

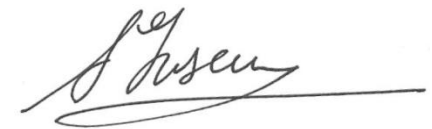
XIII celebrating Alfredo Iusem's 70th birthday  
**Brazilian Workshop on  
Continuous Optimization**

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

CERTIFICATE

We hereby certify that, **Alfredo Iusem - Instituto de Matemática Pura e Aplicada**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Recent results on Asymptotic Analysis with applications in Optimization Theory**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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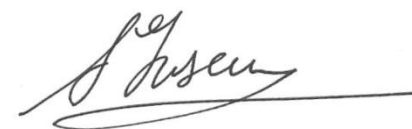
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September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

CERTIFICATE

We hereby certify that, **Ernesto G. Birgin** - Inst.Mat. e Estatística - Univ. de São Paulo, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Augmented Lagrangian methods: complexity and performance**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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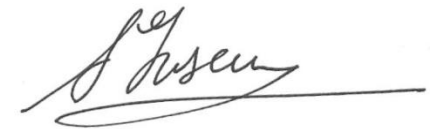
# XIII Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **José Mario Martínez - IMECC**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**On expensive optimization**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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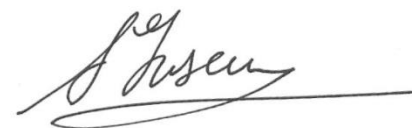
# XIII Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Maryam Fazel** - **University of Washington**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Online Optimization, Smoothing, and Competitive Ratio**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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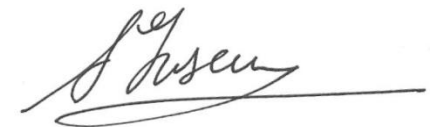
# XIII Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Miguel A. Goberna** - **Universidad de Alicante**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Primal-dual stability in (full and semi) infinite linear optimization**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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# XIII

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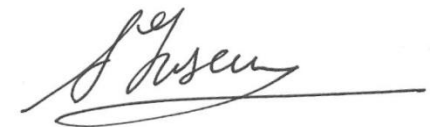
## Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Mikhail Solodov** - Instituto de Matemática Pura e Aplicada, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Some news on the convergence and the cost of iterations of augmented Lagrangian methods**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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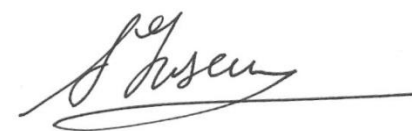
# XIII Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Nelson Maculan** - Programa de Engenharia de Sistemas e Computação, Coppe/UFRJ, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Mixed Integer Nonlinear Optimization Models for the Euclidean Steiner Tree Problem in d-Space**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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# Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Roberto Cominetti** - **Universidad Adolfo Ibáñez**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Routing games in congested networks: convergence for large games and the Price-of-Anarchy.**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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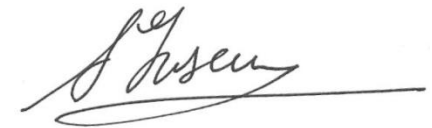
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September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

CERTIFICATE

We hereby certify that, **Russell Luke - Georg-August-Universitaet Goettingen**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Deterministic fixed point algorithms to random function iterations: progress and perspectives**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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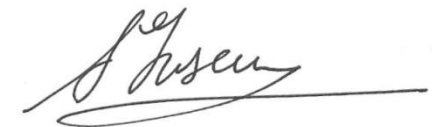
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September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Sandra Augusta Santos - IMECC**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Recent advances on the solution of nonlinear least-squares problems**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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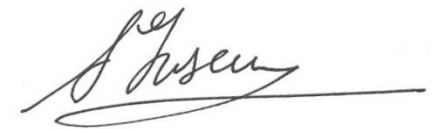
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CERTIFICATE

We hereby certify that, **Stefania Bellavia** - **Florence University**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Second order methods with approximate derivatives with application to finite sum problems arising in machine learning**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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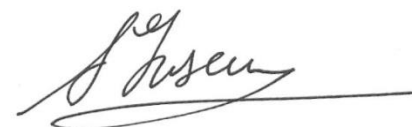
# XIII Brazilian Workshop on Continuous Optimization

IMPA, Rio de Janeiro, Brazil  
September 23<sup>rd</sup> to 27<sup>th</sup>, 2019

# CERTIFICATE

We hereby certify that, **Yuan Jin Yun - Universidade Federal do Paraná**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Numerical linear algebra in data sciences**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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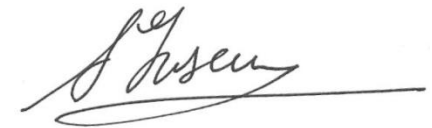
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CERTIFICATE

We hereby certify that, **Yurii Nesterov - Université Catholique de Louvain**, participated in the *XIII Brazilian Workshop on Continuous Optimization* held at IMPA, Rio de Janeiro, September 23 – 27, 2019 and presented the following Plenary Talk: “**Implementable Tensor Methods in Unconstrained Convex Optimization**”.

Rio de Janeiro, September 27<sup>th</sup>, 2019



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