



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Abdelmoubine Amar Henni, IMECC**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Abramo Hefez, Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Ageu Barbosa Freire, Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font. The background of the banner is a green field with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Alessio Corti, Imperial College London**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Alex Massarenti**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Amílcar Pacheco***, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Andrew Dudzik, University of California at Berkeley**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized green font with a 3D effect, and the word "years" in a smaller green font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Aron Simis**, **Universidade Federal de Pernambuco**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Atoshi Chowdhury, University of California at Berkeley**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

A logo for a 20th anniversary, featuring the number "20" in a stylized green font with a 3D effect, and the word "years" in a smaller green font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Beatriz Casulari da Motta Ribeiro**, Universidade Federal de Juiz de Fora, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Caio Licínio Vasconcelos Pantarotto**, **Universidade de Brasilia**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, lowercase, sans-serif font. The background of the banner is a green field with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Carolina Bhering de Araujo**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Cecilia Salgado, Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Cesar Augusto Hilario Poma**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Claudio Plinio Campana Chacca**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Cristhian Garay**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, blocky font with a green-to-white gradient, and the word "years" in a smaller, white, sans-serif font below it.

20  
years

# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Dan Anibal Agüero Cerna***, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Daniel Aguilar Alvarez***, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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20  
years

# CERTIFICATE



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Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Daniel Carlos Leite, Universidade Federal do Mato Grosso**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Daniel Santana Rocha***, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Douglas Ulmer, Georgia Institute of Technology**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Edison Marcavillaca Niño de Guzman***, Instituto de Ciências Matemáticas e de Computação, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Eduardo de Sequeira Esteves**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Eduardo dos Santos Silva**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Enzo Alessandro Aljovin Navarro**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Esteban José Arreaga Ambéliz**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Ethan Cotterill**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Fabien Pazuki, Copenhagen University**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Fernando Cukierman, Universidad de Buenos Aires**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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20  
years

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Frederico Sercio Feitosa, Universidade Federal de Juiz de Fora**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Gilson Granja Ferreira Filho***, **Universidade Federal de Minas Gerais**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Guilbert de Arruda Souza, Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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20  
years

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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Israel Manuel Diaz Acha***, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee

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# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Jhon Ever Quispe Vargas**, **Universidade Federal de Minas Gerais**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **João Paulo Lindquist Figueredo**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

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Carolina B. Araujo  
Organizing Committee

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20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Jose Eduardo Moura Garcez**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

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Carolina B. Araujo  
Organizing Committee



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# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **José Naéliton Marques da Silva**, Universidade Federal da Paraíba - João Pessoa, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font. The background of the entire banner is a photograph of a green lawn with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Josnei Antonio Novacoski**, **Inst. de Ciências Matemáticas e de Computação**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Juliana Coelho Chaves, Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font. The background of the banner is a green field with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Julio Pedro Ripoll Filho**, Pontifícia Universidade Católica do Rio Grande do Sul, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Junio Cesar Ferreira, Universidade de Franca-SP**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a simple, lowercase font.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Kelyane Barboza de Abreu***, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, lowercase font.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Letterio Gatto, Politecnico di Torino**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Lucas von Haehling Braune**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a green, blocky font above the word "years" in a smaller green font. The background is a photograph of a green lawn with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Luciana Menezes Vasconcelos**, **Universidade Federal de Sergipe**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font. The background of the banner is a photograph of a green lawn with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Luciane Quoos Conte, Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Luiz Ricardo Bertoldi de Oliveira**, **Universidade Vale do Rio dos Sinos**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black, sans-serif font.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Maral Mostafazadehfard**, **IMPA - Pós-Doutorando**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a simple, lowercase font.

# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Marcelo Escudeiro Hernandes**, **Universidade Estadual de Maringá**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Marcos Francino Sena**, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **María de los Angeles Chara**, Instituto de Matemática Aplicada del Litoral, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized green font with a 3D effect, and the word "years" in a smaller green font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Maria Pe Pereira, Universidad Complutense de Madrid**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a simple, lowercase font.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Oliver Lorscheid**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Parham Salehyan, Universidade Estadual Paulista - São José do Rio Preto**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Paulo Bessa do Rego Monteiro***, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font. The background of the entire banner is a photograph of a green lawn with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Pedro Barbisan Widniczck**, **Universidade Federal do Rio Grande do Sul**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font.

20  
years

# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Pedro Hernandez Rizzo**, **Universidad de Antioquia**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Pedro Vytor Alves do Carmo Pereira**, **Centro Universitário de Patos de Minas**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font. The background of the entire banner is a photograph of a green lawn with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Rafael Barbosa da Silva, Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a large, stylized, green font with a 3D effect, and the word "years" in a smaller, white font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Reillon Oriel Carvalho Santos**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Renan da Silva Santos**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font. The background of the banner is a green field with a dirt path.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, ***Rick Antonio Rischter***, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, blocky font with a green-to-white gradient, and the word "years" in a smaller, white sans-serif font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Roberto Carlos Alvarenga da Silva Júnior**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Rodrigo José Gondim Neves**, **Universidade Federal Rural de Pernambuco**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Rodrigo Salomão**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a simple, lowercase font.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Sajad Salami**, **Universidade do Estado do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D font above the word "years" in a simple, lowercase font.

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Sally Andria Vieira da Silva**, **Universidade Federal Fluminense**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Severino Collier Coutinho**, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Seyed Hamid Hassanzadeh Hafshejani**, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a large, green, 3D-style font with a grid pattern, and the word "years" in a smaller, green, sans-serif font below it.

20  
years

# CERTIFICATE



# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Thomas Érico Jacobus**, **Universidade Federal do Rio Grande do Sul**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, green, 3D block font above the word "years" in a smaller, green, sans-serif font. The background is a photograph of a dirt path winding through a green field.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Valdir José Pereira Júnior**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, white font.

# CERTIFICATE



# 14th ALGA Meeting

## Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Vinicius Bouça Marques da Costa**, **Universidade Federal do Rio de Janeiro**, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink that reads "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee



# CERTIFICATE





# 14th ALGA Meeting

Commutative Algebra and Algebraic Geometry

IMPA, Rio de Janeiro - February 6-10, 2017

We hereby certify that, **Wállice Mangueira de Sousa**, Instituto Nacional de Matemática Pura e Aplicada, participated in the 14<sup>th</sup> ALGA - Álgebra Comutativa e Geometria Algébrica, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, from February 6<sup>th</sup> to 10<sup>th</sup>, 2017.

Rio de Janeiro, February 10<sup>th</sup>, 2017

A handwritten signature in blue ink, reading "Carolina B. Araujo".

Carolina B. Araujo  
Organizing Committee

A logo celebrating 20 years, featuring the number "20" in a stylized, 3D green font above the word "years" in a smaller, black font. The background is a green field with a dirt path.

# CERTIFICATE