

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Albert Fathi - École Normale Supérieure de Lyon** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Smoothing Lyapunov functions**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Alexander Friedrich Ritter - Trinity College** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Floer theory for negative line bundles via Gromov-Witten invariants**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Alfonso Sorrentino - University of Cambridge** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Symplectic properties of the minimal average action**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Frédéric Bourgeois - Université Libre de Bruxelles** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Contact homology and  $S^1$ -equivariant symplectic homology**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Mark McLean - Massachusetts Institute of Technology** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Contact manifolds with infinitely many Reeb orbits**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Miguel Tribolet de Abreu - Instituto Superior Técnico-Universidade Técnica de Lisboa** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Remarks on Lagrangian intersections in toric manifolds**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Otto van Koert - Seoul National University** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Applications of the mean Euler characteristic**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Pedro Antonio Santoro Salomão - Instituto de Matemática e Estatística** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Geodesic flows on the 2-sphere of Finsler metrics with positive flag curvature**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil



impa



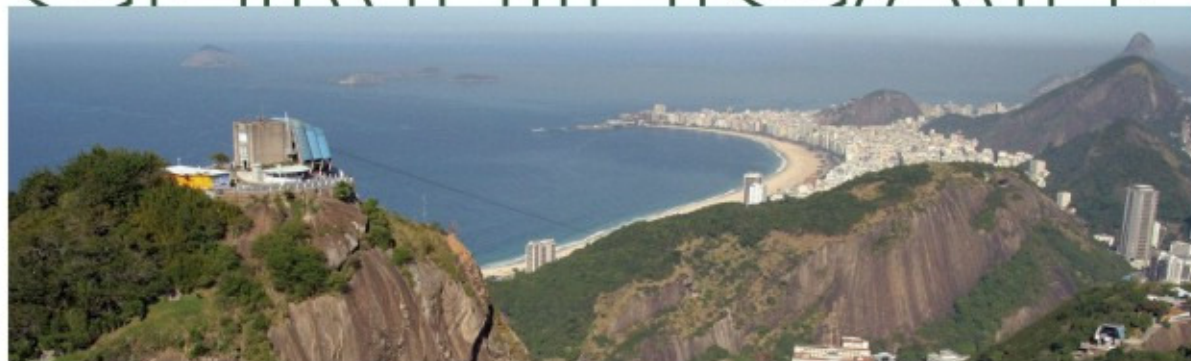
# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Sheila Sandon - Univ. de Nantes** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**On existence of translated points for contactomorphisms**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Tudor Ratiu - Ecole Polytechnique Fédérale de Lausanne** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**igher order Lagrangian and Hamiltonian systems**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



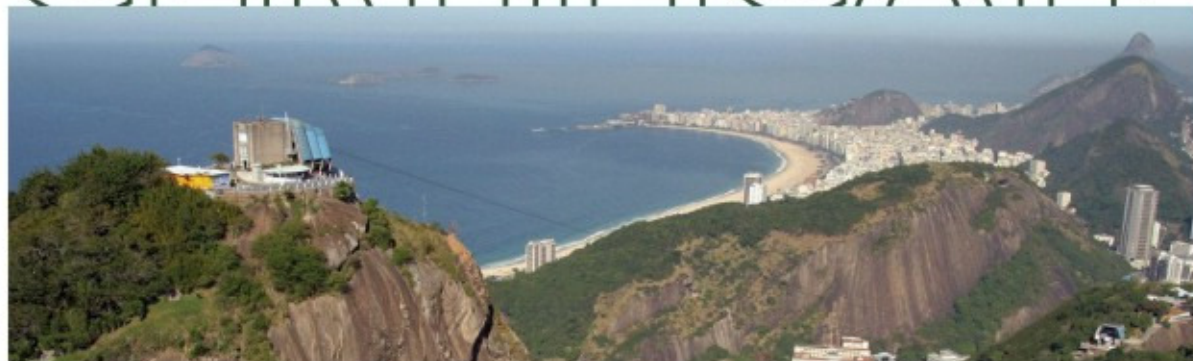
# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Umberto Leone Hryniewicz - Universidade Federal do Rio de Janeiro** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Local contact homology and applications**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Urs Frauenfelder - Seoul National University** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Contacting the moon**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Victor Ginzburg - University of California, Santa Cruz** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**Conley conjecture and beyond: infinitely many periodic points of Hamiltonian dynamical systems**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Will Merry - University of Cambridge** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: “**On the growth rate of leaf-wise intersections**”.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil

impa



# Workshop on Conservative Dynamics and Symplectic Geometry

We hereby certify that, **Yael Karshon - University of Toronto** participated in the Workshop on Conservative Dynamics and Symplectic Geometry, held at IMPA – Rio de Janeiro, from 31 July to August 05, 2011 and presented the following work: **“Symplectic blowups of the complex projective plane, and counting torus actions”**.

Rio de Janeiro, August 05, 2011.

Leonardo Macarini  
Organizing Committee

# CERTIFICATE



*Support*

CNPq

CAPES

FAPERJ

August 01<sup>st</sup> to 05<sup>th</sup>, 2011  
IMPA, Rio de Janeiro, Brazil