



# Nicolaus Copernicus in Brazilian Postgraduate Research

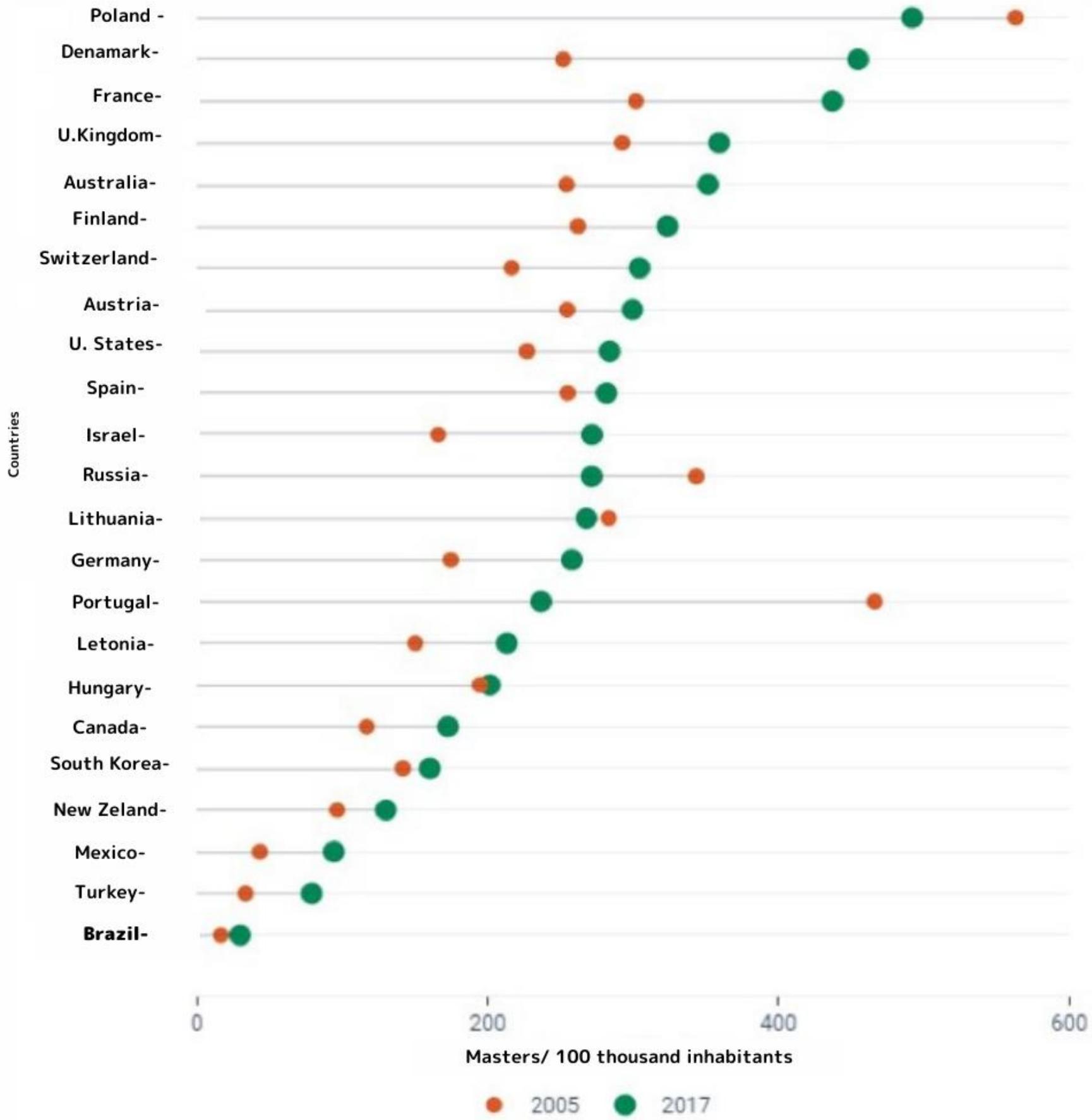
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# POSTGRADUATE STUDIES IN THE WORLD

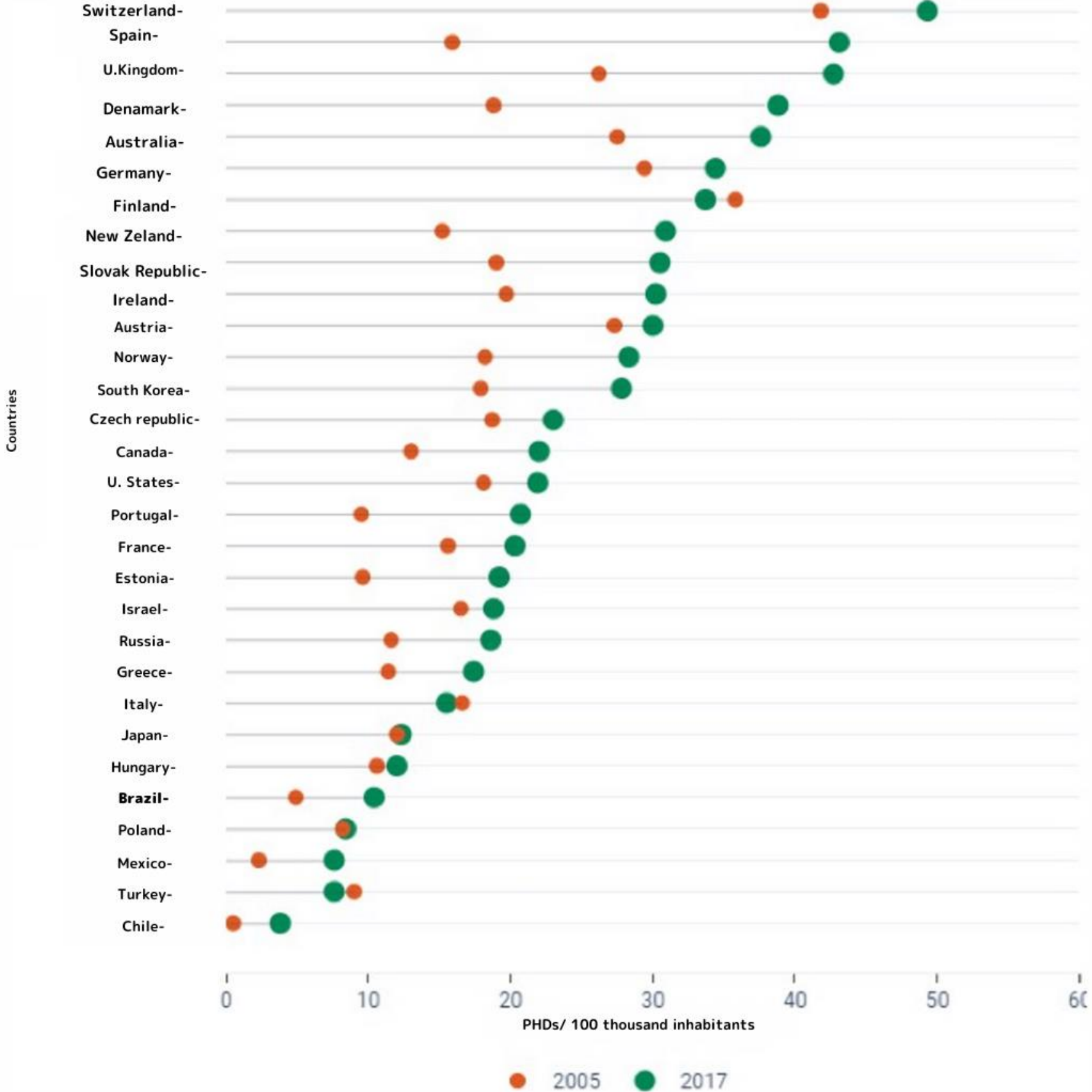
MASTERS PER 100,000 INHABITANTS



Source: CGEE, 2019.

# POSTGRADUATE STUDIES IN THE WORLD

MASTERS PER 100,000 INHABITANTS



Source: CGEE, 2019.

# THE ROLE OF MASTERS AND PHDS IN BRAZIL



In Brazil, masters and PhDs have been given a fundamental role in the educational and innovation systems.

➤ This level of training is given a strategic position;

➤ Masters and PhDs "constitute the portion of human resources trained specifically to carry out research and development" (CGEE, 2010, p. 15).

# POSTGRADUATE STUDIES IN BRAZIL

CURRENT SCENARIO

**4.602**  
PROGRAMMES

**856**

PROFESSIONAL MASTERS

**7.017**  
COURSES

**3.666**

ACADEMIC MASTERS

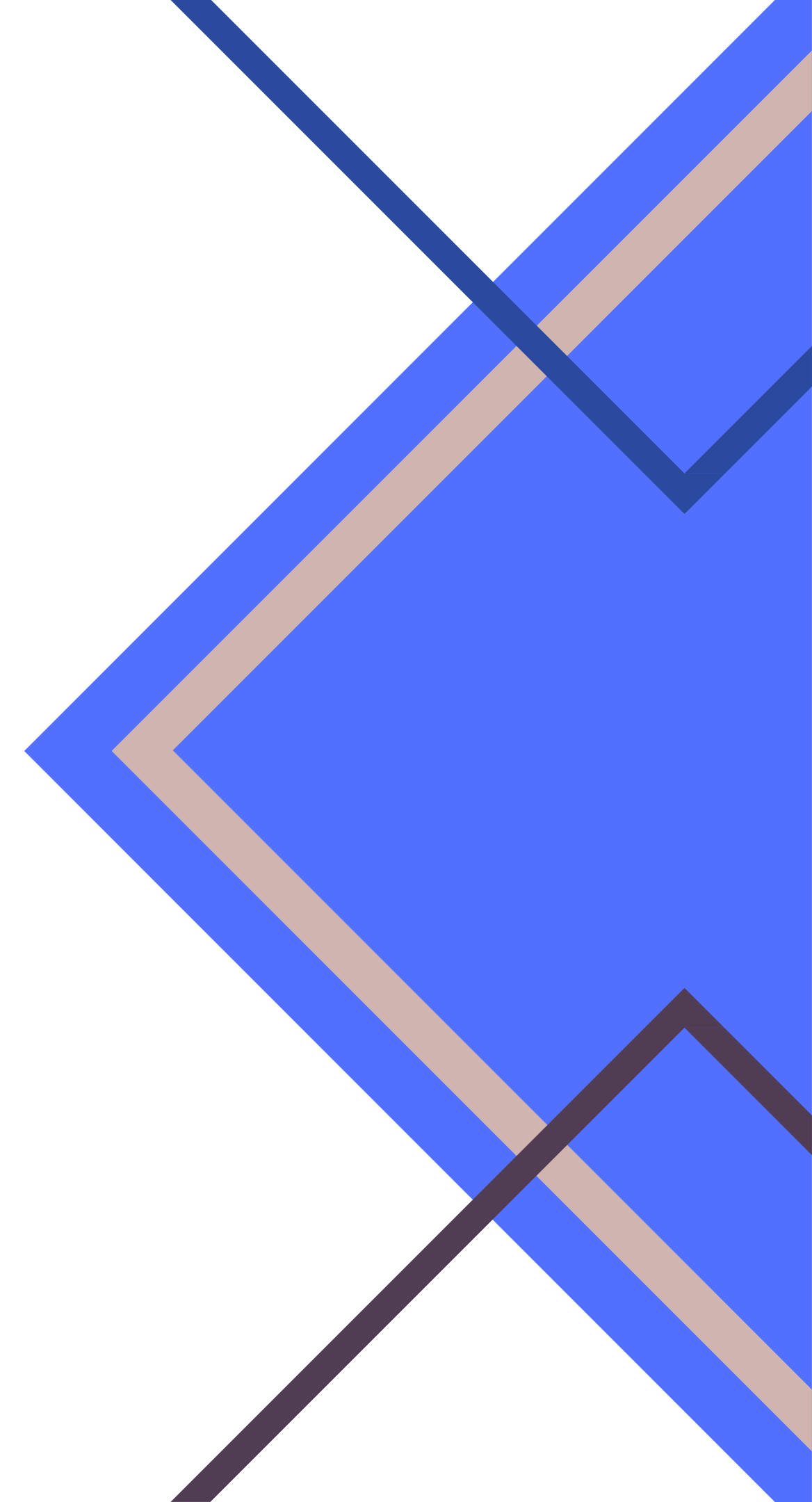
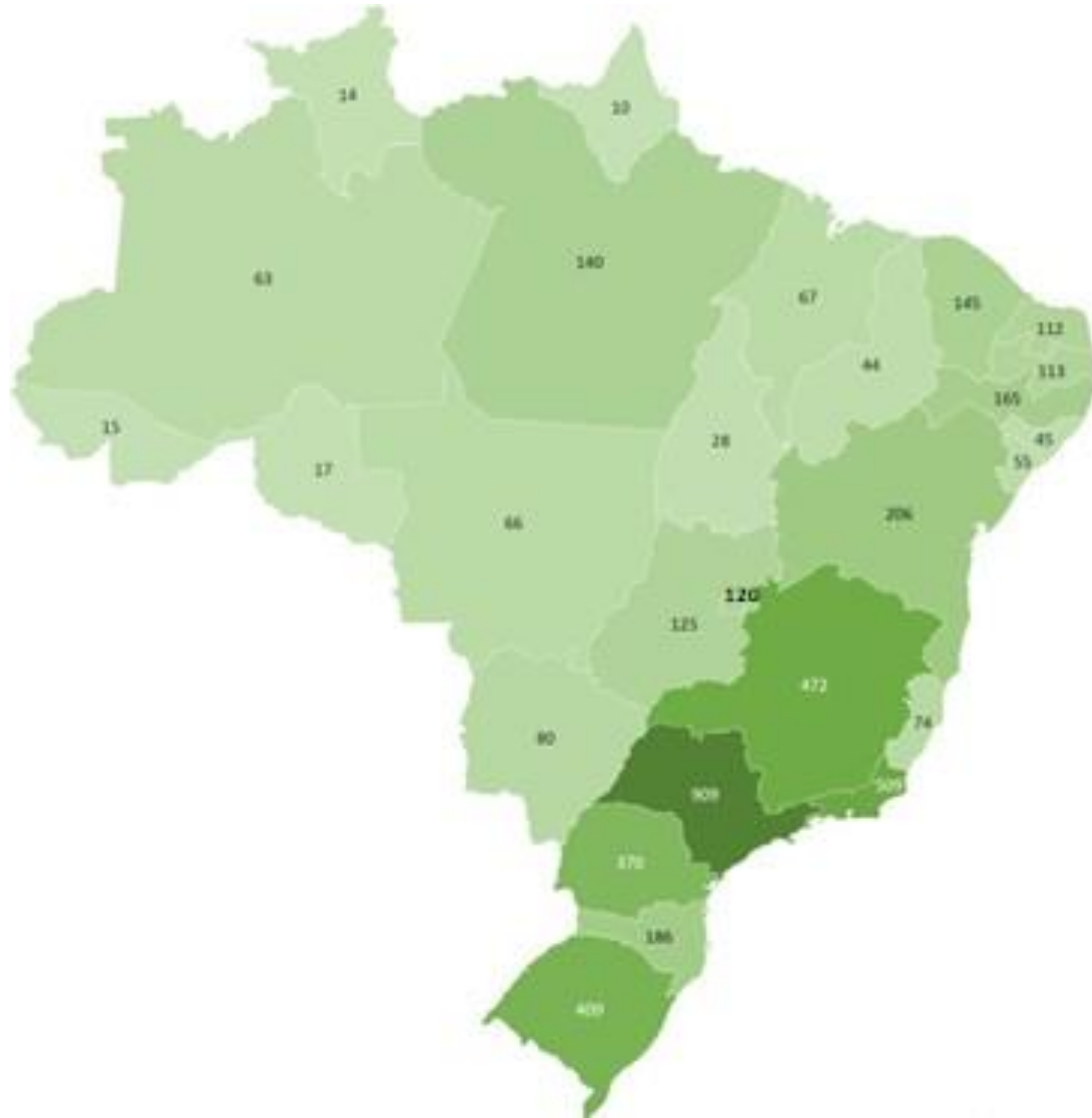
**58**

PROFESSIONAL PHDs

**2.437**

ACADEMIC PHDs

# POSTGRADUATE PROGRAMMES IN BRAZIL



# STUDENTS

(Ref. 2021)

	ENROLLED	QUALIFIED
ACADEMIC MASTER	145.422	45.359
PROFISSIONAL MASTER	46.611	13.943
ACADEMIC PHD	131.832	20.671
PROFISSIONAL PHD	1.324	12



SOURCE: SUCUPIRA  
PLATAFORM



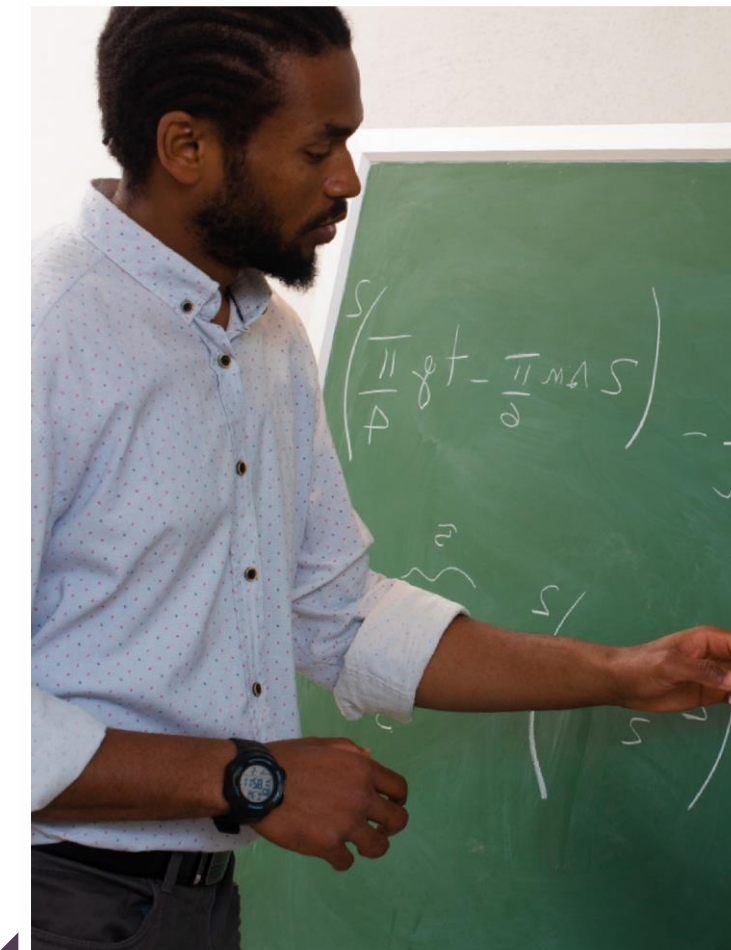
# PROFESSIONAL MASTERS

Professional master's degrees, especially networked professional master's degrees, induced and fostered by the Brazilian federal government for the training of basic education teachers at the postgraduate level, have played a fundamental role in the consolidation of science in the educational environment, through the development of in-depth research and the study of relevant thinkers in the areas of knowledge, such as **Nicolaus Copernicus**.



# PROFESSIONAL MASTER'S PROGRAMME FOR BASIC EDUCATION TEACHERS - PROEB

## ENROLLED 2020 TO 2023



	2020	2021	2022	2023	TOTAL
PROFESSIONAL MASTER IN PHYSICS	1.474	1.077	569	606	3.726
PROFESSIONAL MASTER IN MATHS	1.592	1.546	1.123	1.391	5.652

SOURCE: SUCUPIRA PLATAFORM



# STATE OF KNOWLEDGE

## 1 SEARCH SOURCES

*Brazilian Digital Library of Theses and Dissertations (BDTD), a database of academic productions provided by the Brazilian Institute of Information in Science and Technology (IBICT).*

## 2 SEARCH DESCRIPTOR

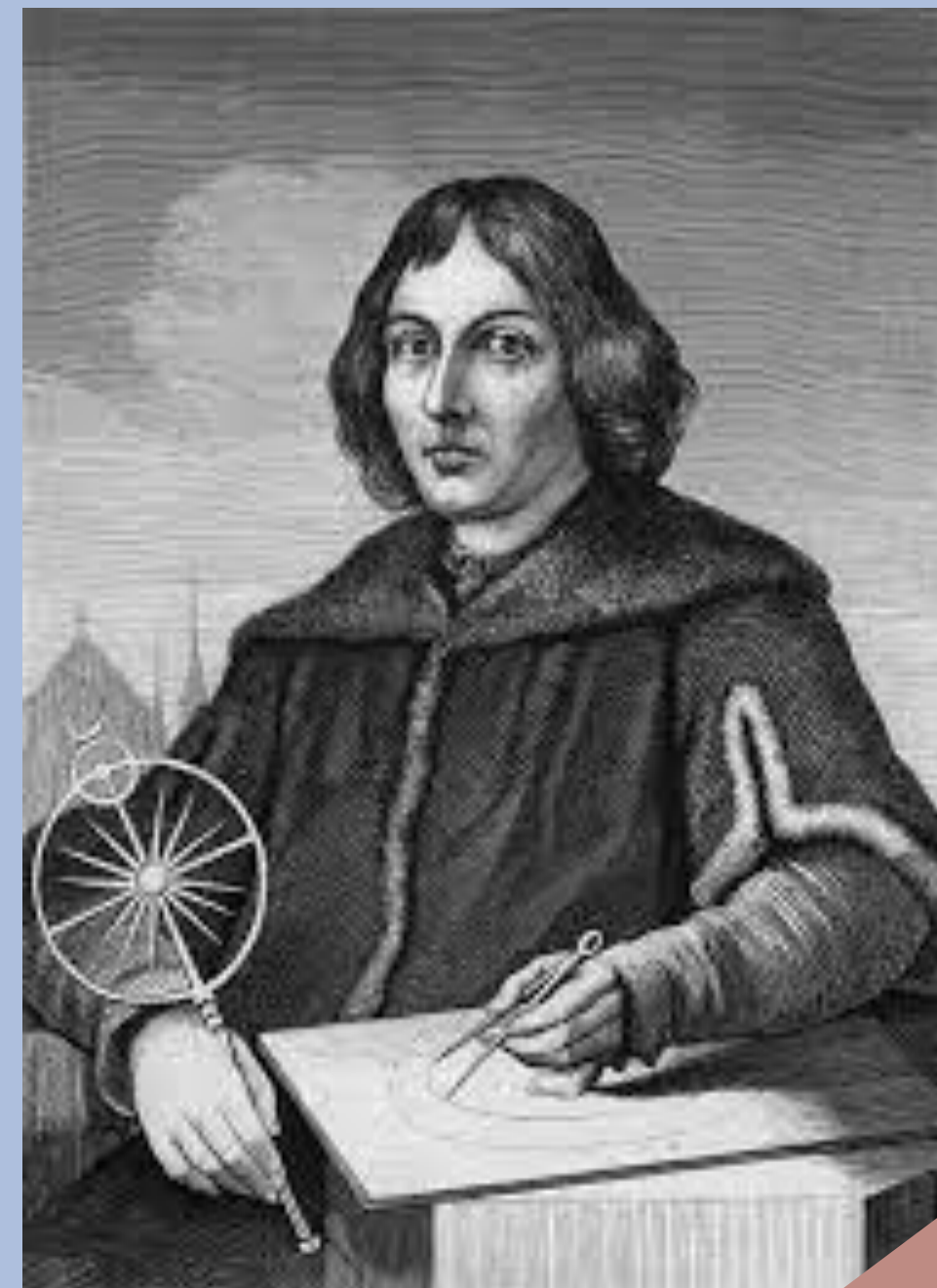
*Nicolaus Copernicus.*

## 3 TIME CONSTRAINTS

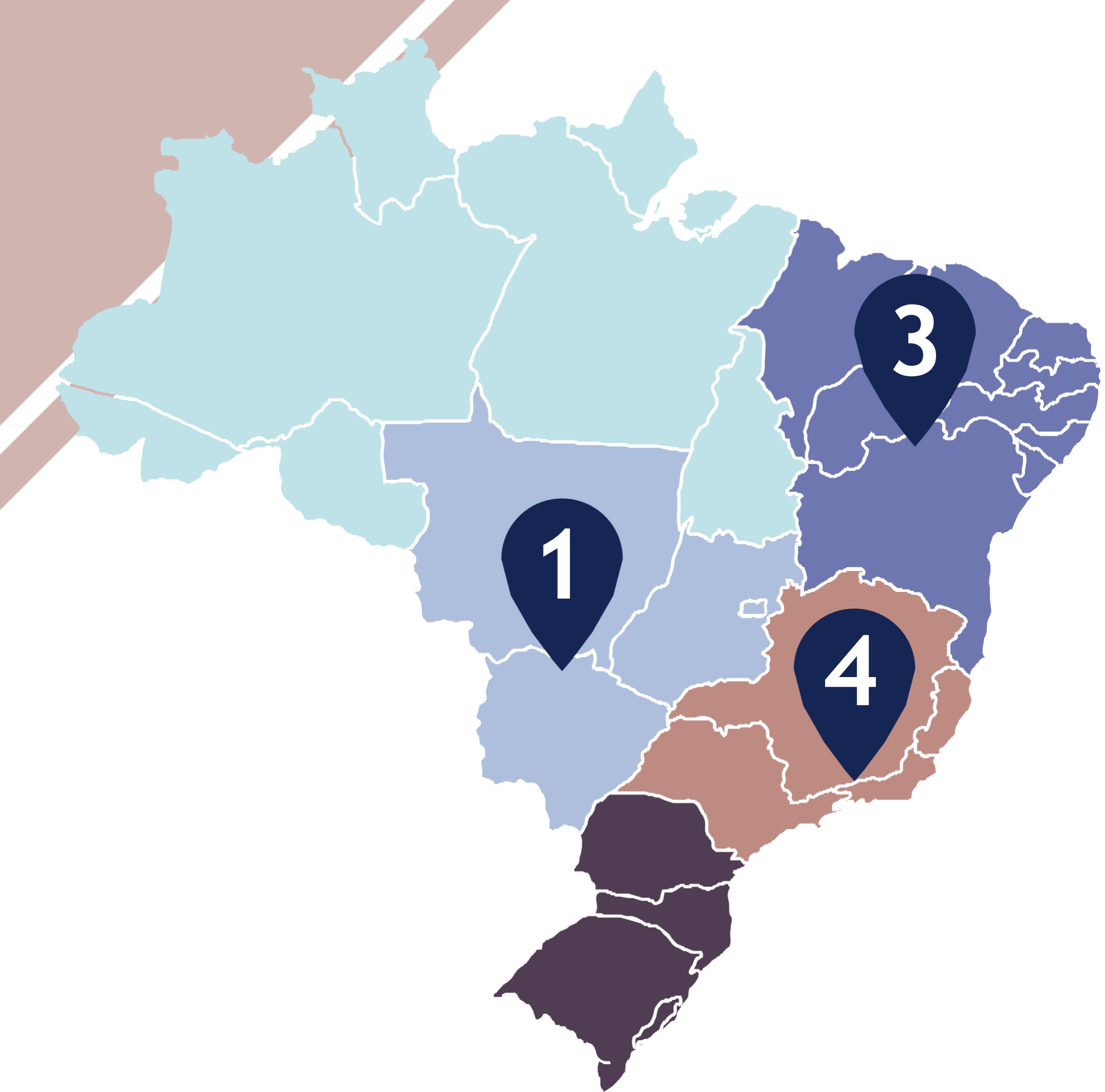
*2000 to 2022, in order to contemplate the country's academic productions in the 21st century.*

## 4 FINDINGS

*8 results were found, of which 5 were dissertations (master's degree) and 3 theses (PhD).*



**STATE OF KNOWLEDGE**  
**THESES AND DISSERTATIONS**



# DISSERTATIONS AND THESES





# AREAS OF EXPERTISE

	QUANTITATIVE
MATHS	2
PHYSICS/ASTRONOMY	4
HISTORY	1
LINGUISTICS	1



## 1 SEARCH SOURCES

*Brasil Scientific Electronic Library Online (SciELO).*

## 2 SEARCH DESCRIPTOR

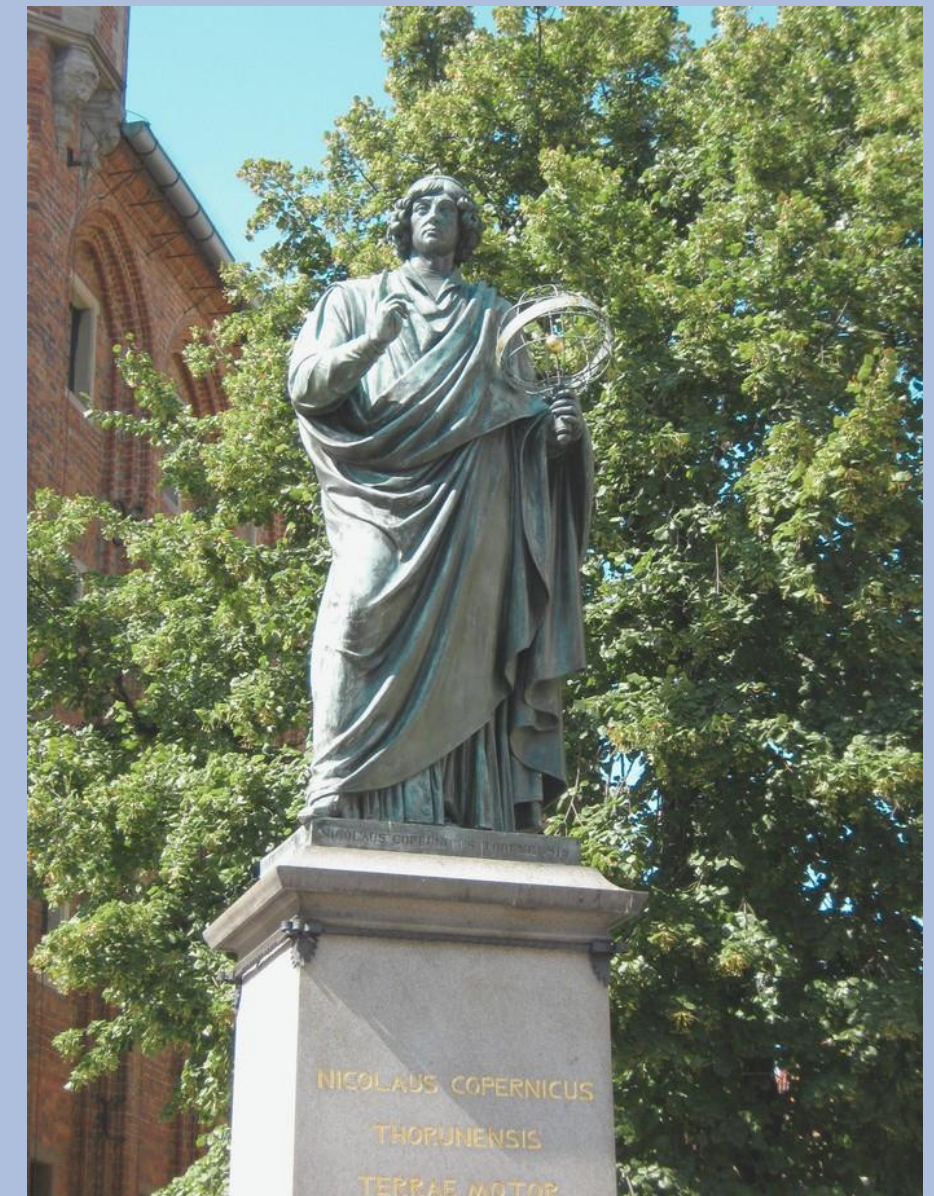
*Nicolaus Copernicus.*

## 3 TIME CONSTRAINTS

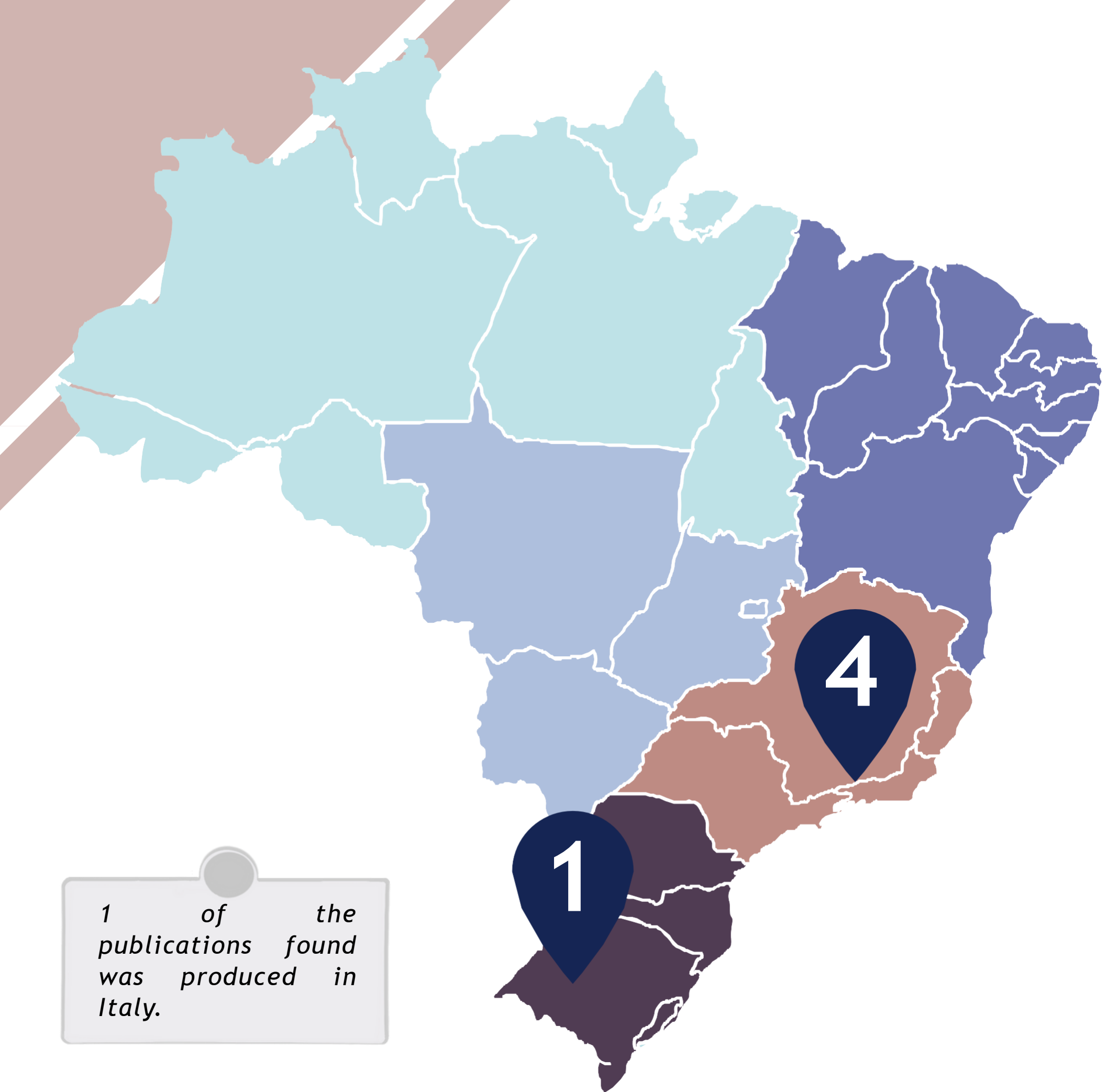
*2000 to 2022, in order to contemplate the country's academic productions in the 21st century.*

## 4 FINDINGS

*6 results were found on SciELO.*



**STATE OF KNOWLEDGE**  
**SCIENTIFIC ARTICLES**



# SCIENTIFIC ARTICLES





# AREAS OF EXPERTISE

	QUANTITATIVE
PHYSICS	4
SOCIOLOGY	1
FILOSOFY	1





# A FEW REFLECTIONS

Of these academic productions, 50% come from professional master's degree programmes, in which

- 2 of the Professional Master's Degree in Physics (Profis),
- 1 of the Professional Master's in Mathematics (ProfMat) e
- 1 of the Professional Master's Degree in Teaching Natural Sciences.

# WHAT DO BRAZILIAN PRODUCTIONS SAY ABOUT NICOLAUS COPERNICUS?

In general terms, the productions emphasize Copernicus' scientific contributions, according to Perez (2015):

*From the moment Galileo pointed his telescope at the sky, a close relationship began between the evolution of astronomical instruments, technology, history and science. His act supported the ideas of Nicolaus Copernicus, who led us out of the dark ages and into the Renaissance, culminating in Newton's theory of Universal Gravitation. (PEREZ, 2015 , p. 6)*



# WHAT DO BRAZILIAN PRODUCTIONS SAY ABOUT NICOLAUS COPERNICUS?

The great discoveries and outstanding scientific contributions in the history of humanity are raised by Neto (2016):

*Copernicus literally destroyed the Aristotelian universe when he placed the Sun as the centre of the Universe, the Earth revolving around its axis, the Moon revolving around the Earth and all the planets in circular orbits around the Sun. For him, the fact that Ptolemy's model hurt Plato's idea of uniform velocity showed that this model was not suitable for describing the movements of celestial bodies. For Copernicus, the planets described circular orbits with constant orbital velocities. He went further and proposed how the planets would be distributed around the Sun. (NETO , 2016 , p. 24 )*

# WHAT DO BRAZILIAN PRODUCTIONS SAY ABOUT NICOLAUS COPERNICUS?

The relevance of Copernicus for teacher training is also emphasised, as in Mendes (2010):

*In our desire to train maths teachers with a broader vision of knowledge about the world, not just maths, we realise that the work of Nicolaus Copernicus is an important source of culture and can provide maths teachers with more than just mathematical knowledge, particularly about trigonometry.. (MENDES, 2010, p. 15)*

“KNOWING THAT WE KNOW WHAT WE KNOW, AND KNOWING THAT WE DON'T KNOW WHAT WE DON'T KNOW, THIS IS TRUE WISDOM.”

*Nicolaus Copernicus*



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**THANK YOU!**

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