

# Becoming a Computational Communication Scholar

Fabienne Lind & Hajo G. Boomgaarden  
Department of Communication, University of Vienna



**</Computational>**  
Communication Science Lab

ICA 2019 | Washington D.C. | 24.05.2019

Pre-Conference: Expanding Computational Communication: Towards a Pipeline for Graduate Students and Early Career Scholars

Department of Communication | University of Vienna  
compcommlab.univie.ac.at  
@compcommlab

## Today

- Some General Steps
- Personal Notes
- Short autobiographical research
- Challenges
- Moving on

## Computational Communication Scholars work with...

big data analytics, computer simulations, social network analysis, text mining, computer-assisted content analysis, machine learning, large-scale experiments, cognitive modeling, web and mobile analytics, and data visualization,...

## Step 1

Check your motivation and define your focus



Photo by Janko Ferlic from Pexels

## Step 2

Develop your skills



Photo by Christina Morillo from Pexels

## Step 3

Make sure you have the  
right environment  
and support.



Image by Zdeněk Picpauer from Pixabay



## Step 4

Develop your network,  
share and show your work



Photo by Pixabay from Pexels

## The Computational Communication Lab





## A PhD Project and some background notes

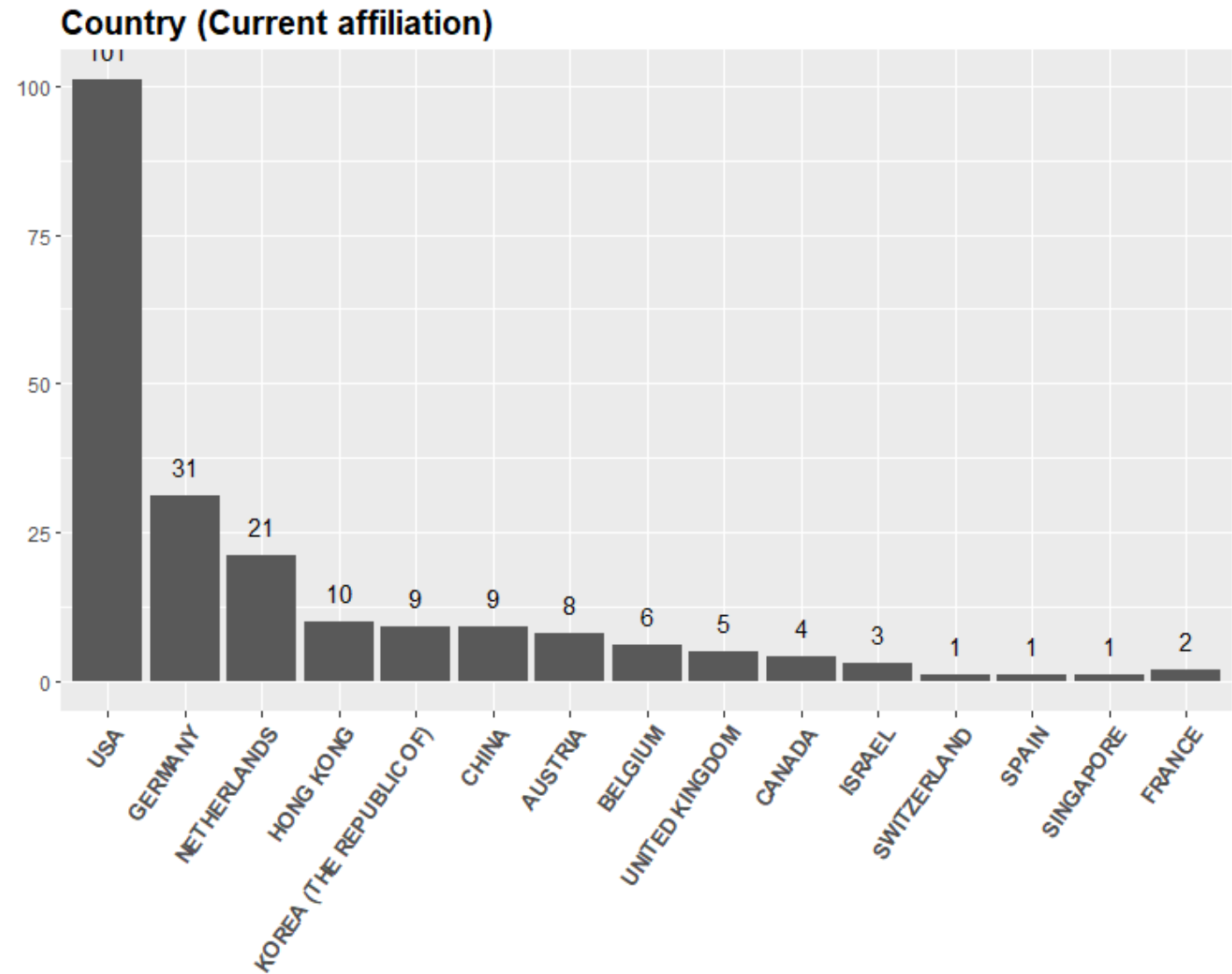
Multilingual  
Computer-Assisted  
Content Analysis



## Small autobiographical research:

- Computational Methods Interest Group, ICA 2019: Chairs, Discussants, and Participants ->  $N = 212$

## International - to some degree

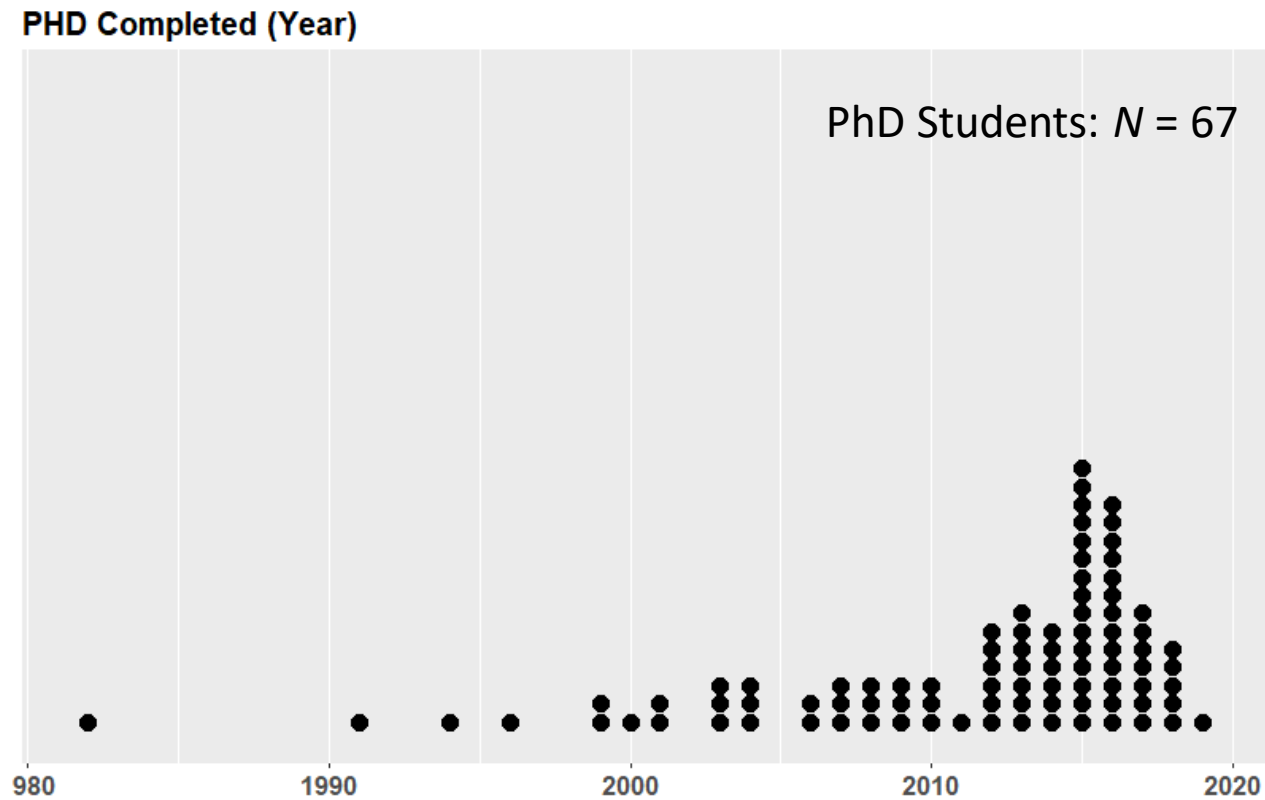


## Small autobiographical research (continued):

- Google search with name, affiliation, country (based on ICA program)
- $N = 181$  with public available CV/linked in profile/university websites

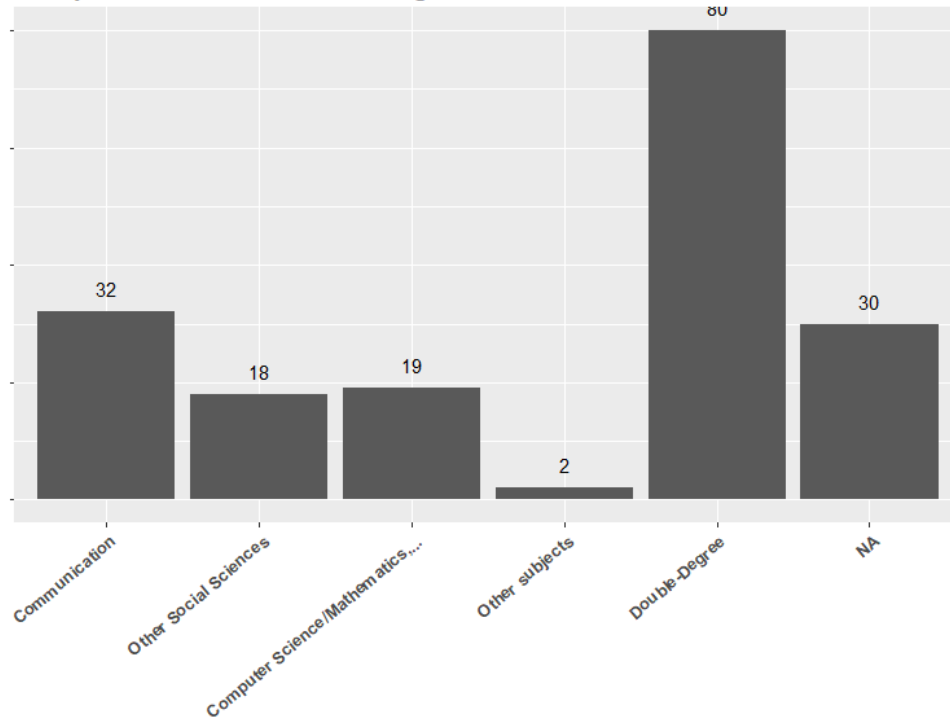


## A young field

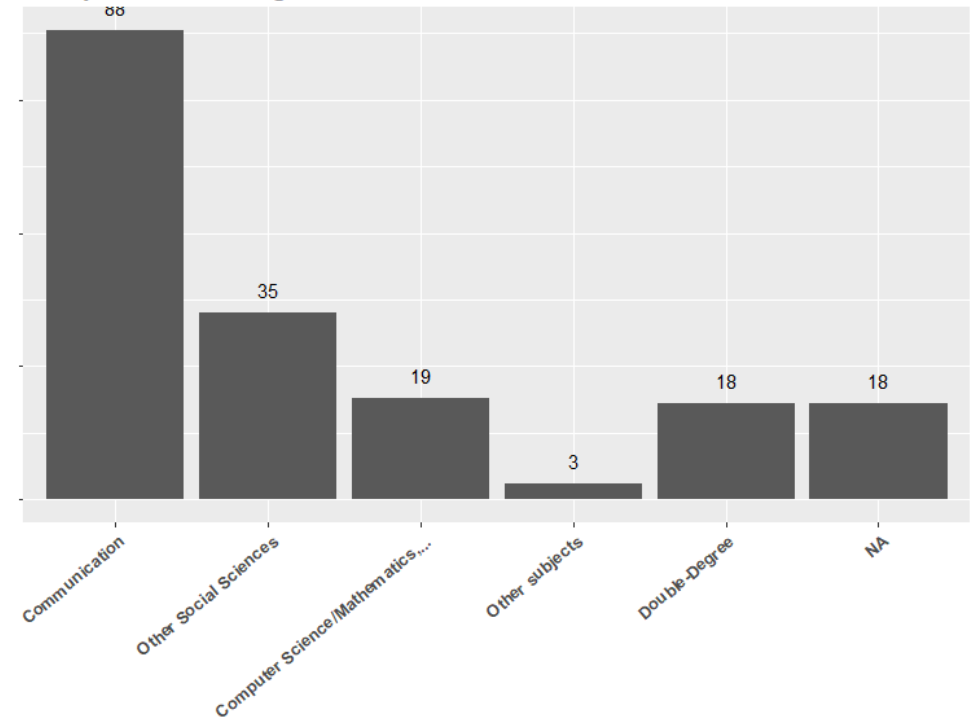


## Bachelor/Master Degrees: An interdisciplinary field, but strong focus on communication

Discipline of Bachelor/Master Degree



Discipline of PhD Degree



# Challenges for ‘Becoming a Computational Communication Scholars’

- Infrastructure
- Interdisciplinary Collaborations
- Skills
- Accessibility of datasets
- Communication with the field

# Opportunities

In academia and beyond

## ASSISTANT PROFESSOR IN COMPUTATIONAL COMMUNICATION

We seek applicants with expertise in one or more of the following areas :

- Computational social science
- Data science
- Social algorithms and artificial intelligence
- Web science research methods

## PH.D. POSITION IN COMPUTATIONAL COMMUNICATION SCIENCE



## Data engineer: The 'real' sexiest job of the 21st century

As the hype around data scientists fails to meet expectations, perhaps it's time data engineer took the title as the "sexiest job of the 21st century"



Speaking at the Gartner Data & Analytics Summit 2019, London, Nick Heudecker, VP Analyst, Gartner, stated: "Data scientists just remind me of a bunch of frustrated weather forecasters."



## Moving on

- ICA 2019 Computational Methods Program
- Sharing resources for 'Becoming a Computational Communication Scholar' (summer schools, online courses, conferences, ...)

<https://urlzs.com/FBTMv>



# Thank you for your attention!

Fabienne Lind & Hajo G. Boomgaarden

Department of Communication, University of Vienna



@FabienneLind  
@boomgaardenhg



</**Computational**>  
Communication Science Lab

Department of Communication | University of Vienna  
compcommlab.univie.ac.at  
@compcommlab

## References and More on the Topic

- van Atteveldt, W., & Peng, T. Q. (2018). When Communication Meets Computation: Opportunities, Challenges, and Pitfalls in Computational Communication Science. *Communication Methods and Measures*, 12(2-3), 81-92.
- Matei, S. A., & Kee, K. F. Computational communication research. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, e1304.
- Matthes, J. (2019). Viel Luft nach oben. Eine kritische Reflexion zum Stellenwert der Methoden in der Kommunikationswissenschaft. In *Emotions Meet Cognitions* (pp. 93-103). Springer VS, Wiesbaden.
- Parks, M. R. (2014). Big data in communication research: Its contents and discontents. *Journal of Communication*, 64(2), 355-360.
- Peng, T. Q., Liang, H., & Zhu, J. J. (2019). Introducing computational social science for Asia-Pacific communication research. *Asian Journal of Communication*, 29(3), 205-216.
- Davenport, T. H., & Patil, D. J. (2012). Data scientist. *Harvard business review*, 90(5), 70-76.

# Images

- <https://www.pexels.com/photo/blur-book-stack-books-bookshelves-590493/>
- <https://www.pexels.com/photo/woman-programming-on-a-notebook-1181359/>
- <https://pixabay.com/photos/lighting-light-bulb-energy-4042812/>
- <https://www.pexels.com/photo/close-up-photography-of-yellow-green-red-and-brown-plastic-cones-on-white-lined-surface-163064/>
- <https://www.information-age.com/data-engineer-sexiest-job-21st-century-123480578/>