STANDING ON THE FRONTIER OF OR RESERCH

LIU Jia

Xi'an Jiaotong University

2018.9.6

Standing on the frontier of OR research

Who are LEADING and ACTIVE in OR societies?

What are good journals?

How to obtain newest Articles

Who are LEADING and ACTIVE in OR societies?

1,国际运筹协会

国际性组织(协会)

- <u>INFORMS</u> Institute for Operations Research and the Management Sciences
- IFORS The International Federation of Operational Research Societies
- SIAM <u>Society for Industrial and Applied Mathematics</u>
- EURO The Association of European Operational Research Societies
- MathOpt <u>Mathematical Optimization Society</u>

地区性组织(协会)

- APORS <u>Asia-Pacific Operations Research Society</u>
- 中国运筹学会 Operations Research Society of China

专业的国际协会

Stochastic Programming Society

2, 运筹学最高奖项

MOS奖

• <u>Dantzig Prize</u>被认为数学规划领域最高奖项

INFORMS Prizes

• John von Neumann Theory Prize被认为运筹领域最高奖项

3,运筹学国际学术会议

国际性组织(协会)

22nd International Symposium on Mathematical Programming,MathOpt协会举办的运筹学盛会,优化届三大会议之一,三年一次- 2018, 2021

IFORS 2017 - 21st Conference of the International Federation of Operational Research Societies, 国际运筹协会的大会,三年一次, 2017, 2020

SIAM Conference on Optimization (OP17),三年一次,**优化届三大会议之一**,可以申请Student Travel Funding, 2017 , 2020

专业的国际协会

XIV International Conference on Stochastic Programming 2016, 三年一次, 随机 优化会议,2016, 2019

ICCOPT - The fifth International Conference on Continuous Optimization,世界连续优化会议,三年一次

3,运筹学国际学术会议

国际性组织(协会)

INFORMS的会议,运筹学的盛会之一,重头戏是其中的 Annual Meeting 和 Analytics Meeting,主要在美国!

28th European Conference on Operational Research,欧洲运筹协会的会议,三年俩次。

CTW / CMS

国内协会

<u>中国运筹学会第十次全国代表大会暨2016年学术交流年会</u>,中国运筹年会,会颁布中国运筹各技术奖项,两年一次,2018,2020

中国运筹学会金融工程与金融风险管理分会学术年会,一年一次,2019,上海

What are good journals?

4,运筹学杂志

数学优化TOP杂志

- Mathematical Programming *
- SIAM J. Optimization *
- Mathematics of Operations Research *

运筹学TOP杂志

- Management Science *
- Operations Research *

数理金融TOP期刊

Mathematical Finance *

综述TOP杂志

- SIAM Review *
- INFORMS Tutorial series *
- Elsevier: Surveys in Operations Research and Management Science

4,运筹学杂志

数学优化比较好的杂志

- Journal of Optimization Theory and Applications *
- Operations Research Letters *

运筹学比较好的杂志

- European Journal of Operational Research *
- Computers & Operations Research
- Annals of Operations Research

数理金融比较好的期刊

- Finance and Stochastic
- J. Economic and Dyanmic Control
- Insurance and Mathematics of Finance
- Quantitative Finance

4,运筹学杂志

OTHER GOOD JOURNALS which are not that strongly related to our directions

- Omega--international journal of management science
- INFORMS Journal on Computing

其他比较相关的还不错的期刊

- OR Spectrum
- Optimization
- Computational Management Science

How to obtain newest Articles

- 1. Publication list from the Journals
- 2 On-line First articles
- 3. How to Find related articles?
- 4. NEW PAPER ALERTS

How to obtain newest Articles

1 Publication list from the Journals

1, SPRINGER ALERTS

Subscribe to SPRINGER.

Springer	Inbox	Scholar	Computational Economics, Vol. 52, Issue 1 - New I	Jun 18
Journal of Optimization .	Inbox	Phd S	cholar XJTU JOTA: Your manuscript entitled Data-dr	Jun 15
Springer	Inbox	Scholar	EURO Journal on Computational Optimization, Vo	Jun 12
Google Scholar Alerts	Inbox	Scholar	Daniel Kuhn - new results - Status of the Daniel K. II	Jun 12
Springer	Inbox	Scholar	中国作者投稿最多的20本商学与经济学期刊 - 限时免费	Jun 12
Springer	Inbox	Scholar	Review of Quantitative Finance and Accounting, V	Jun 12
Springer	Inbox	Scholar	Computational Mathematics and Modeling, Vol. 29, Is:	Jun 10
Springer	Inbox	Scholar	Financial Markets and Portfolio Management, Vol. 32,	Jun 10
Google Scholar Alerts	Inbox	Scholar	Bertsimas - new results - Distributionally robust fixed	Jun 9
Springer	Inbox	Scholar	Computational Optimization and Applications, Vol	Jun 7
梅玉	Inbox	Phd S	cholar XJTU 本周讨论班 - 大家好 ,本周讨论班由金(C	Jun 7
Mathematics Springer	Inbox	Scholar	数学教材提案正在征集! - 数学教科书系列丛书推荐	Jun 6
Springer Shop	Inhox	Scholar	Find interesting Social Science aBooks and journs	lup 5

1. SPRINGER ALERTS

EURO Journal on Computational Optimization, Vol. 6, Issue 2 - New Issue Alert





Jun 12 🛪



Dear Reader,

We are pleased to deliver your requested table of contents alert for **EURO Journal on Computational Optimization**. **Volume 6 Number 2** is now available online.



Original Paper

Column generation algorithms for bi-objective combinatorial optimization problems with a min-max objective

Christian Artigues, Nicolas Jozefowiez & Boadu M. Sarpong

» Abstract » Full text HTML » Full text PDF



1 SPRINGER ALERTS

https://www.springer.com/gp/stay-informed-with-springer-alerts/54290?countryChanged=true



Journal and book alerts

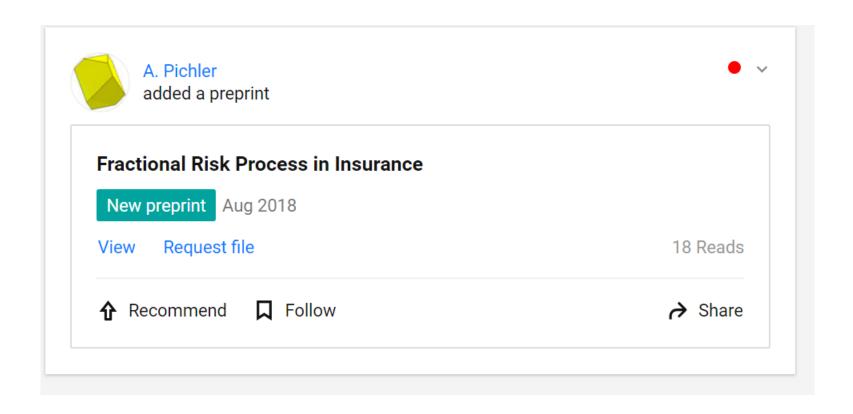
Journal alert	Choose from over 1,800 journals. You will receive the table of contents of a new journal issue when the issue is available online at springerlink.com. Browse by journal or Browse by subject
New book alert (including ebooks)	Tailor your profile to meet your needs by selecting from over 500 subject areas. You will be notified when a new print book and eBook is published. Browse by subject
Book series alert	See the table of contents of a newly published volume within a book series, delivered to you directly. Browse by subject

1、 RESEARCHGATE

~ _			/ I I	J	/ 1 1	0,	
$\stackrel{\wedge}{\sim}$	ResearchGate	Phd	Vikas Vikram Singh	published an arti	cle - This week's	research fr	Jul 23
$\nearrow \Box$	ResearchGate	Phd	Jia, a recent chapte	r cited your resea	arch - Jia, a recei	nt chapter c	Jul 20
	ResearchGate	Phd	Jia, a researcher y	ou cited is work	ing on a project	t: Hawkes I	Jul 19
	ResearchGate	Phd	Congratulations Jia	you reached a n	nilestone - Jia Liu	ı Your publi	Jul 18
$\stackrel{\wedge}{\sim}$	ResearchGate	Phd	Vikas Vikram Singh	published an arti	cle - This week's	research fr	Jul 17
\sim	ResearchGate	Phd	Jia, people are read	ling your work - J	ia, people are rea	ading your \	Jul 17
	ResearchGate	Paolo	Vanini commented	on an article - F	Paolo Vanini com	mented on	Jul 13
$\stackrel{\wedge}{\sim}$	ResearchGate	Phd	Jia, people are read	ling your work - J	ia, people are rea	ading your \	Jul 10
	ResearchGate	Phd	Xiangxiang Zhu ad	lded a new full-t	ext - This week's	research fi	Jul 10
$\stackrel{\wedge}{\sim}$	ResearchGate	Jia, y	ou have a new read	- Isaac Siwale Is	aac Siwale just r	ead your ρι	Jul 9
$\stackrel{\wedge}{\sim}$	ResearchGate	Paolo	Vanini commented o	n an article - Pac	lo Vanini comme	nted on an	Jul 5

1 RESEARCHGATE

https://www.researchgate.net/



How to obtain newest Articles

2 On-line First articles

2, On-line First Articles

SHORTFALL:

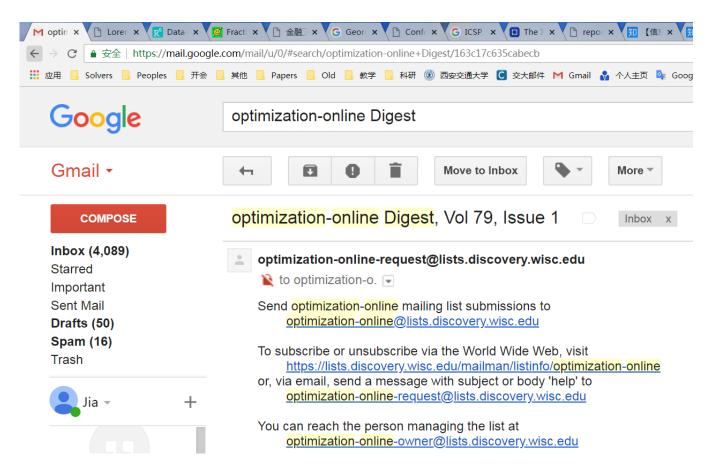
- IT takes 1 or 2 years for formally publication!
- NOT ON-TIME!
- PRE-print version manuscripts

2, On-line First Articles

Optimization Online

www.optimization-online.org/

Subscribe to the Optimization Online monthly digest.



2. On-line First Articles

Optimization Online

www.optimization-online.org/

Subscribe to the Optimization Online monthly digest.

ROBUST OPTIMIZATION

Etienne de Klerk, Daniel Kuhn, Krzysztof Postek
Distributionally robust optimization with polynomial densities: theory, models and algorithms http://www.optimization-online.org/DB HTML/2018/05/6615.html

Viet Anh Nguyen, Daniel Kuhn, Peyman Mohajerin Esfahani
Distributionally Robust Inverse Covariance Estimation: The Wasserstein Shrinkage Estimator
http://www.optimization-online.org/DB HTML/2018/05/6627.html

Ward Romeijnders, Krzysztof Postek

Piecewise constant decision rules via branch-and-bound based scenario detection for integer adjustable robust optimization http://www.optimization-online.org/DB HTML/2018/05/6634.html

STOCHASTIC PROGRAMMING

Christoph Buchheim, Jonas Pruente
K-Adaptability in Stochastic Programming
http://www.optimization-online.org/DB HTML/2018/05/6613.html

Yunxiao Deng, Junyi Liu, Suvrajeet Sen
Coalescing Data and Decision Sciences for Analytics
http://www.optimization-online.org/DB_HTML/2018/05/6629.html

How to obtain newest Articles

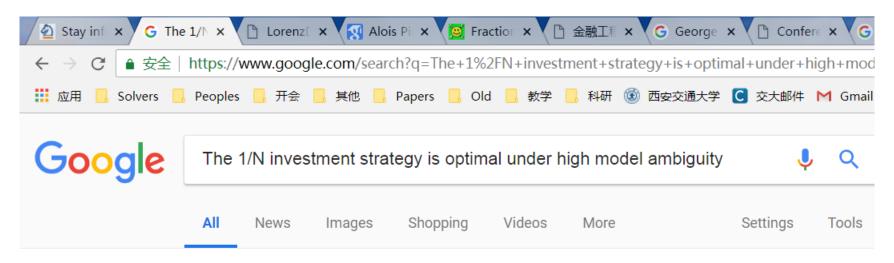
- 3. How to Find related articles?
- References
- Citations

References

References

- [1] R. Bellman. *Dynamic Programming*. Courier Dover Publications, 2003.
- [2] A. Ben-Tal, D. den Hertog, A. De Waegenaere, B. Melenberg, and G. Rennen. Robust solutions of optimization problems affected by uncertain probabilities. *Management Science*, 59(2):341–357, 2013.
- [3] D. Bertsimas and A. Georghiou. Design of near optimal decision rules in multistage adaptive mixed-integer optimization. *Operations Research*, 63(3):610–627, 2015.
- [4] D. Bertsimas, V. Gupta, and N. Kallus. Robust sample average approximation. *Mathematical Programming*, Jun 2017.
- [5] D. B. Brown and M. Sim. Satisficing measures for analysis of risky positions. *Management Science*, 55(1):71–84, 2009.
- [6] G. Calafiore. Ambiguous risk measures and optimal robust portfolios. *SIAM Journal on Optimization*, 18(3):853–877, 2007.
- [7] G. Calafiore and L. El Ghaoui. On distributionally robust chance-constrained linear programs. *Journal of Optimization Theory and Applications*., 130(1):1–22, 2006.

Citations



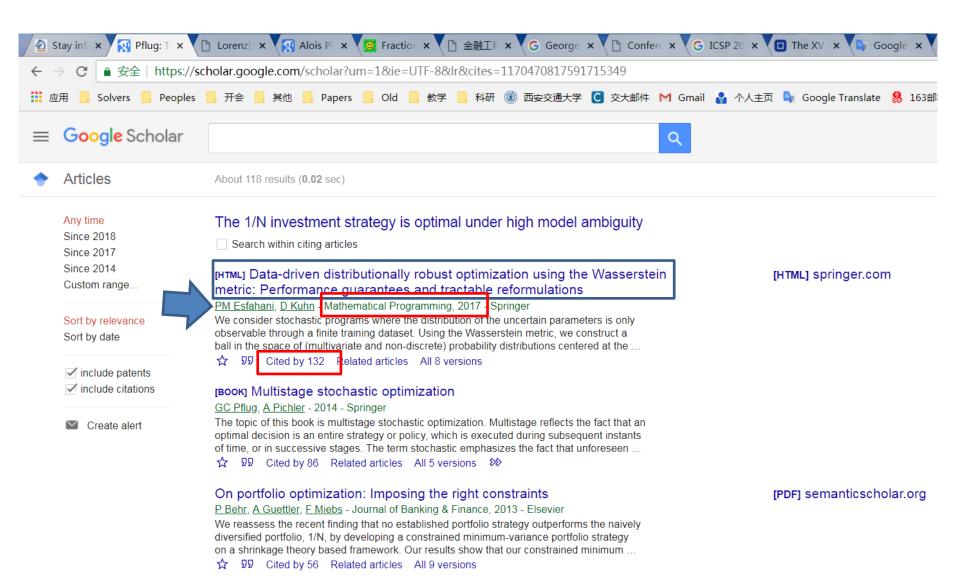
About 23,800,000 results (0.61 seconds)

The 1/N investment strategy is optimal under high model ambiguity ...

https://www.sciencedirect.com/science/article/pii/S0378426611002299

by GC Pflug - 2012 - Cited by 116 - Reated articles

In this paper, we demonstrate that the uniform **investment strategy** is rational **in** situations where an agent is faced with a sufficiently **high** degree of **model** ...





Peyman Mohajerin Esfahani

Unknown affiliation Verified email at tudelft.nl - <u>Homepage</u>



TITLE	CITED BY	YEAR
Data-driven distributionally robust optimization using the Wasserstein metric: Performance guarantees and tractable reformulations P Mohajerin Esfahani, D Kuhn Mathematical Programming, 1-52	132	2017
Cyber attack in a two-area power system: Impact identification using reachability P Mohajerin Esfahani, M Vrakopoulou, K Margellos, J Lygeros, Proceedings of the 2010 American Control Conference, 962-967	86 *	2010
Symbolic control of stochastic systems via approximately bisimilar finite abstractions M Zamani, P Mohajerin Esfahani, R Majumdar, A Abate, J Lygeros IEEE Transactions on Automatic Control 59 (12), 3135-3150	64	2014
A robust policy for automatic generation control cyber attack in two area power network P Mohajerin Esfahani, M Vrakopoulou, K Margellos, J Lygeros, 49th IEEE Conference on Decision and Control (CDC), 5973-5978	51 *	2010
Performance bounds for the scenario approach and an extension to a class of non-convex programs P Mohajerin Esfahani, T Sutter, J Lygeros IEEE Transactions on Automatic Control 60 (1), 46-58	44	2015

Cited by

		All	Since 2013
Citation	ıs	774	730
h-index		14	14
i10-inde	ex	21	21
			240
			180
			120
			60
2011 20	12 2013	2014 2015 2016	2017 2018 0
Co-aut	thors		VIEW ALL
8		ygeros f Computation and	d Control >
P	Daniel Profes	Kuhn sor of Operations	Research >
9	Tobias ETH Z	Sutter urich, Automatic c	ontrol la

How to obtain newest Articles

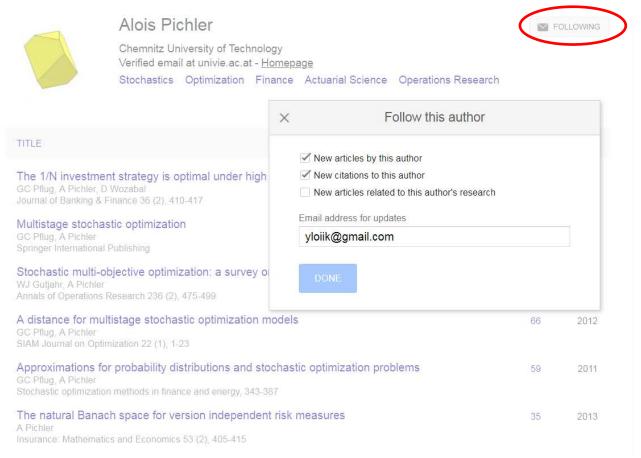
4. NEW PAPER ALERTS

4 NEW PAPER ALERTS

Google Scholar Alerts

https://scholar.google.com/scholar_alerts

Google Scholar



Cited by

	All	Since 2013
Citations	692	668
n-index	12	12
10-index	17	17
		180
		135
		90
-	ш	45
2011 2012 2013	2014 2015 2016	2017 2018 0

Co-authors

Pflug G

10	Professor Statistics and OR	>
279	Stein-Erik Fleten Professor, Norwegian University	>
2	David Wozabal Technische Universität München	>
-	Walter Cutions	

4. NEW PAPER ALERTS

Google Scholar Alerts

https://scholar.google.com/scholar_alerts





Alerts

Alerts for	/loiik@gmail.coi	m
------------	------------------	---

Napat Rujeerapaiboon - new articles	Show up to 10 results	CANCEL
Shabbir Ahmed - new citations	Show up to 10 results	CANCEL
Georg Pflug - new results	Show up to 20 results	CANCEL
Pflug G - new articles	Show up to 10 results	CANCEL
Weijun Xie - new citations	Show up to 10 results	CANCEL
Jeff Hong - new articles	Show up to 10 results	CANCEL
Shuzhong Zhang - new articles	Show up to 10 results	CANCEL

4. NEW PAPER ALERTS

Google Scholar Alerts

https://scholar.google.com/scholar_alerts

Primary	Social	I	Promotions	1 Updates	+
Google Sch	olar Alerts	Scholar	Rustem - new results - Silica-coated	iron-oxide nanoparticle:	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Shapiro - new results - Downstaging	prior to liver transplanta	6:26 pm
☐ ☆ ☐ Google Scho	olar Alerts	Scholar	Alois Pichler - new articles - [PDF] Fra	ctional Risk Process in	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Marco Scarsini - new related researe	ch - [PDF] Resource Al	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Ruszczyński - new results - Probiotic	es, mechanisms of actic	6:26 pm
☐ ☆ ☐ Google Scho	olar Alerts	Scholar	Alexander Shapiro - new citations - [Pl	OF] Improved nonparan	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Alois Pichler - new citations - $[\mbox{PDF}]$	Fractional Risk Process	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Daniel Kuhn - new results - [HTML]	Geomorphological evide	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Shuzhong Zhang - new citations - F	DD-Based Cell-Free Ma	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Wolfram Wiesemann - new citations	- [PDF] A Robust Optii	6:26 pm
☐ ☆ ☐ Google Scho	olar Alerts	Scholar	Duan Li - new citations - Benchmarking	g ADMM in Nonconvex	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Bertsimas - new results - An Integrat	ed Multi Response Tag	6:26 pm
☐ ☆ ☐ Google Sch	olar Alerts	Scholar	Melvyn Sim - new citations - An Integ	grated Multi Response ⁻	6:26 pm

4 NEW PAPER ALERTS

Google Scholar Alerts

https://scholar.google.com/scholar_alerts

Alois Pichler - new citations









Google Scholar Alerts <scholaralerts-noreply@google.com>

Feb 17



to me 🔻

[PDF] Martingale Characterizations of Risk-Averse Stochastic Optimization Problems

A Pichler, R Schlotter - arXiv preprint arXiv:1802.03639, 2018

Abstract: This paper addresses risk awareness of stochastic optimization problems. Nested risk measures appear naturally in this context, as they allow beneficial reformulations for algorithmic treatments. The reformulations presented extend usual Hamilton-Jacobi-Bellman







Systemic risk and copula models

GC Pflug, A Pichler - Central European Journal of Operations Research, 2018
Abstract Systemic risk describes the phenomenon that dependency adds a specific component of risk to a system or network of (financial) institutions as a whole, which would not be present if the institutions were independent from each other. This paper introduces







Google Scholar Alerts

https://scholar.google.com/scholar_alerts

TITLE	CITED BY	YEAR
The 1/N investment strategy is optimal under high model ambiguity GC Pflug, A Pichler, D Wozabal Journal of Banking & Finance 36 (2), 410-417	118	2012
Multistage stochastic optimization GC Pflug, A Pichler Springer International Publishing	86	2014
Stochastic multi-objective optimization: a survey on non-scalarizing methods WJ Gutjahr, A Pichler Annals of Operations Research 236 (2), 475-499	74	2016
A distance for multistage stochastic optimization models GC Pflug, A Pichler SIAM Journal on Optimization 22 (1), 1-23	66	2012
Approximations for probability distributions and stochastic optimization problems GC Pflug, A Pichler Stochastic optimization methods in finance and energy, 343-387	59	2011

How to obtain newest Articles

5. OTHER MATERIALs

5, INTERNATION VEDIO RESOUCES

SLIDES of CONFERENCES

ICSP 2013 / ICSP 2016

VEDIOS

ICSP 2016

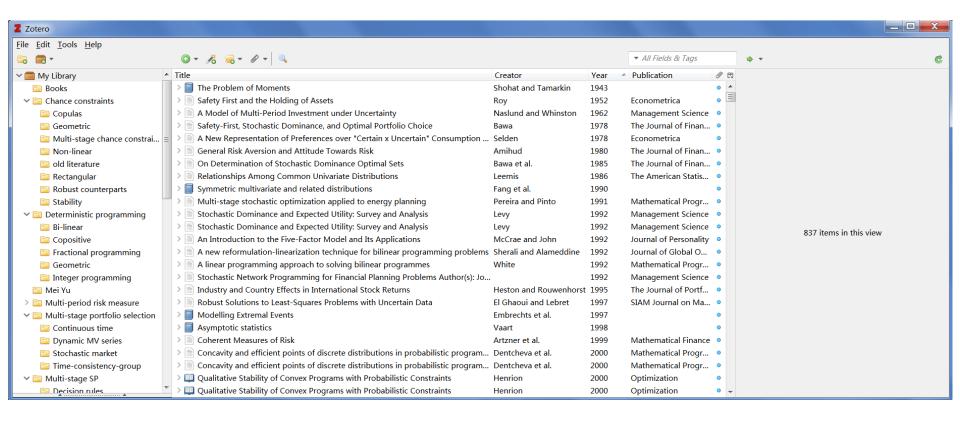
https://www.youtube.com/watch?v=bB-CSHHFsUU

ISMP 2018 ALL INVITED TALKS

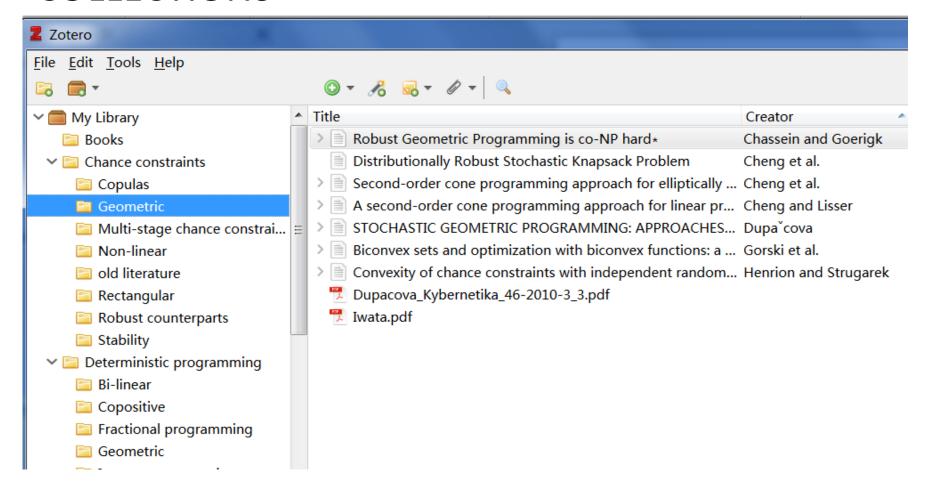
The Banff International Research Station for Mathematical Innovation and Discovery (BIRS) on distributionally robust optimization (DRO)

http://www.birs.ca/events/2018/5-day-workshops/18w5102

ZOTERO



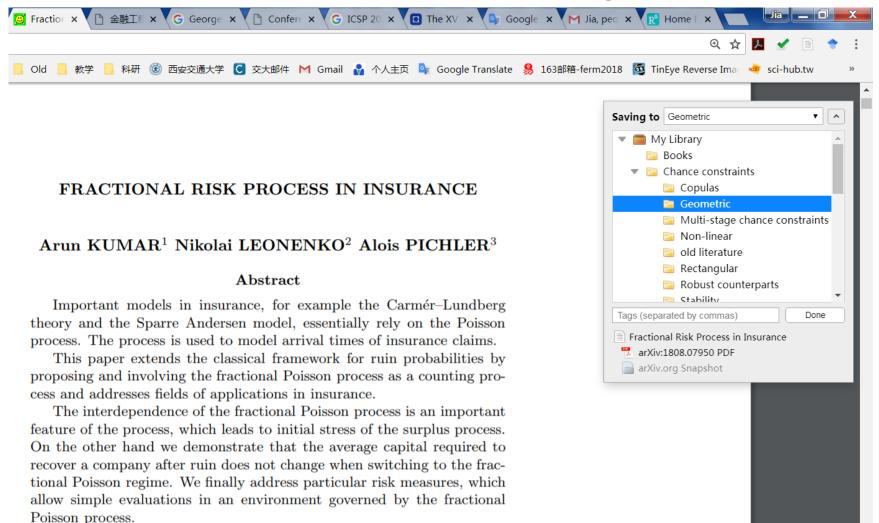
COLLECTIONS



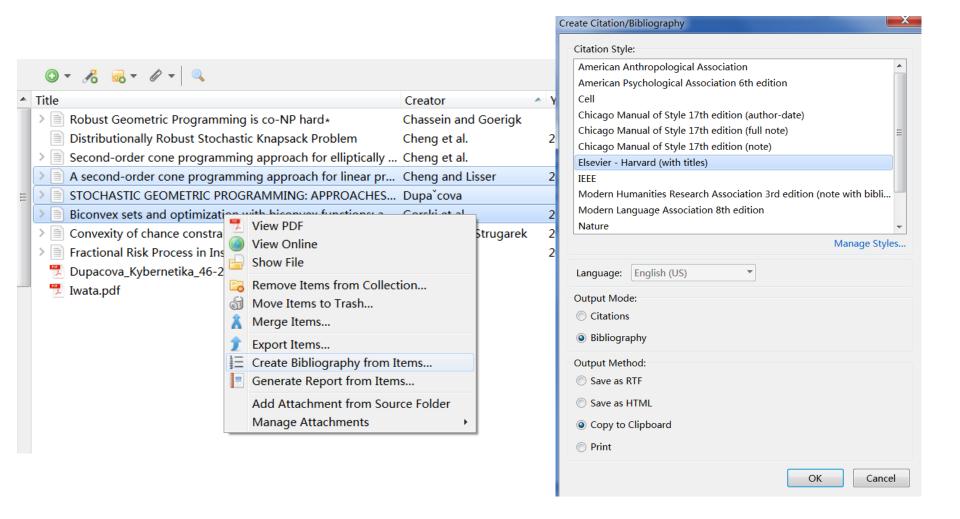
SEARCH

			▼ Dentcheva)
Title	Creator	Year ^	Publication	9
Concavity and efficient points of discrete distributions in probabilistic program	Dentcheva et al.	2000	Mathematical Progr	0
Dentcheva et al 2000 - Concavity and efficient points of discrete distrib.pdf				0
▼	Dentcheva et al.	2000	Mathematical Progr	•
📜 Dentcheva et al 2000 - Concavity and efficient points of discrete distrib.pdf				0
✓ ☐ Optimization with Stochastic Dominance Constraints	Dentcheva and Ruszczy	2003	SIAM Journal on Op	0
📜 考虑交易费用的二阶随机占优投资组合风险控制模型 (1).pdf				0
Dentcheva_Ruszczynski_2003_Optimization with Stochastic Dominance Const				0
✓ ☐ Optimization with Stochastic Dominance Constraints	Dentcheva and Ruszczy	2003	SIAM Journal on Op	•
📜 Dentcheva and Ruszczynski - 2003 - Optimization with Stochastic Dominanc				•
▼ Semi-infinite probabilistic optimization: first-order stochastic dominance const	Dentcheva † and Ruszcz	2004	Optimization	•
Dentcheva †_Ruszczyński_2004_Semi-infinite probabilistic optimization.pdf				•
✓ ☐ Optimality and duality theory for stochastic optimization problems with nonlin	Dentcheva and Ruszczy	2004	Mathematical Progr	•
Dentcheva_Ruszczynski_2004_Optimality and duality theory for stochastic op				•
▼ ☐ Inverse stochastic dominance constraints and rank dependent expected utility	Dentcheva and Ruszczy	2006	Mathematical Progr	•
Dentcheva_Ruszczyński_2006_Inverse stochastic dominance constraints and r				0
✓ ☐ Portfolio optimization with stochastic dominance constraints	Dentcheva and Ruszczy	2006	Journal of Banking	0
🔁 Dentcheva_Ruszczyński_2006_Portfolio optimization with stochastic dominan				0
▼ Portfolio optimization with stochastic dominance constraints	Dentcheva and Ruszczv	2006	Journal of Banking	•

MANTAINTION



REFERENCE



HOW TO USE

https://www.jianshu.com/p/68f0e4134b04

https://zhuanlan.zhihu.com/p/30899762

https://www.zotero.org/

6, HOW TO USE GOOGLE

https://portal.shadowsocks.to/

https://www.fanqiangzhe.com/software/

Thanks for reading

- Any advice and suggestions are greatly appreciated
- Any questions are welcomed

- Email: jialiu@xjtu.edu.cn
- Office: 理科楼332