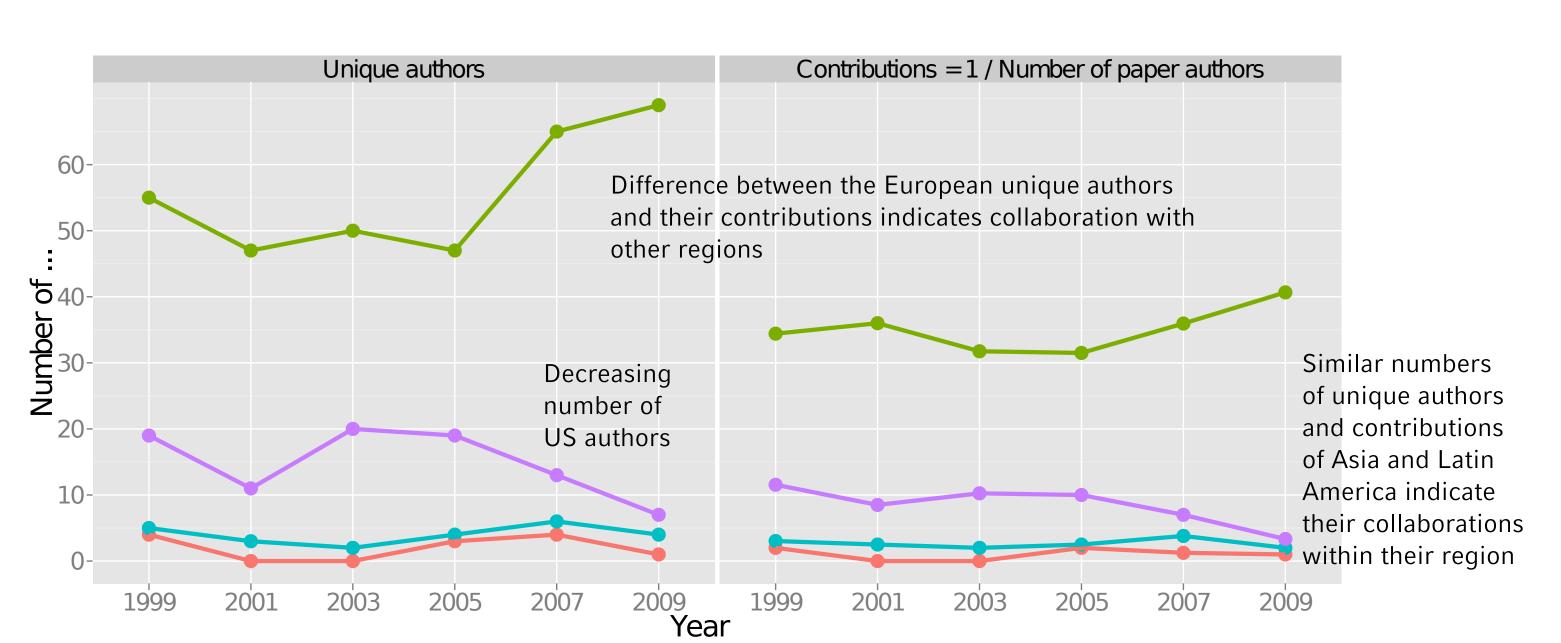
0.1. MARK AND COMMENT

Feel free to mark and comment on interesting aspects you find in the presented data!

1. SIMPLE SUMMARY STATISTICS

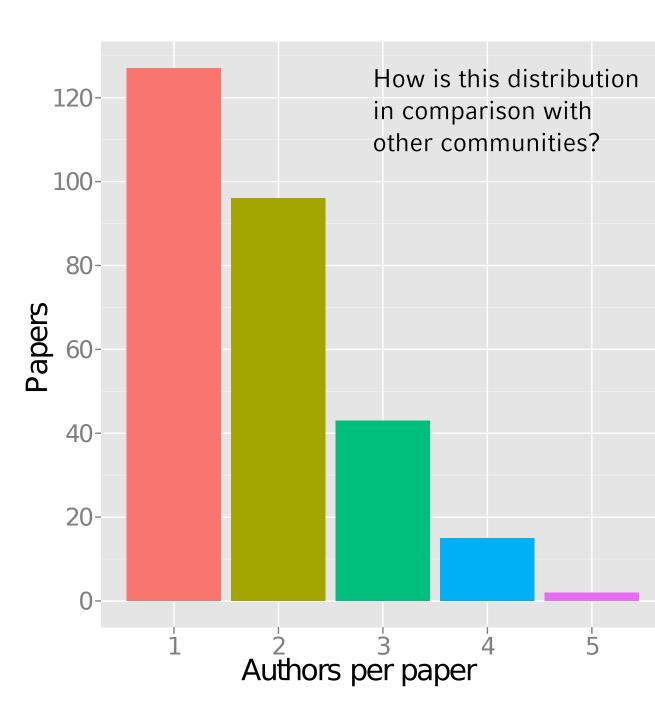


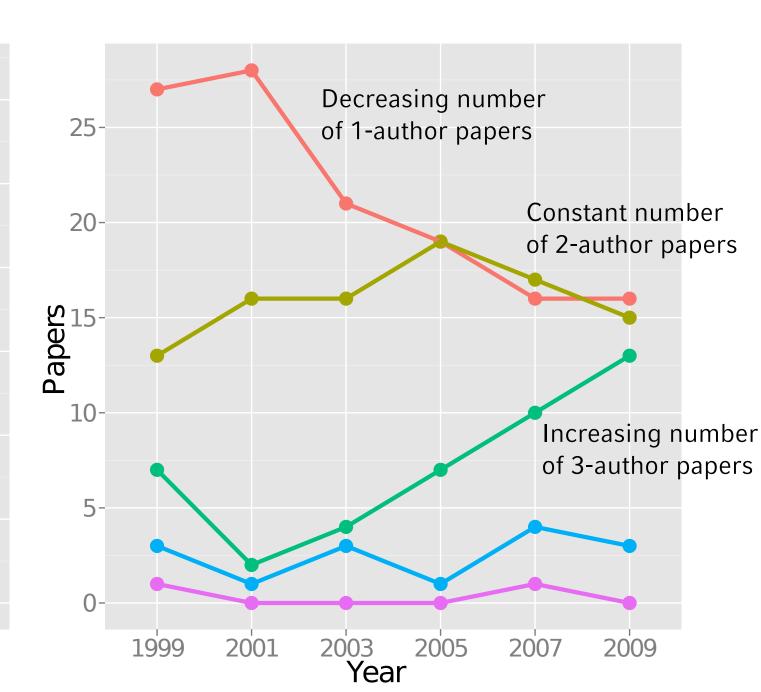
2. AUTHORS AND CONTRIBUTIONS BY REGION



Asia and the Pacific • Europe • Latin America and the Caribbean • North America

3. AUTHORS PER PAPER





4. Papers per author

Papers: 1 2 3 4 5 6 7 8 10 11 12 Frequencies: 154 46 19 14 7 7 1 1 2 1 3 Barbara Vantaggi (21): 7 Frank Coolen (70): 8 Since 1999 most Serafin Moral (218): 10 authors contributed Lev Utkin (139): 10 one paper; the Fabio Cozman (61): 11 distribution Thomas Augustin (237): 12 has a long tail Gert de Cooman (82): 12 Marco Zaffalon (149): 12

5. REGULAR CONTRIBUTORS

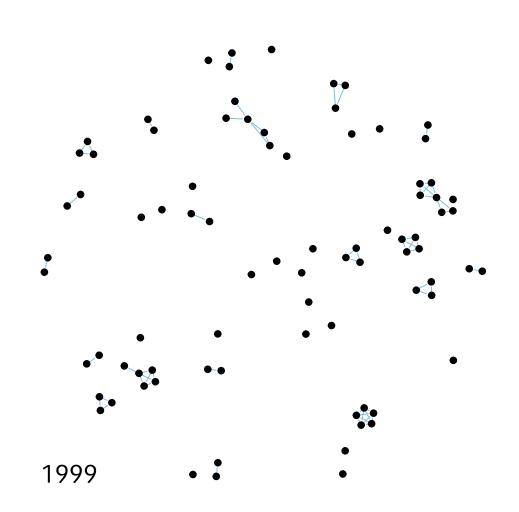
Conferences: 1 2 3 4 5 6 Frequencies: 158 47 21 13 5 11 Paolo Vicig (180) Angelo Gilio (13) Barbara Vantaggi (21) Robert Nau (205) Fabio Cozman (61) Serafin Moral (218) Gert de Cooman (82) Thomas Augustin (237) Veronica Biazzo (244) Jirina Vejnarova (121) Lev Utkin (139)

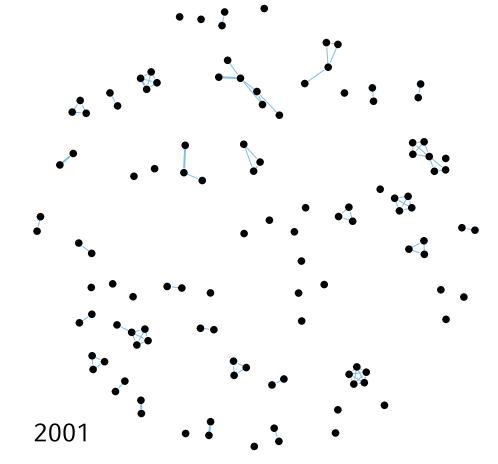
5.1. CONTRIBUTORS FLOW

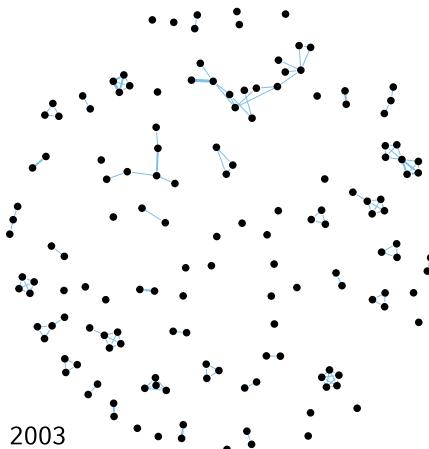
Conferences:	1999-2001	2001-2003	2003-2005	2005-2007	2
Absolut flow:	29	25	33	35	
Relative flow:	0.48	0.41	0.46	0.48	

Constant number of authors contributing again at the following conference; standardization by the maximal loss, i.e., the minimum of unique authors of two following conferences

6. COAUTHOR NETWORK







72

25

151 60

193

232

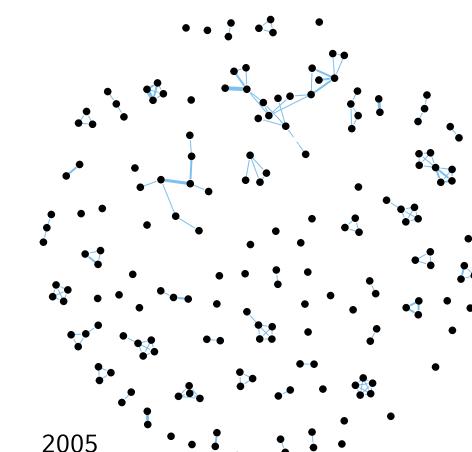
"Probabilistic Satisfiability

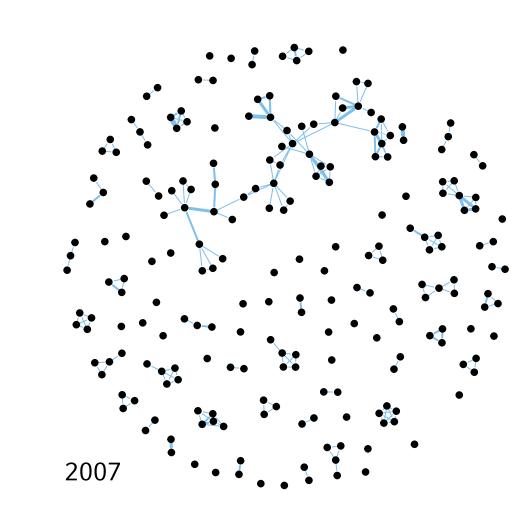
Poggi de Aragão, Chauny

by Hansen, Jaumard,

and Perron (1999)

with Imprecise Probabilities"





2009

Italian IP group around Barbara Vantaggi (21), regular contributor since 1999 -- Andrea Capotorti (9), Francesca Vattari (69), Giuliana Regoli (85), Giuseppe Busanello (87), Marcello Mastroleo (146), Marco Baioletti (147)

Poster author

Gero Walter (81)

A group from Sweden -- Aron Larsson (19), Christofer Waldenstrom (32), David Sundgren (43), Jim Johansson (120), Love Ekenberg (140), Mats Danielson (158) Mikael Andersson (168); Contributions 2003 (1 paper), 2007 (1 paper), and 2009 (2 papers)

2005

6.1. GRAPH MEASURES

Based on the largest cluster of the graph.

Degree of separation = 4.64

This average path length implies that on average every author is only 5 steps away from any other author; the well-known "small world phenomenon" states 6 steps.

Diameter = 10

The diameter is the longest shortest path; this concrete path is:

Alessio Benavoli (4) Alessandro Antonucci (3) Gert de Cooman (82) or Marco Zaffalon (149) Enrique Miranda (53) Ines Couso (100) Didier Dubois (44) Sebastien Destercke (217) Lev Utkin (139) Frank Coolen (70) Damjan Skulj (35) Robert Hable (204)

7. Do IT Yourself



Download and install the ISIPTA R-package and start your own analysis:

R> install.packages(c("igraph", "ggplot2",

"geosphere", "rworldmap", "plyr", "colorspace"))

R> install.packages("ISIPTA", type = "source", + repos = "http://www.statistik.lmu.de/~eugster/")

This poster is reproduced by the available demos:

R> demo(package = "ISIPTA") # show all demos R> demo("simple-summary", package = "ISIPTA")

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