mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Bruno Dupire** participated in and contributed a talk entitled **"Numeraire Portfolio and Weighted Monte Carlo"** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance: RiO Research in Options

CERTIFICATE

We certify that **Eduardo Abi Jaber** participated in and contributed a talk entitled **“From the Quintic model to signature volatility models”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Christian Bayer** participated in and contributed a talk entitled **“Markovian approximations to rough volatility models”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Diogo Duarte** participated in and contributed a talk entitled **“Bank Liquidity Management and Payout Policy under Peer Pressure”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Jorge Zubelli** participated in and contributed a talk entitled **"Local Volatility Estimation with Jumps - Honoring the life & work of our colleague Marco Avellaneda"** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Julien Gyon** participated in and contributed a talk entitled **“Neural joint S&P 500/VIX smile calibration”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Lakshithe Wagalath** participated in and contributed a talk entitled "**Regulatory arbitrage and financial stability: how the new output floor compares to other capital requirements**" at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY: Bloomberg FAPERJ Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY: FGV SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Marcelo Fernandes** participated in and contributed a talk entitled **“Estimation risk in conditional expectiles”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Marcel Nutz** participated in and contributed a talk entitled **“Optimal Execution among N Traders with Transient Price Impact”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Mohammad Fesanghary** participated in and contributed a talk entitled **“Causal Discovery in Financial Markets: What is it?”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:
RiO
Research in Options

CERTIFICATE

We certify that **Ryan Donnelly** participated in and contributed a talk entitled **“Insider Trading with Temporary Price Impact”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance:

RiO

Research in Options

CERTIFICATE

We certify that **Sebastian Jaimungal** participated in and contributed a talk entitled **“Partial Information Nash Equilibria between Broker and Traders”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance: RiO Research in Options

CERTIFICATE

We certify that **Silvana Pesenti** participated in and contributed a talk entitled **“Portfolio choice with α-Bregman Wasserstein penalisation”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS

mathematics & finance: RiO Research in Options

CERTIFICATE

We certify that **Teemu Pennanen** participated in and contributed a talk entitled **“Duality in Convex Stochastic Optimization”** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY: Bloomberg, FAPERJ Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY: FGV School of Applied Mathematics

mathematics & finance:

RiO

Research in Options

CERTIFICATE

We certify that **Xiaofei Shi** participated in and contributed a talk entitled **"The Price of Information"** at the **19th Research in Options** held at the School of Applied Mathematics of Getulio Vargas Foundation - FGV EMAp, Rio de Janeiro, from December 4th, 2024 to December 8th, 2024.

Rodrigo dos Santos Targino

Rodrigo Targino
Organizing Committee

SUPPORTED BY:

Bloomberg

FAPERJ
Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro

ORGANIZED AND HOSTED BY:

FGV | SCHOOL OF APPLIED MATHEMATICS