

# The Impact of ICL on My Work and a Surprise

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INRIA – LaBRI

20<sup>th</sup> Anniversary of ICL

Knoxville, March 2010

# A short history

1994: first stay in Knoxville (3 months) : PVM 3 tester

2001: I am back and work on Netsolve

2001-2006: several stays work on Netsolve/GridSolve

2006: 6 months stay (GridSolve/Scalapack/Robust scheduling)

ICL/Jack: First contact with the Research in the USA.

PVM 3 tester: First development for a distributed software

Learn the importance of producing something that works and can be used by other people

6 months stay in 2006: very productive stay and wonderful time with all my family in Tennessee.

Enter INRIA at that time

I work(ed) on large scale distributed environments:

- Online compression
- Scheduling on Netsolve/GridSolve

In Bordeaux I work on runtime environments

- MPI process placement on multicore environment
- GPU/multicore programming

- ICL is kind of fixe point for my research: I moved a lot in France but always come back here
- I like the nice atmosphere here
- I must acknowledge Jack for this!

# The surprise...

- Do you know: <http://genealogy.math.ndsu.nodak.edu>
- It is a website that collect the genealogy in terms of advisor/PhD student in math.
- In general a student has one advisor, but sometimes it has 2 advisors.
- Moreover an advisor can co-advise a student of one of its decendent:
  - The scientific genealogy is not a tree: it is a directed acyclic graph (DAG).


The Mathematics Genealogy Project - Jack Dongarra

http://genealogy.math.ndsu.nodak.edu/id.php?id=14931

Recherche Complex HPC LaBRI Divers Sport Météo Actualités Apple (83) Chess

## Mathematics Genealogy Project

**Jack J. Dongarra**  
[MathSciNet](#)

Ph.D. [University of New Mexico](#) 1980 

Dissertation: *Improving the Accuracy of Computed Matrix Eigenvalues*  
Mathematics Subject Classification: 68—Computer science

Advisor: [Cleve Barry Moler](#)

Students:  
Click [here](#) to see the students listed in chronological order.

Name	School	Year	Descendants
<a href="#">Thara Angskun</a>	University of Tennessee - Knoxville	2007	
<a href="#">Henri Casanova</a>	University of Tennessee - Knoxville	1998	
<a href="#">Zizhong Chen</a>	University of Tennessee - Knoxville	2006	
<a href="#">Erika Fuentes</a>	University of Tennessee - Knoxville	2007	
<a href="#">Youngbae Kim</a>	University of Tennessee - Knoxville	1996	
<a href="#">Lorie Liebrock</a>	Rice University	1994	1
<a href="#">Piotr Luszczek</a>	University of Tennessee - Knoxville	2003	
<a href="#">Antoine Petit</a>	University of Tennessee - Knoxville	1996	
<a href="#">Jelena Plesivac-Grbovic</a>	University of Tennessee - Knoxville	2007	
<a href="#">Zhao Shi</a>	University of Tennessee - Knoxville	2006	
<a href="#">Mohammad Sidani</a>	University of Tennessee - Knoxville	1991	
<a href="#">Sathish Vadhiyar</a>	University of Tennessee - Knoxville	2003	

According to our current on-line database, Jack Dongarra has 12 [students](#) and 13 [descendants](#).  
We welcome any additional information.

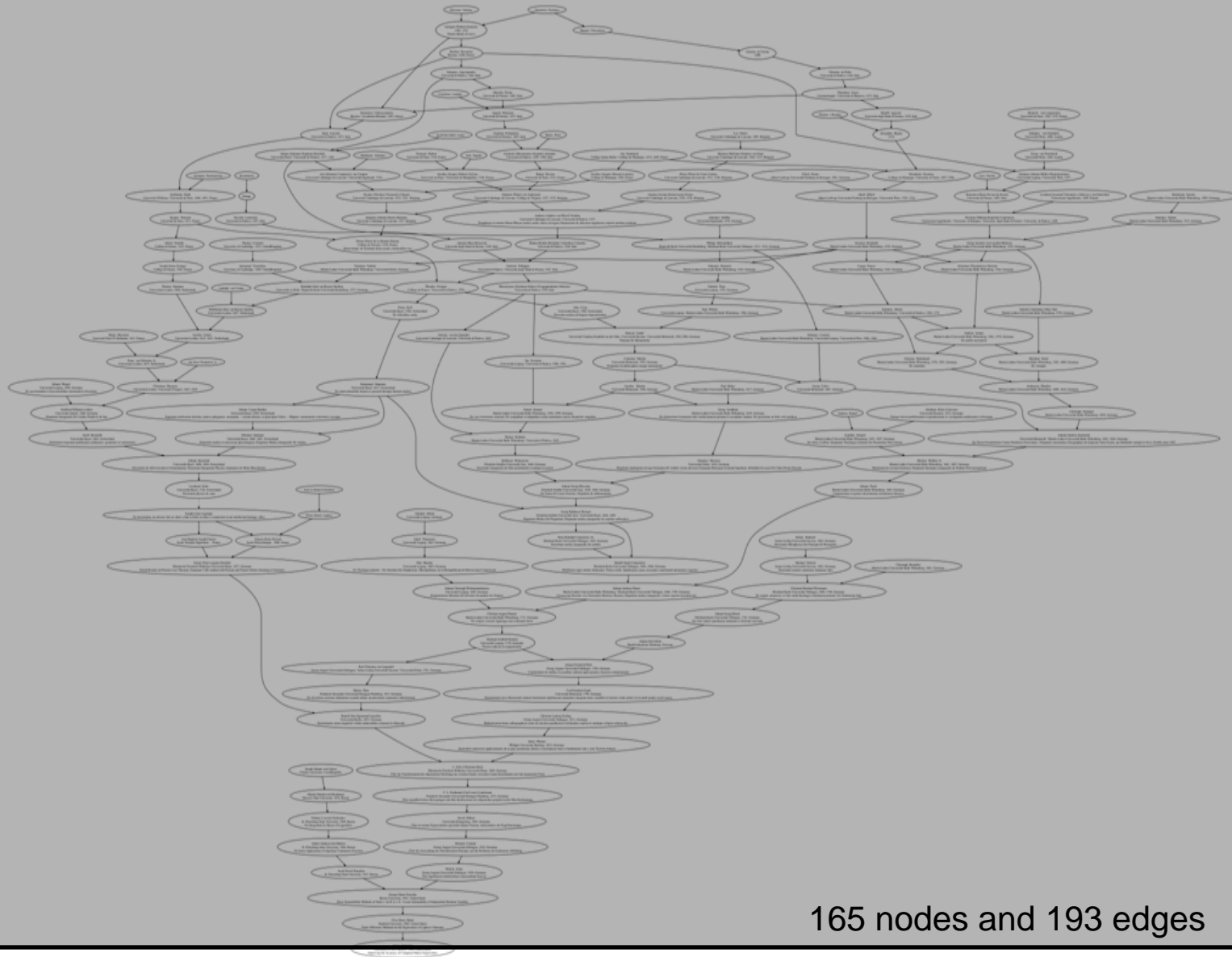
If you have additional information or corrections regarding this mathematician, please use the [update form](#). To submit students of this mathematician, please use the [new data form](#).

Search Extrema About MGP - Links FAQs Posters Submit Data

The Mathematics Genealogy Project is in need of funds to help pay for student help and other associated costs. If you would like to contribute, please send your tax-deductible contribution to:

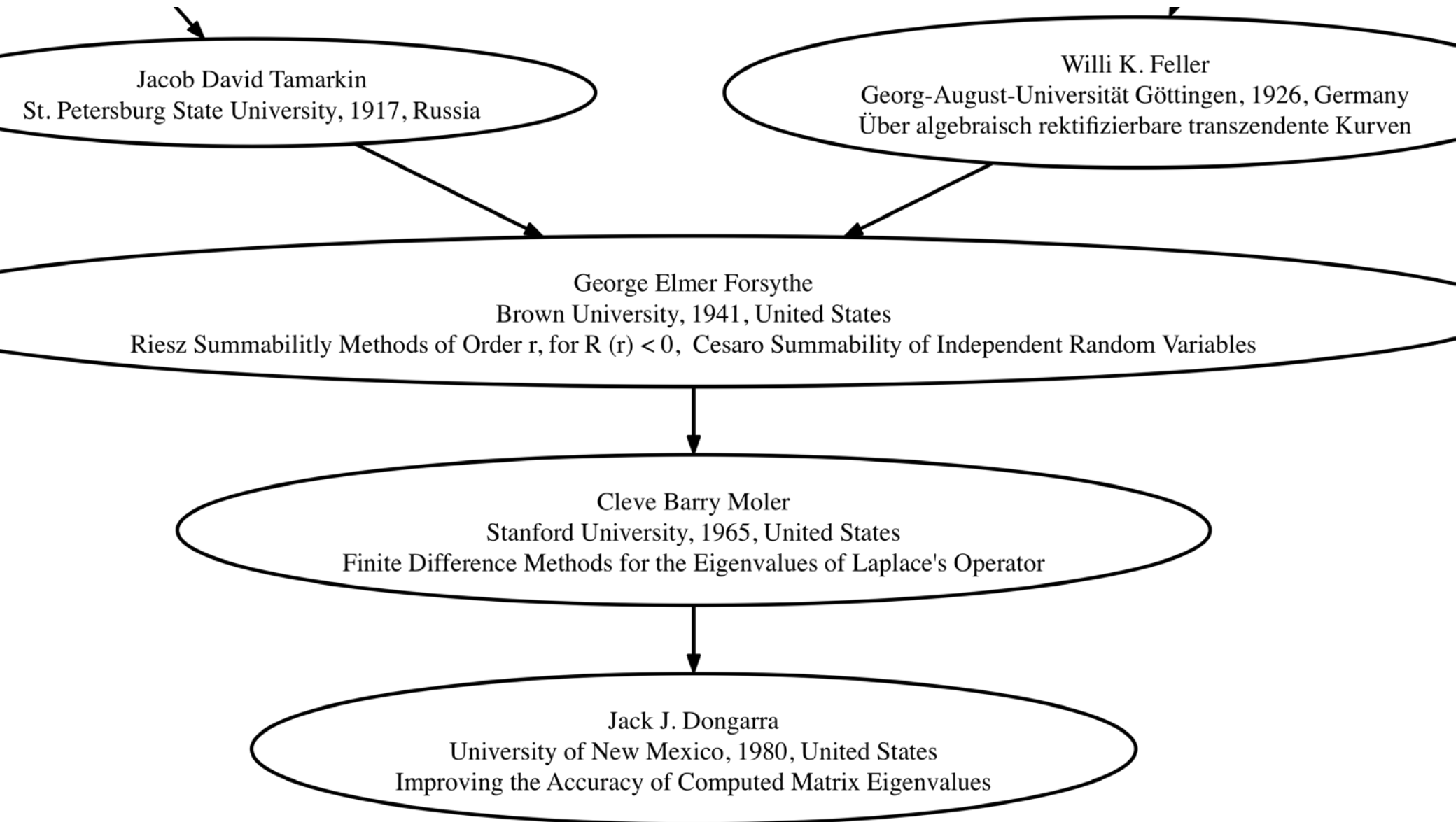
Mathematics Genealogy Project  
Department of Mathematics  
North Dakota State University  
P. O. Box 6050  
Fargo, North Dakota 58108-6050

# Jack's genealogy

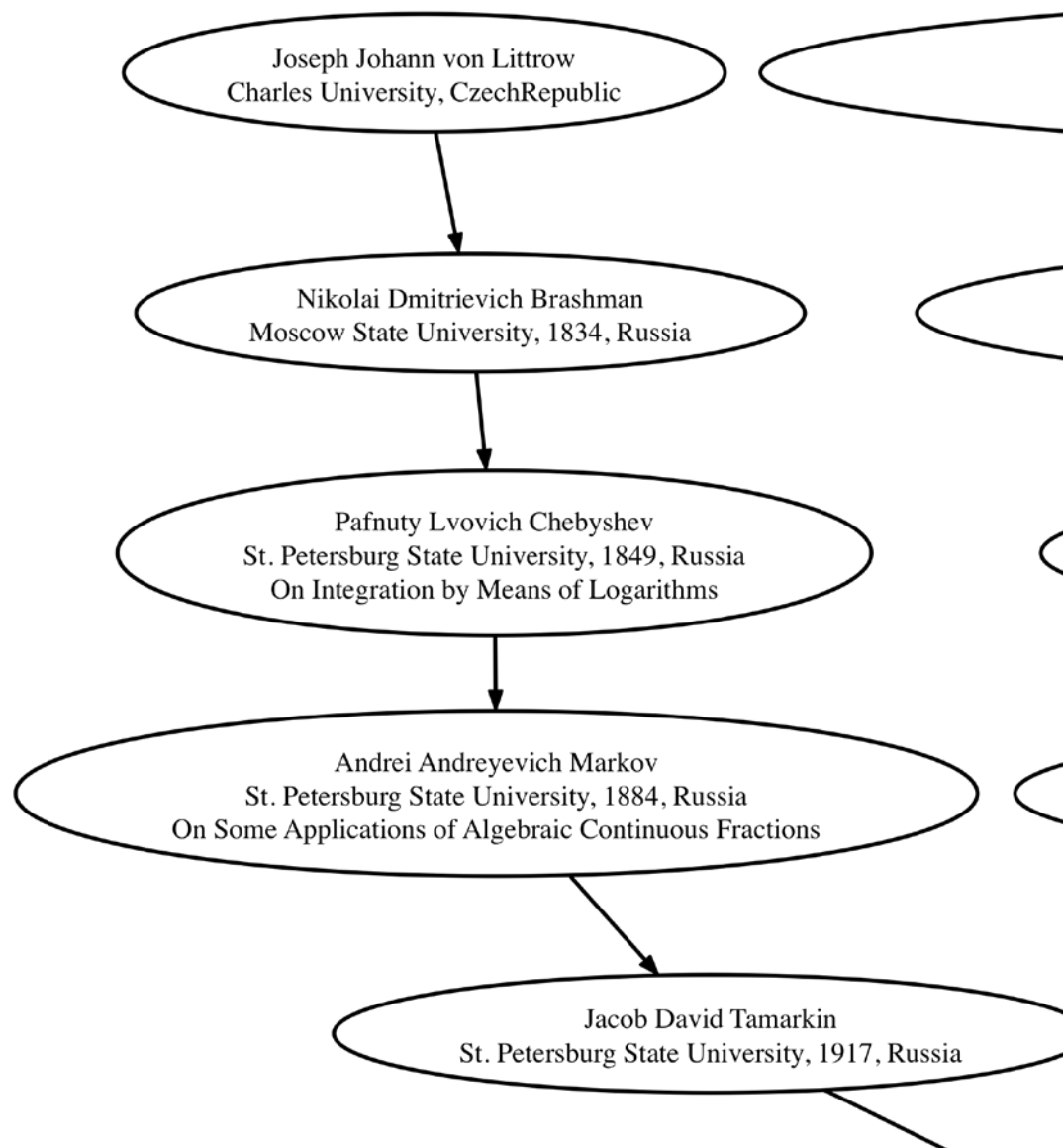


165 nodes and 193 edges

# From USA to Europe



# The “Russian” Branch

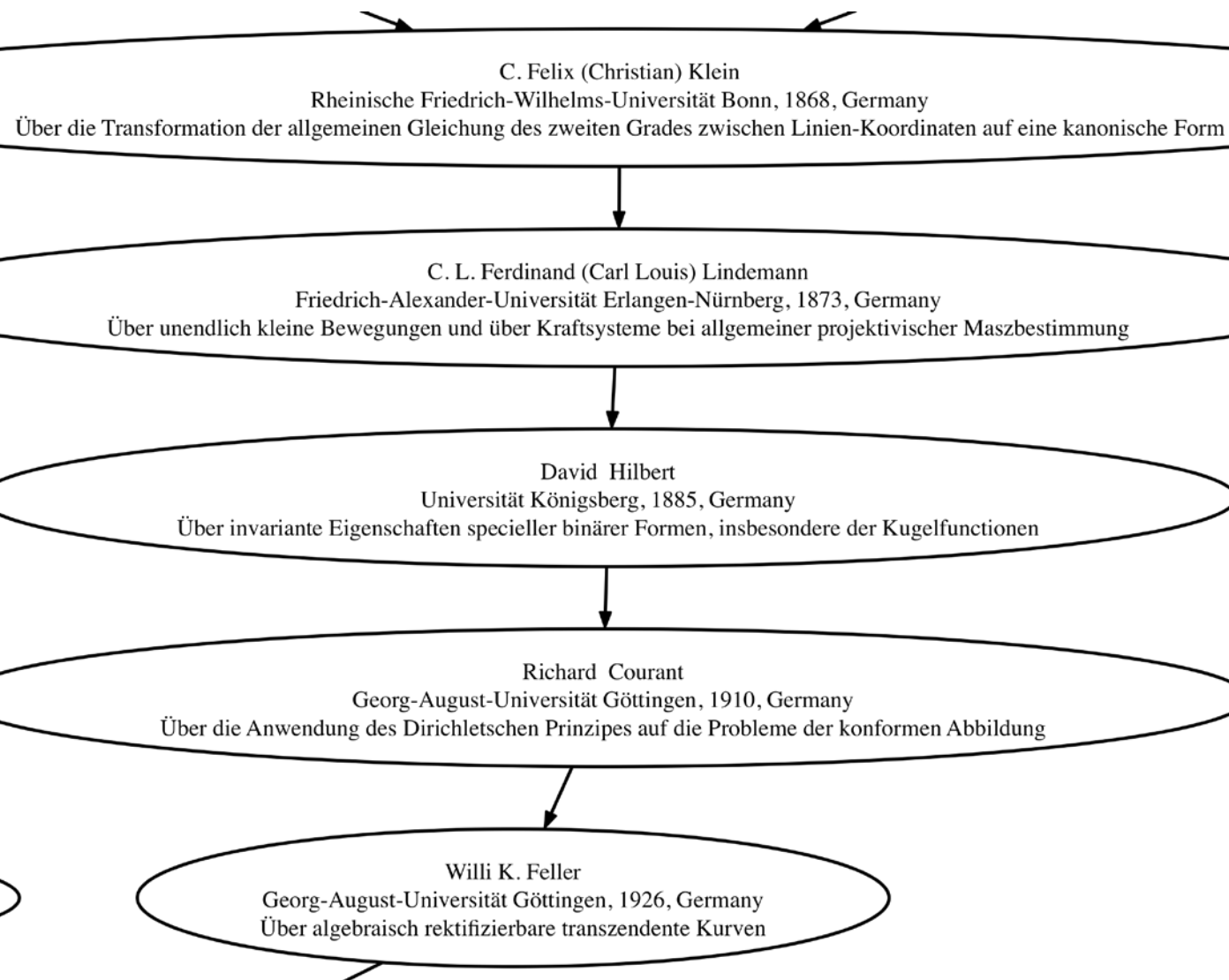


Chebyshev Inequality:

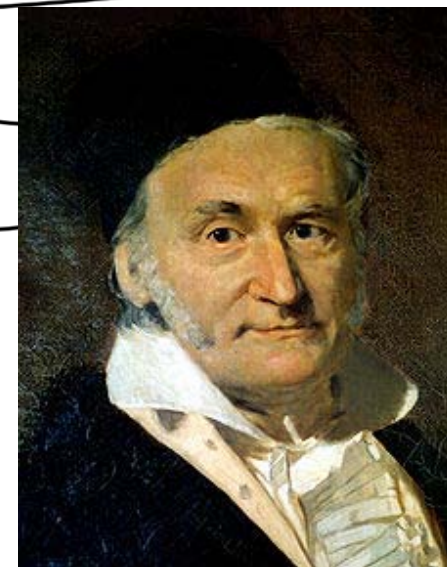
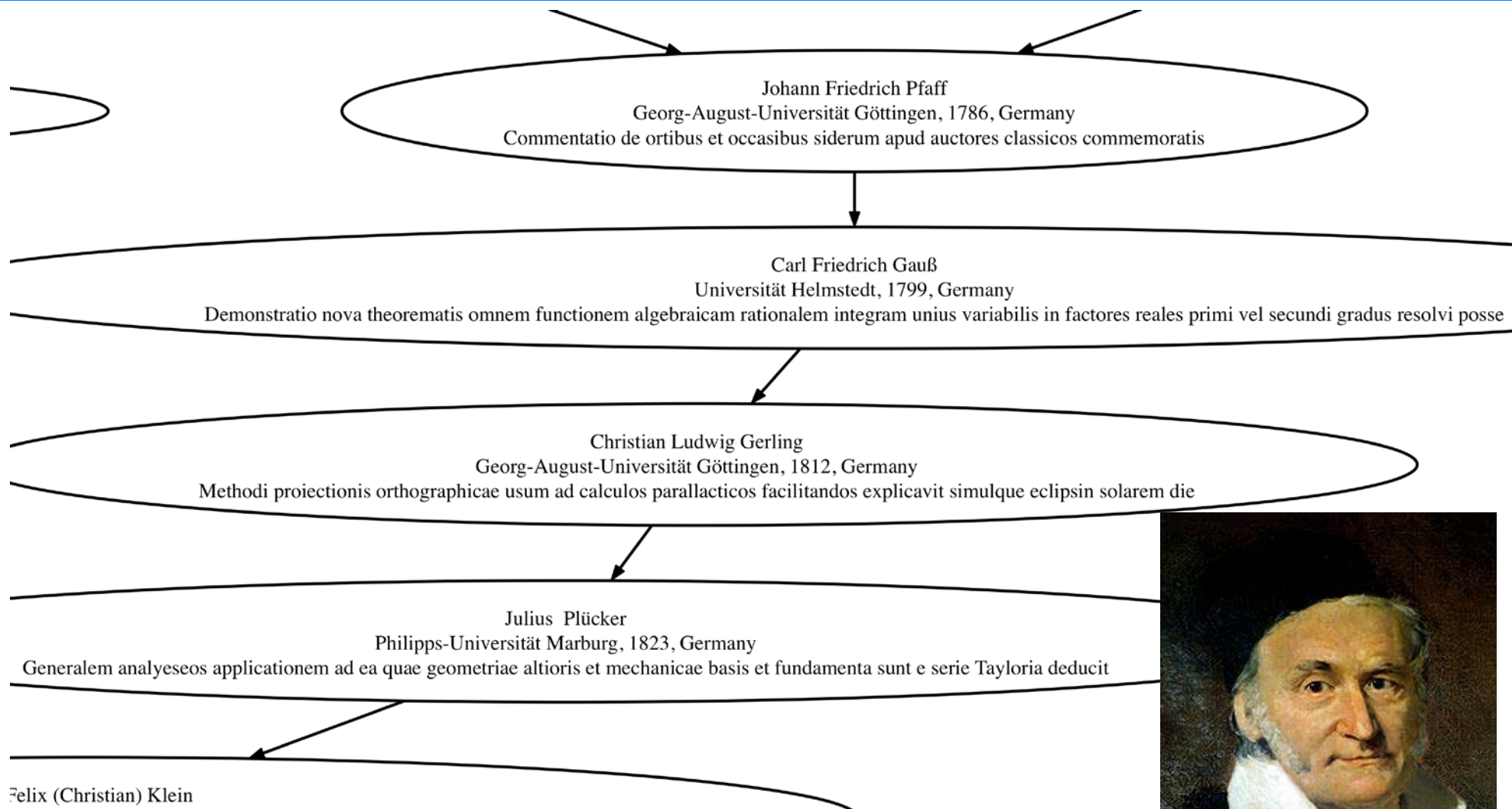
$$\Pr(|X - \mathbf{E}(X)| \geq a \sigma) \leq \frac{1}{a^2}.$$



# The "German" Branch

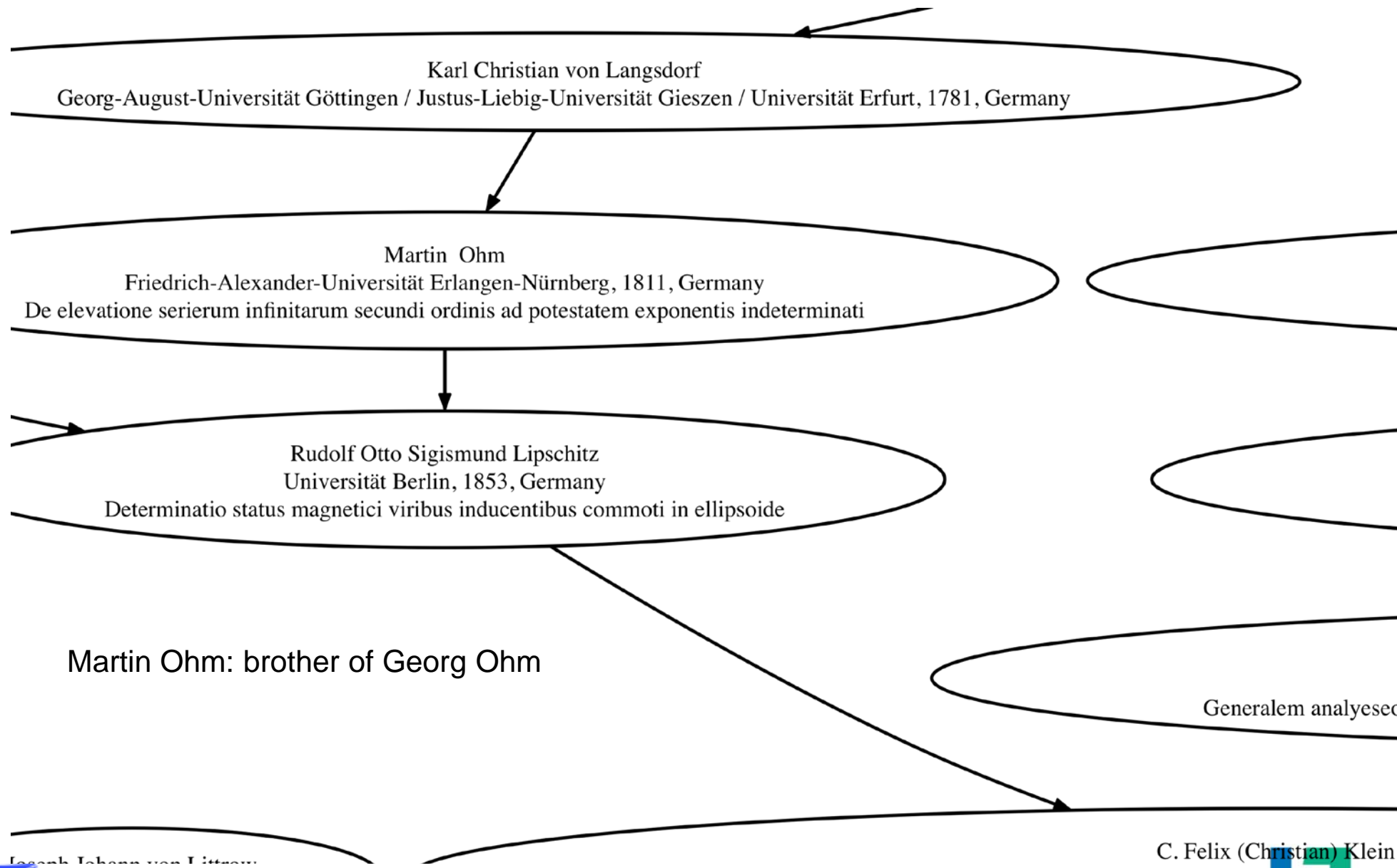


# Klein's Branch 1

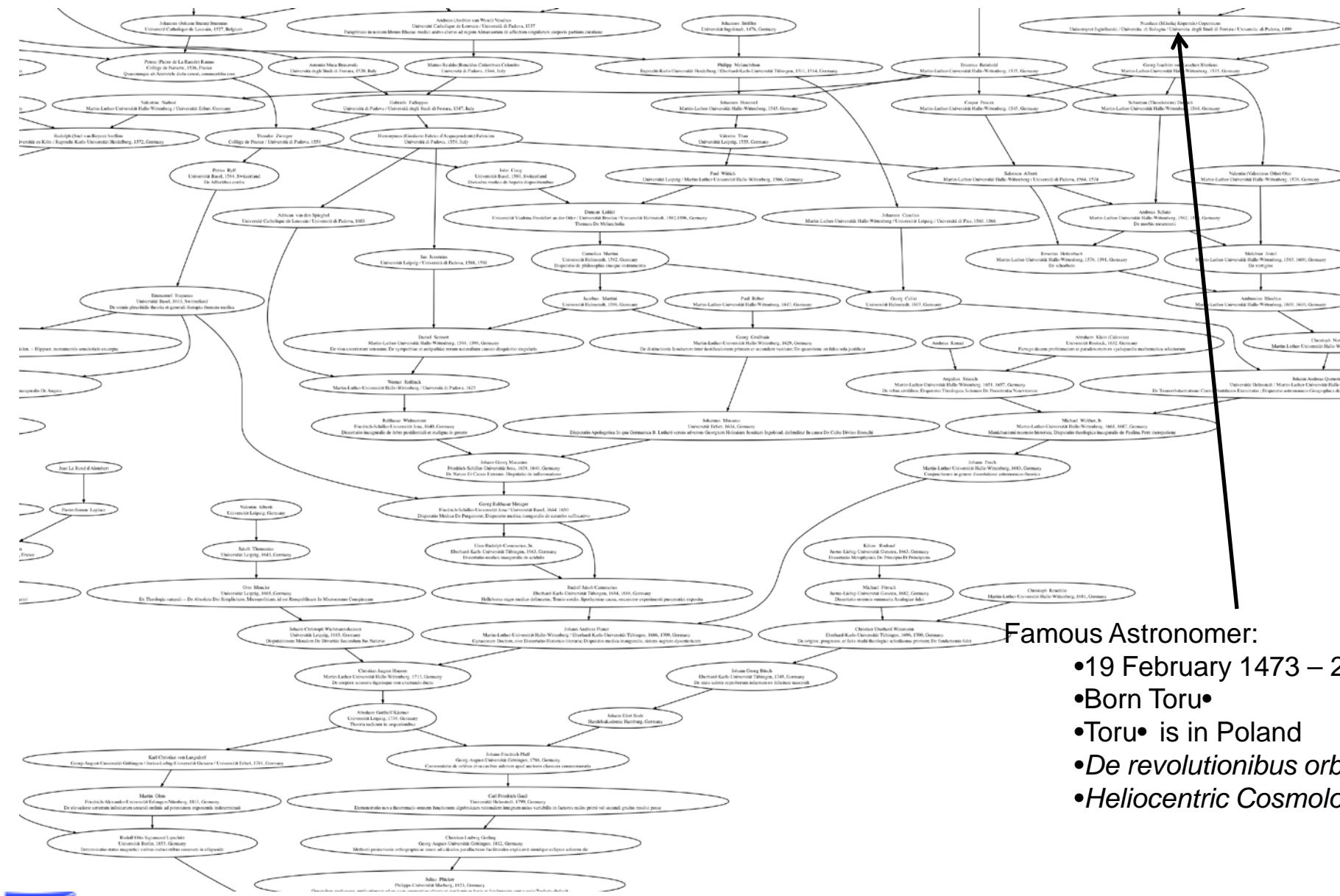


Note that now, dissertations are in Latin

# Klein's Branch 2



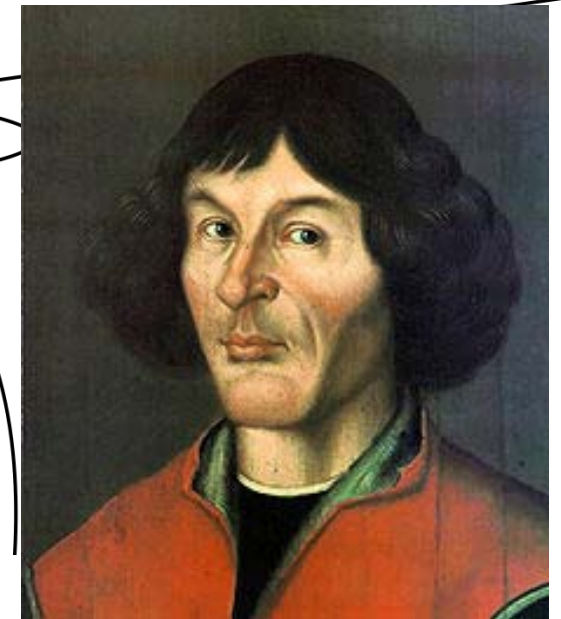
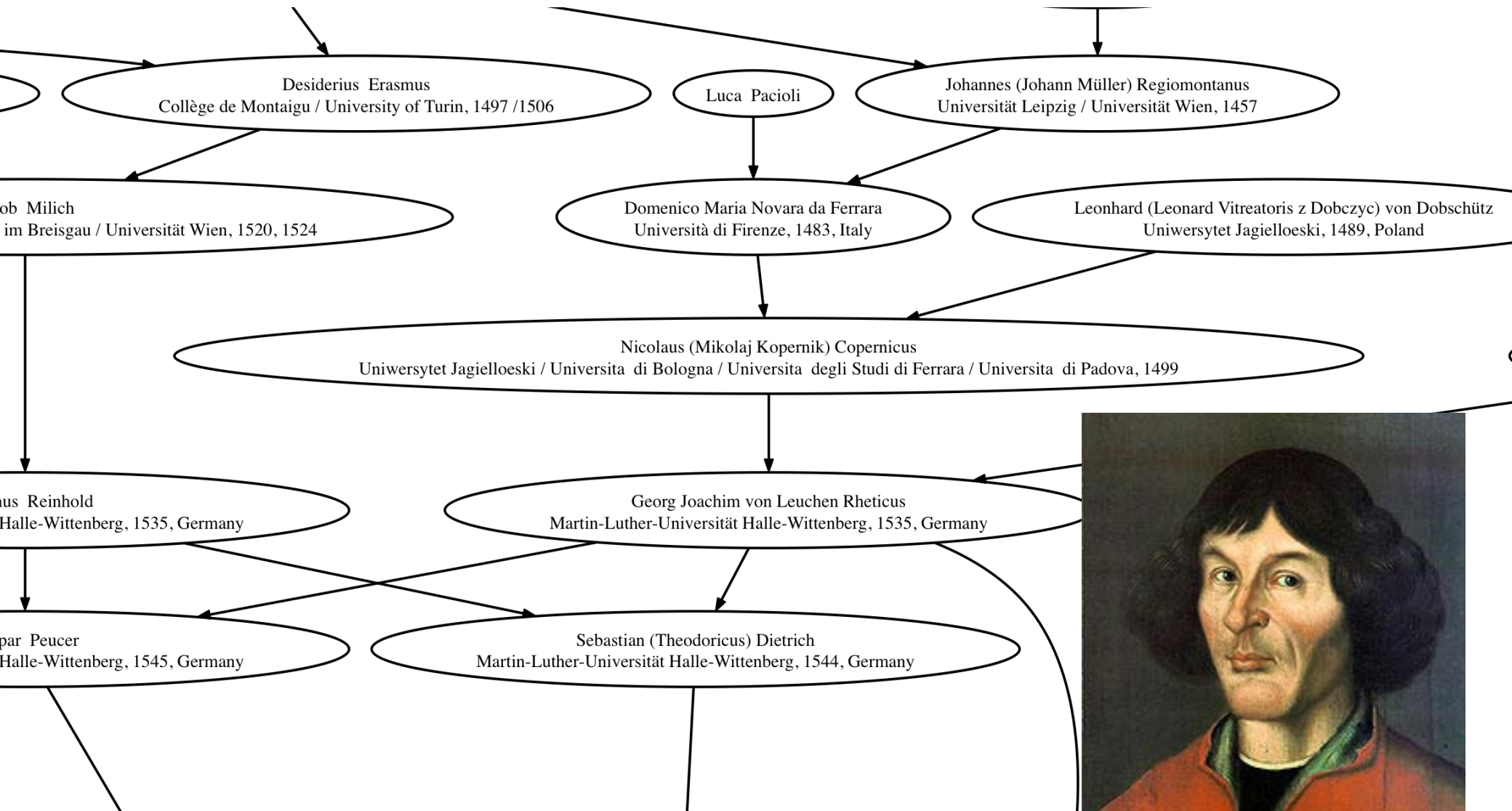
# “The lost Astronomer”



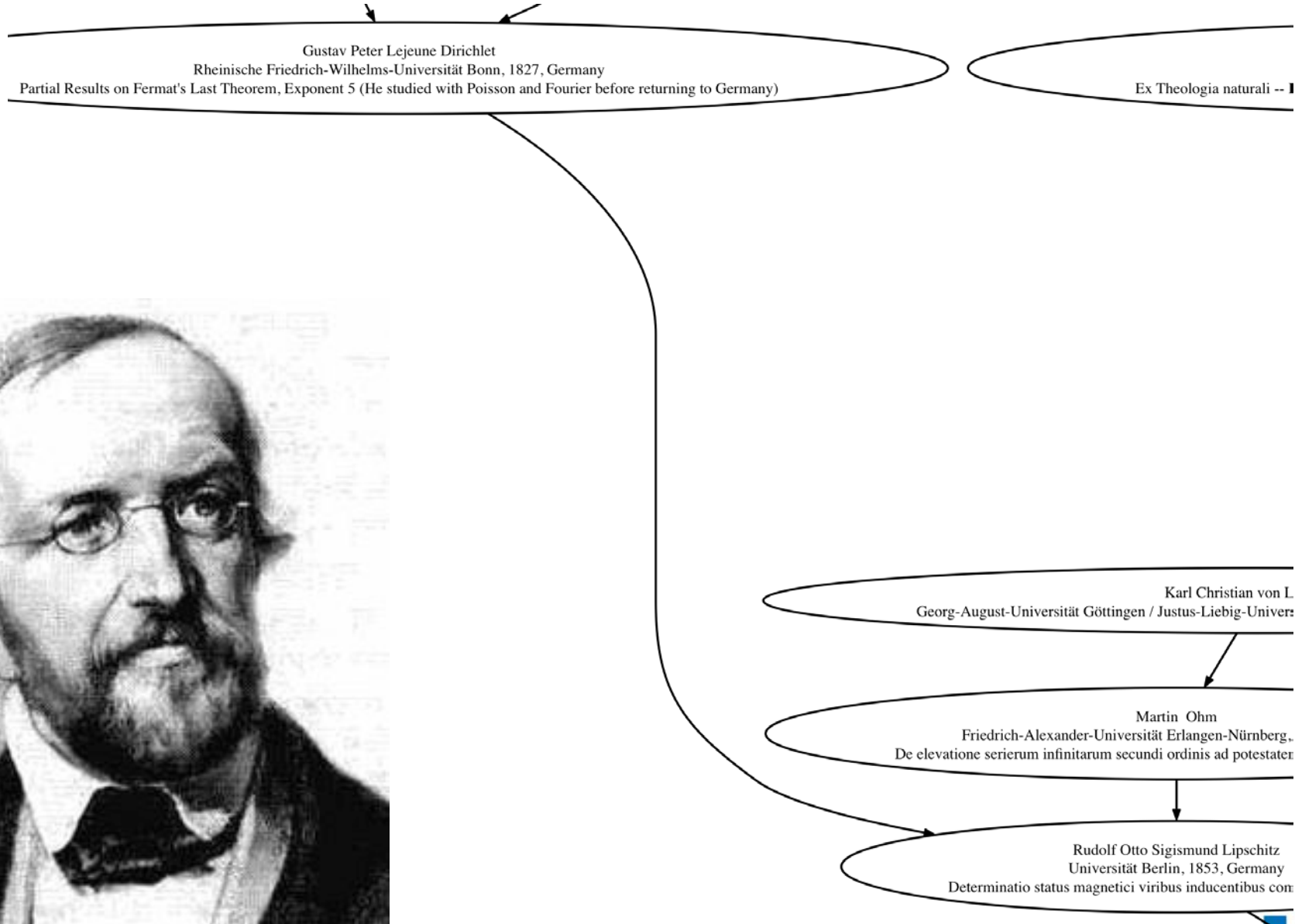
## Famous Astronomer:

- 19 February 1473 – 24 May 1543
- Born Toru•
- Toru• is in Poland
- *De revolutionibus orbium coelestium*
- *Heliocentric Cosmology*

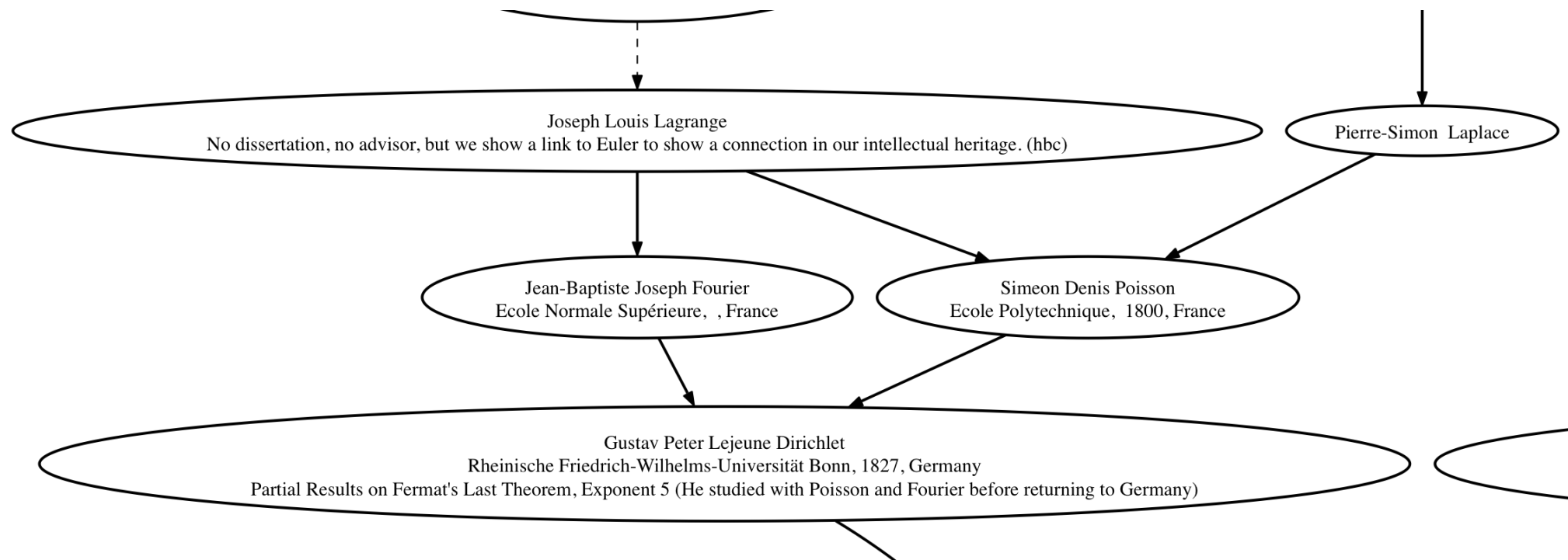
# Nicolaus Copernicus



# Lipschitz's Branch



# The “French” Branch



# Lagrange to Euler special link

Lagrange did not write a thesis dissertation but Euler plays a great role as an unofficial advisor



# Plenty of very well known researchers

- Markov
- Chebyshev
- Hilbert
- Gauss
- Lipschitz
- Copernicus
- Dirichlet
- Fourier, Poisson, Laplace, Lagrange, D'Alembert
- Indirect: Euler, Bernoulli, Leibniz, Huygens

Many of them worked on (linear) algebra...

# What about Italy?

There are many Italian researcher in the graph.

In middle age a (french) lady ask a friend to which university she should send his son to learn mathematic:

She received the following answer:

*“If he wants to learn **addition** he can go to a French university”*

*“but...”*

*“If he wants to learn **multiplication** he should go to an Italian university”*

It is always a pleasure to come to ICL and Knoxville!

If you want to build your own genealogy, you can use the scripts I designed for this presentation:

<http://www.labri.fr/~ejeannot/genealogy>