



12th Annual

# Global TechMining Conference

3-4 November 2022 • Virtual Event

## Olhando para o futuro: mineração de textos para uma visão prospectiva baseada em evidências

### Programação

5ª feira, 03 de Novembro

07:00 -07:45h

#### Power Talks 1A: Applications of Tech Mining

*Prosumer engagement in the context of digital intelligence transformation*

(Tianshu Kang\*, Lidan Jiang, Jiaqi Liu)

\*China

*Technological Prospecting in Public Health Policies: an Innovative Approach for the Decision Making Process*

(Lincoln Pereira\*, Filipe Gomes, Felipe Semaan)

\*UFF/IFRJ - Brasil

*Bibliometric study about company's internationalization strategy*

(Maxwel Azevedo-Ferreira\*, Deborah Zouain, Josir Gomes)

\*UNIGRANRIO/IFRJ - Brasil

*Technological Mapping of Vegetable Biomasses for Conventional Plastics Replacing*

(Karolyne L. Melo\*, Luisa Luz Marçal, Filipe Nery D. C, Gomes, Simone Alves)

\*IFRJ - Brasil

*Applications of Artificial Intelligence to Fight COVID-19: Technological Prospecting based on Patents*

(Daniel Reis Armond-de-Melo, Karla Susiane dos S. Pereira\*, Lana G. Rodrigues, Dalton C, Vilela Junior)

\*UFAM – Brasil

07:00 -07:45h

#### Power Talks 1B: Methods for Tech Mining

*Discussion of Moves Recognition in Scientific Documents under limited Samples*

(Xin Zhang\*, Haiyun Xu)

\* CLIC, CAS

*A Study of Citation Recommendation by Fusing Heterogeneous Network Representation Learning and Attention Mechanisms*

(Jin Zhu Zhang\*, Mengmeng Qiu)

\*Universidade de Ciência e Tecnologia de Nanjing - China

*From cooperation to citation or from citation to cooperation?*

Yan Qi - Chinese Academy of Medical Sciences / Peking Union Medical College - China

*Topic diversity: A discipline scheme-free diversity measurement for journals*

(Yi Bu\*, Mengyang Li, Weiye Gu, Win-Bin Huang)

\*Universidade de Pequim - China

*Research on Technology Opportunity Recognition and Evaluation Based on Semantic Mining and Knowledge Network*

(Xiao Zhou, Yaqian Gao\*, Jiayi Fan, Ying Guo)

\*XIDIAN University - China

08:00-08:45h

### **Keynote: Text-mining TF&SC for Strategic Foresight**

Palestrante: Scott Cunningham, University of Strathclyde – Reino Unido

09:00-10:15h

### **Sessão 2A - Apresentações orais: Methods for Tech Mining**

*2-years after Reliance on Science: Discovering patent-to-article citing sentences by supervised classification*

(Mei Yun Lai\*, Thomas Pastuska, Korinna Bade, Martin G. Moehrle)

\*Universidade de Bremen - Alemanha

### ***New Perspectives on Trademark Categorization using Text Analytics***

Alexander Lehmann

Escritório de Propriedade Intelectual Canadense - Canadá

***Full-text citation pattern analysis based on the enriched cited references: A discipline comparison perspective***

(Xiaoyu Liu\*, Yuwei Huang, Yalong Yan, Shuhuan Chen, Xiaomei Tai)

\*Instituto Eletrônico de Ciência e Tecnologia de Pequim - China

***The Emergence of Inter-organisational Networks in Emerging Technologies: The Case of Microneedles***

(Fengxuan Lv\*, Luhe Wang, Yifei Yu)

\* Universidade de Wuhan - China

***Human-Robot Interaction patent prediction through Long Short-Term Memory network***

(Jon Borregan-Alvarado\*, Izaskun Alvarez-Meaza, Ernesto Cilleruelo-Carrasco, Gaizka Garechana-Anacabe)

\*Universidade do País Basco - Espanha

10:30-11:30h

### **Sessão Painel**

11:30-12:00h

### **Salas de Networking**

09:00-10:15h

### **Sessão 2B - Apresentações orais: Exploring Technology Emergence and Convergence**

*Towards an Information Technology Convergence Index: A Keyword Extraction Approach Using arXiv Data*

(Jacques Roitel, Dimitri P. David, Alexander Glavackij, Alain Mermoud, Thomas Maillart, Alessandro Tavazzi\*)

\*Armasuisse (Federal Office for Defence Procurement) - Suíça

***Graph-based Deep Learning Method on Analyzing Complex CO2 Capture Inventions***

(Ming Sin Choong, Amy J.C. Trappey, Kai Lun Huang, Chih Ping Liang, Ai Wildan Nabila)

\* Universidade Nacional Tsing Hua - China

***The Technological Emergence of Quantum Communication: A Patent Analysis***

(Xiaoyu Liu\*, Yuwei Huang, Yalong Yan, Shuhuan Chen, Xiaomei Tai)

\*Instituto Eletrônico de Ciência e Tecnologia de Pequim - China

***The Emergence of Inter-organisational Networks in Emerging Technologies: The Case of Microneedles***

(Daniele Rotolo\*, Angelo Natalicchio, Alan Porter, David J. Schoeneck)

\*Universidade de Sussex – Reino Unido/  
Universidade Politécnica de Bari - Itália

07:00-07:45h

### **Power Talks 3A: Using Novel Data for Tech Mining**

#### ***Data Scraping Method: Using Wget in Searches***

Otavio A, de Brito L, da Silva (IFRJ – Brasil)

#### ***Analyzing health risk on technology of mRNA vaccine by integrating publications and Twitter data***

Munan Li (Universidade de Tecnologia do Sul da China – China)

#### ***Identifying data-driven innovative companies: A web mining approach***

Denilton Darold (Universidade de Hohenheim – Alemanha)

#### **Analysis of Research Projects Focusing on Artificial Intelligence and Digital Technologies applied to COVID-19**

([Karla Susiane dos S. Pereira](#)\*, Daniel R. Armond-de-Melo, Lana G. Rodrigues, Dalton C. Vilela Junior)

\*UFAM – Brasil

8:00-8:45h

### **Keynote: Intelligent Bibliometrics for Foresight**

Palestrante: Yi Zhang

Universidade de Tecnologia de Sydney - Austrália

8:00-8:45h

### **Sessão 3B – Apresentações Orais: Mapping the Emergence of Innovation Ecosystem**

ShihHsin Chen, Rider Foley, Hon-Ngen Fung, Yujia He, Hung-Chi Chang, [Duenkai Chen](#)\*

\*Universidade de Tamkang – Taiwan

9:00-10:15h

#### Sessão 4A: Tech Mining with Novel Data

*Scaling-up of an Index of I4.0-Readiness of German Companies - applying ML models based on website data*

(Rainer Frietsch, Denilton Darold\*)

\*Universidade de Hohenheim - Alemanha

*Explainable NLP for Monitoring the German Automotive Industry*

(Andrea Zielinski\*, Henning Kroll, Anna Grimm)

\*Instituto Fraunhofer - Alemanha

*ArenaBox- Leveraging Language Models and Multimodality for Sustainability Oriented Tech Mining of Intermediary Organizations on Twitter?*

(Babajide Owoyele\*, Victor Omolaoye, Moritz Schneider)

\*Erasmus University Rotterdam / Dutch Research Institute for Transitions (DRIFT) - Holanda

*An identification method of emerging technology using social perception multi-source data*

(Bingying Gong\*, Chao Wang, Rujiang Bai, Xin Zhang, Liang Chen, Haiyun Xu)

\*Universidade de Tecnologia de Shandong - China

10:30-11:30h

#### Sessão Painei

*Mapping Studies Conducted by the Cellular Communication Laboratory at the Oswaldo Cruz Institute (IOC-Fiocruz)*

Palestrantes:

Fabio Mota – Fiocruz/Brasil

Michele Waltz Comarú – IFRJ/Brasil

Renato Matos Lopes - Fiocruz/Brasil

11:30-12:00h

#### Salas de Networking

9:00-10:15h

#### Sessão 4B: Understanding and Forecasting Technology Life Cycle

*Is disequilibrium collaboration really conducive to catch-up in enabling technologies*

(Lidan Jiang, Ziqi Zhang\*, Ying Huang)

\* Universidade de Correios e Telecomunicações de Pequim - China

*Discovering potential application areas for technology using function-based SAO semantic analysis*

Yali Qiao (Universidade de Tsinghua – China)

*A heterogeneous network-enhanced approach for knowledge recombination prediction*

(Mengjia Wu\*, Yi Zhang)

\*Universidade de Tecnologia de Sydney - Austrália

*Tracking the dynamic technological development by exploring the science-technology linkage: From the perspective of technology life cycle*

(Dongmei Ye\*, Lin Zhang, Ying Huang)

\*Universidade de Wuhan - China



Apoio institucional



<https://www.gtmconference.org/program>

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