

impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Alan Reid, The University of Texas at Austin**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: **“Determining hyperbolic 3-manifolds by geometric spectra”**.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Andre Neves, Imperial College London**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Min-max theory and applications II**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **David Gabai, Princeton University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**On the Classification of Heegaard Splittings**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, ***Fernando Codá dos Santos Cavalcanti Marques***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Min-max theory and applications I**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

An Activity of



IMPA-Brown Activity supported by _____



certificate

impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Frank Pacard, École Polytechnique**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**The role of Green’s function in doubling constructions for minimal and constant mean curvature surfaces**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Hugo Parlier, University of Fribourg**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work:
“Combinatorial moduli spaces”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Ivaldo Paz Nunes, Universidade Federal do Maranhão**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Rigidity of area-minimizing hyperbolic surfaces in three-manifolds**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Jeffrey F. Brock, Brown University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work:
“Bounded geometry and uniform models for hyperbolic 3-manifolds”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Joachim Hyam Rubinstein, University of Melbourne**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Shortest geodesics and minimal surfaces**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Joel Hass, University of California at Davis**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Minimal surfaces in 3-manifolds that fiber over S^1** ”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, ***José María Espinar García***, Instituto Nacional de Matemática Pura e Aplicada, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Escobar type Theorem for fully nonlinear Yamabe problem with boundary.**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Laurent Hauswirth, Université de Marne-la-Vallée**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: **“Spectral curves, harmonic maps and minimal surfaces”**.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Laurent Mazet, CNRS**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Minimal surfaces in finite volume hyperbolic 3-manifolds**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Marc Lackenby, Oxford University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Cusp volumes of hyperbolic alternating knots**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Michael Anderson, Stony Brook University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: **“Handlebodies with constant curvature metrics and minimal surface boundary”**.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Moon Duchin, Tufts University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work:
“Hyperbolicity from a statistical viewpoint”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Regina Rotman, University of Toronto**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work:
“Quantitative homotopy theory and the lengths of geodesics on Riemannian manifolds”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Stéphane Sabourau**, **Université Paris-Est Créteil**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Sweepout estimates on Riemannian manifolds**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Stephen Kleene, Brown University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Non-compactness of Moduli spaces of finite topology embedded minimal surfaces**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Steven Kerckhoff, Stanford University**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work:
“Boundary value problems and deformations of hyperbolic 3-manifolds”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by _____



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **William Meeks III, Univ. of Massachusetts at Amherst**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Minimal and CMC surfaces in homogeneous 3-manifolds**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by



impa



Hyperbolic Geometry and Minimal Surfaces

IMPA, Rio de Janeiro, Brazil
January 4th to 10th, 2015



We hereby certify that, **Zheng Huang, City University of New York**, participated in the Hyperbolic Geometry and Minimal Surfaces, held at Instituto Nacional de Matemática Pura e Aplicada – IMPA, Rio de Janeiro, from January 04 to 10, 2015 and presented the following work: “**Closed minimal surfaces in hyperbolic three-manifolds**”.

Rio de Janeiro, January 10, 2015.

Mikhail Belolipetskiy
Organizing Committee

certificate

An Activity of



IMPA-Brown Activity supported by

