




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Alberto Abbondandolo participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Systolic inequalities and Reeb dynamics*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Alexander Arbieto participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Aplicações Induzidas*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Ali Messaoudi participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Dynamics of linear operators*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Artem Raibekas participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Tangências e Sistemas Iterados*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

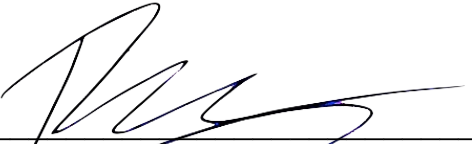


de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Carlos Gustavo T. de A. Moreira participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Geometria fractal e bifurcações homoclínicas*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Claudio Buzzi participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Generic Bifurcations in Refractive Systems*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
DINÂMICOS**  
VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

**CERTIFICATE**

We hereby certify that Daniel Smania participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Generalized Weierstrass functions, linear response problem and central limit theorem*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

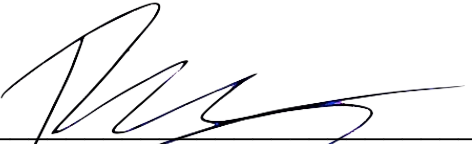


de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Dmitry Turaev participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Dynamics near Bonatti-Diaz cycles*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)



IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
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VALINHOS, SP

de 03 a 07  
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de 2016

**CERTIFICATE**

We hereby certify that Douglas Novaes participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Chaos induced by sliding phenomena in Filippov systems*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Elismar Oliveira participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Fuzzy attractors of Iterated Function Systems*”.

Campinas/SP/Brazil, October 07, 2016.



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(on the behalf of the organizing committee of IV EBSD)

IV

ESCOLA BRASILEIRA DE  
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VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

**CERTIFICATE**

We hereby certify that Joachim Weber participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Conley pairs and geometry - some examples*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
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VALINHOS, SP

de 03 a 07  
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de 2016

**CERTIFICATE**

We hereby certify that Leandro Cioletti participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Connections between Mathematical Statistical Mechanics and Symbolic Dynamics*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

# IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
DINÂMICOS**  
VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

## CERTIFICATE

We hereby certify that Leonardo Macarini participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Reeb flows with positive topological entropy and connected sums*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
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VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

**CERTIFICATE**

We hereby certify that Lorenzo Díaz participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Transitive nonhyperbolic step skew-products: Ergodic approximation and entropy spectrum of Lyapunov exponents.*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

# IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
DINÂMICOS**  
VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

## CERTIFICATE

We hereby certify that Luiz A. B. San Martin participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Moment Lyapunov Exponents for i.i.d. Random Products and Semigroups*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Manuel Stadlbauer participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*On the Lyapunov spectrum of relative transfer operators*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
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de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Marcel Guardia participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Growth of Sobolev norms in the nonlinear Schrödinger equation*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Michael Hutchings participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Mean action and the Calabi invariant*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

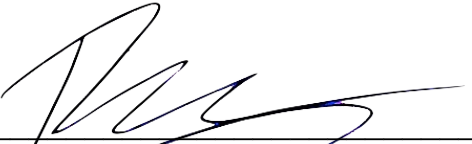


de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Otto Van Koert participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Contact geometry of the unbounded component in RTBP*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Patrícia Cirilo participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Ergodicity for higher dimensional cylindrical cascade*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
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IV

ESCOLA BRASILEIRA DE  
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VALINHOS, SP

de 03 a 07  
de outubro  
de 2016

**CERTIFICATE**

We hereby certify that Paul Schweitzer participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*The existence and structure of generalized Reeb components in codimension one foliations - a generalization of Novikov’s Theorem*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Paulo Varandas participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*On the ergodic theory of free semigroup actions*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

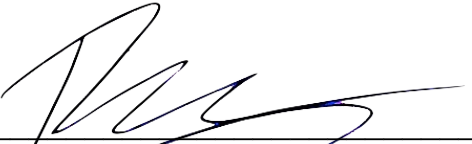


de 03 a 07  
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### CERTIFICATE

We hereby certify that Rafael Potrie participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Partial hyperbolicity and foliations in 3-manifolds*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

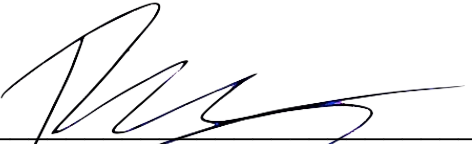


de 03 a 07  
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### CERTIFICATE

We hereby certify that Sergio Fenley participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Free Seifert fibered pieces of pseudo-Anosov flows*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)






de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Tere Seara participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Regularizations in non-smooth systems*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Thiago Catalan participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*A link between Topological Entropy and Lyapunov Exponents*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Thierry Barbot participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Anosov Representations and Lorentzian Geometry*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
de outubro  
de 2016

### CERTIFICATE

We hereby certify that Urs Frauenfelder participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Periodic orbits in the restricted three body problem and Arnold’s  $J_+$  invariant.*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)




de 03 a 07  
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### CERTIFICATE

We hereby certify that Vilton Pinheiro participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Topological ergodicity and pointwise entropy*”.

Campinas/SP/Brazil, October 07, 2016.



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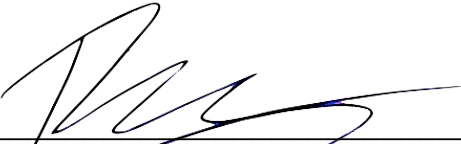


de 03 a 07  
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de 2016

### CERTIFICATE

We hereby certify that Vinicius Gripp Barros Ramos participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Symplectic embeddings, toric domains and billiards*”.

Campinas/SP/Brazil, October 07, 2016.



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Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)

# IV

ESCOLA BRASILEIRA DE  
**SISTEMAS  
DINÂMICOS**  
VALINHOS, SP

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## CERTIFICATE

We hereby certify that Welington de Melo participated in the “IV Escola Brasileira de Sistemas Dinâmicos”, held at Hotel Fonte Santa Tereza (Valinhos/SP) and organized by the Research Group on Dynamical Systems of IMECC/Unicamp - Instituto de Matemática, Estatística e Computação Científica - Brazil, from October 03 to 07, 2016, and presented the talk “*Rigidity of smooth critical circle maps*”.

Campinas/SP/Brazil, October 07, 2016.



Prof. Dr. Ricardo Miranda Martins  
(on the behalf of the organizing committee of IV EBSD)