



CeMEAI

CEPID - Center for Mathematical
Sciences Applied to Industry

Annual Report CEPID-CeMEAI- 2021 – 2022

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Coordinator: José Alberto Cuminato

Host Institution: ICMC-USP - São Carlos

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1. Introduction and Summary of the Initial Plan

1.1 INTRODUCTION

This report describes the activities of the Center for Mathematical Sciences Applied to Industry (RIDC-CeMEAI) for the period July/2021 through June/2022. In this ninth-year period of the project, the majority of the activities promised in the initial proposal have been implemented. New proposals have been taken on board, be they from industry or from funding agencies. Out of the 3 calls for proposals launched by Fapesp in the past two years (2 CPA-IA jointly with many institutions in SP and throughout Brazil and 1 NPOP,) RIDC-CeMEAI applied to all and was granted on two of them, the CPA-IA IARA - Artificial Intelligence in the Remaking of Urban Environments (led by André C. P. L. F de Carvalho) and the NPOP Data Intelligence Center for City Management and Security - DICe (led by Luis Gustavo Nonato). Unfortunately, the NPOP had to be withdrawn due to the retreat of the supporting companies. We are implementing the charging (tarifação) of the Cluster so its use will become available for more research projects. The Education and Knowledge Dissemination coordination has been very active as we shall describe in the main body of the report. The project manager has been working full time to increase contacts with industries resulting in new projects and collaborations. In section 1.3 of this report, we present a summary of the progresses during the period. Table 1.1 brings a quantitative summary of the Center's academic output. In the main body of this report, we shall present in detail the activities of the RIDC-CeMEAI for each of its main three research groups, including projects with industry that has been contracted during this report period. During the pandemic time, CeMEAI researchers worked very hard to develop tools and published papers related to the COVID-19 pandemic, chapter 3 presents this research and its impact.

1.2 SUMMARY FOR THE 2018 PROPOSAL AND ITS GOALS

The State of São Paulo concentrates a large part of the industry in Brazil and also many of the best academic research institutions. However, mainly due to a lack of coordination, the industry/academia interaction has not yet grown in the region. Due to the nature, complexity, and scale of the activities proposed in this project, we expect the Center will need some time to mature and accomplish the proposed schedule. In addition, the very nature of the Center is interdisciplinary as it involves groups in several areas of applied mathematics, statistics, and computer science. This is very important for the success of the Center because the problems coming from the industry are very often multidisciplinary in their nature. Another long-term objective result from the fact that Brazil has a severe shortage of human resources trained for working in industrial/government problems. Our mathematical sciences courses (undergraduate and graduate) nowadays focus on the training of students to be good academics and not on working alongside multidisciplinary teams for practical problem-solving. On the other hand, the industry itself is not used to seeking help from

academia, especially from mathematicians. We are aware that all of these difficulties are very complex and we are not going to solve all of them by starting this center. However, we do believe that by starting this Center we can enhance the usage of mathematical techniques by the industrial sector and disseminate this practice.

The justification for the renewal of the proposed project of RIDC-CeMEAI lies in the fact that in spite that the use of mathematics by industries in Brazil being a novelty, RIDC-CeMEAI managed in 5 years to attract a considerable number of projects, and is changing the scenario described in the previous paragraph. In the beginning, the Center's activity was not known by companies, so we had to make a lot of effort to get projects from the industry. Now, this is starting to change and many times we get contact from industries willing to work with us. So the continuation of the funding from Fapesp will be crucial to solidify this interest and make the Center a new thrust for the development of São Paulo State. The extension of the Center will make it stronger and will help to accomplish its mission set forth in the initial plan.

1. The RIDC-CeMEAI will continue to be a Center for the production and diffusion of knowledge in applied mathematical sciences, identifying potential problems and areas which require attention, enabling the interaction between researchers and industries in these areas. More specifically, the RIDC-CeMEAI will promote contact between experts in the mathematical sciences and entrepreneurs, industry workers, researchers, and practitioners from other fields of knowledge.
2. The RIDC-CeMEAI will continue to provide an adequate environment and structure for the development of applied research to the whole industrial sector including healthcare, financial, agriculture, and trade.
3. The RIDC-CeMEAI has been working towards building a solid and lasting multidisciplinary community by training students to become able to collaborate in solving practical problems and to be prepared to replicate the center's philosophy in other regions of the country.
4. The RIDC-CeMEAI is hard-working toward becoming an international reference for successful cooperation between academia and industry/government in mathematical sciences.



1.3 SUMMARY OF ACHIEVEMENTS JULY 2021 – JUNE 2022

A primary objective of this project is to produce a virtuous cycle going from high-level mathematical research to applications and vice versa.

During the period of this report, 344 papers in scientific journals have been published by the 34 principal and 63 associate investigators of CeMEAI.

In the present report, 13 projects that describe collaborations with industry as well as with public and private “non-Mathematical” institutions are reported. Most of these projects have already resulted in scientific publications, as is also the case of the PhD Thesis being advised by members of CeMEAI, in the period.

Diffusion and Educational activities have been exponentially incremented in this period, as can be verified in the sections: diffusion and short courses, Mathematical Clinic activities, production of videos, support for seminars highlighting applications and surprising facts of Mathematics, press releases and movie screening. See Table 1.1

The MBA on Data Science is on its third edition with 260 students, more than 400 students have already completed the MBA in the first two editions and the fourth edition is planned for 2023. The first edition of MBA in Data Security is in its final phase with 55 students.

TABLE 1.1: PROJECT MAIN ACTIVITIES - SUMMARY 2020-2021

Activity	Total
Students and Visiting Scholars	
Ongoing & Completed Post-doctorate	85
Ongoing Ph.D.'s	249
Ongoing Masters	183
Completed Ph. D.'s	45
Completed Masters	65
Research	
Books	7
Book Chapters	54
Papers	344
Papers in Conferences	146
Awards	32
Innovation and Technology Transfer (KTT)	
Meetings with Partners	49
New Contracts with Partners	3
Education and Knowledge Diffusion	
Videos Produced	18
Video Views	25.000
Press Releases	70
Website Views	149.335



1.4 AWARDS

1. 2022 Capes Thesis Award - Engineering III - Túlio Rodarte Ricciardi. PhD Thesis "High Fidelity Numerical Simulations for Landing Gear Noise Prediction". Supervisor **William Wolf**.
2. 2022 Mention of Honor Award - Brazilian Association of Engineering and Mechanical Sciences – ABCM - Victor Zucatti da Silva MSc. Thesis "Hyper-reduction and calibration techniques for projection-based reduced order models of unsteady flows". Supervisor **William Wolf**
3. 2022 Latin America Research Award, Google.
 - PhD student Robson Parmezan Bonidia - Supervisor **André C. P. de L. F. de Carvalho**.
 - PhD student Vinícius Jardim Carvalho - Supervisor **André Fujita**.
 More information: <https://bit.ly/lara-cemeai>
4. 2021 1st Place ANP Technological Innovation Award, Agência Nacional do Petróleo, Gás Natural e Biocombustíveis. CeMEAI Members: **Francisco Louzada, Jose Alberto Cuminato, Paulo Henrique Ferreira and Vera Lucia D Tomazella**.
More information: <https://bit.ly/premio-annelida>
5. 2022 1st place on Inovation Sport Award, Brazilian Olympic Committee, iSports. Member: **Francisco Louzada Neto**.
More information: https://bit.ly/cob_sports/
6. 2022 Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation. Member: **Tiago Pereira**.
More information: <https://bit.ly/tiago-humboldt>
7. 2021 Elon Lages Lima Award SBMAC for the Book Álgebra Geométrica e Aplicações. Author: **Carlile Campos Lavor**.
More information: <https://bit.ly/livro-carlile>
8. 2021 Microsoft Research PhD Fellowship, Microsoft. PhD student Gean Pereira - Supervisor **André C. P. de L. F. de Carvalho**.
More information: <https://bit.ly/microsoft-cemeai>
9. 2021 Helmholtz Information Data Science Award, Helmholtz Information Data Science Academy. PhD student Jonas Kasmanas - Supervisor **André C. P. de L. F. de Carvalho**.
More information: <https://bit.ly/premio-helmholtz>
10. 2022 1st place on XL Simpósio Brasileiro de Redes de Computadores e Sistemas Distribuídos Hackton, SBRC. Member - **Rodolfo Ipolito Meneguette**.
11. 2022 3rd place in the competition Continual instance-level, on the thread Continual instance-level object detection (1111 possible objects), IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR). Ph. D. student Ângelo G. Menezes. Supervisor: **André C. P. de L. F. de Carvalho**.
More information: <https://bit.ly/competicao-clvision>
12. 2022 5th place in the competition Continual instance-level, on the thread Continual category-level object detection (277 possible categories), IEEE / CVF Computer Vision and Pattern Recognition Conference (CVPR). Ph. D. student Ângelo G. Menezes. Supervisor: **André C. P. de L. F. de Carvalho**.
More information: <https://bit.ly/competicao-clvision>



13. 2021 3rd place on the 2nd MetaDL Competition Workshop at NeurIPS 2021, NEURIPS 2021, Thirty-fifth Conference on Neural Information Processing Systems. PhD student Edésio Alcobaça - Supervisor **André C. P. de L. F. de Carvalho**.
More information: <https://bit.ly/meta-padawan>
14. 2021 Best paper award IDEAL2021 Conference, IDEAL Conference. **André C. P. de L. F. de Carvalho** with Tomas Horvath and Rafael G. Mantovani.
15. 2021 Fulbright Fellowship, Fulbright. Member: **André Fujita**.
16. 2021 Intercontinental Academia Fellow, University-Based Institutes for Advanced Study. Member: **André Fujita**.
17. 2021 Sigma Xi, Nominated Full Membership, Sigma Xi - The Scientific Research Honor Society. Member: **André Fujita**.
18. 2021 Top 2% World Scientist., Univ. of Stanford and Plos Biology.
DOI: 10.17632/btchxktzyw.3.
Member: **Anderson Rezende Rocha** (single year)
Member: **Fábio Gagliardi Cozman** (career and single year)
Member: **João Paulo Papa** (career and single year)
Member: **José Mario Martinez Perez** (career and single year)
Member: **Moacir Ponti** (single year)
Member: **Rodolfo Ipolito Meneguette** (single year)
19. 2022 Top 29 Computer Scientists in Brasil (D-index > 30).
<https://research.com/scientists-rankings/computer-science/br>
Member: **Anderson Rezende Rocha** (21th)
Member: **André Carlos Ponce de Leon Ferreira de Carvalho** (16th)
Member: **João Paulo Papa** (13th)
20. 2022 Top 21 Mathematics Scientists in Brasil (D-index > 30).
<https://research.com/scientists-rankings/mathematics/br>
Member: **Claudia Sagastizábal** (21th)
Member: **Ernesto G. Birgin** (14th)
Member: **José Mario Martinez Perez** (2nd)
Member: **Reinaldo Morabito** (19th)
21. 2022 Top 25 Engineering and Technology Scientists in Brasil (D-index > 30).
<https://research.com/scientists-rankings/engineering-and-technology/br>
Member: **Ernesto G. Birgin** (13th)
Member: **José Mario Martinez Perez** (1nd)
Member: **Reinaldo Morabito** (6th)



1.5 RESEARCH AND SOCIETIES ADMINISTRATION

1. Officer Executive Committee of the International Association of Statistical Computing (IASC) (Summer School Officer). Francisco Louzada Neto.
2. CNPq, Invited member of the CA-MA. Francisco Louzada Neto.
3. CNPq, Invited member of the CA-MA. Maicon Ribeiro Correa.
4. CIMAT, Mexico, Member of External Evaluating Committee. Francisco Louzada Neto.
5. Brazilian Computing Society Vice President (SBC). André Carlos Ponce de Leon Ferreira de Carvalho.
6. Brazilian Statistics Association. Board member (ABE). Gleici da Silva Castro Perdoná.
7. Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). General Coordinator of Professional M.Sc. José Alberto Cuminato.
8. Deputy Director of Aerospace Sciences Group, Technical Activities Division. João Luiz Filgueiras de Azevedo.
9. FAPESP, Assistant Coordinator for Engineering . João Luiz Filgueiras de Azevedo.
10. Deputy Director for South and Central America, Region VII, Regional Engagement Activities Division. João Luiz Filgueiras de Azevedo.
11. FAPESP, Coordinator for Research for Innovation PPI1. Jó Ueyama.



2. Research Team

2.1 COORDINATION

- **Center Director:** José Alberto Cuminato - ICMC-USP
- **Deputy Director:** José Mario Martinez Perez - IMECC-UNICAMP
- **Education and Knowledge Dissemination Coordinator:** Lúcio Tunes dos Santos - IMECC- UNICAMP
- **Technology Transfer Coordinator:** Francisco Louzada Neto - ICMC-USP
- **RIDC Executive Manager:** Maria Fernanda Marreta -ICMC- USP
- **Manager of Education and Dissemination of Knowledge:** Gustavo Blengini Faria - ICMC-USP

2.2 PRINCIPAL INVESTIGATORS

Optimization and Operations research

Roberto **Andreani** (IMECC-UNICAMP), Ernesto G. **Birgin** (USP), Maicon Ribeiro **Correa** (IMECC-UNICAMP), José Mario **Martínez Perez** (IMECC-UNICAMP), Débora P. **Ronconi** (USP), Claudia Alejandra **Sagastizábal** (IMECC-UNICAMP), Sandra A. **Santos** (Unicamp), Maristela Oliveira dos **Santos** (ICMC-USP), Lucio Tunes dos **Santos** (IMECC-UNICAMP), Geraldo Nunes **Silva** (UNESP), Paulo J. S. **Silva** (IMECC-UNICAMPp), Maria do **Socorro Rangel** (UNESP) and Franklina M. B. **Toledo** (ICMC-USP).

Fluid Dynamics

João Luiz F. **Azevedo** (IAE), Gustavo Carlos **Buscaglia** (ICMC-USP), Antonio **Castelo Filho** (ICMC-USP), José Alberto **Cuminato** (ICMC-USP), Cassio M. **Oishi** (UNESP), Tiago **Pereira da Silva** (ICMC-USP), Fabrício Simeoni de **Sousa** (ICMC-USP), Leandro Franco de **Souza** (ICMC-USP) and Murilo Francisco **Tomé** (ICMC-USP).

Statistics and Data Sciences

Vicente Garibay **Cancho** (ICMC-USP), André C P L F de **Carvalho** (ICMC-USP), Kalinka Regina Lucas Jaquie **Castelo Branco** (ICMC-USP), Alexandre Cláudio Bottazo **Delbem** (ICMC-USP), Nikolai V. **Kolev** (IME-USP), Zhao **Liang** (FFCLRP-USP), Francisco **Louzada** (ICMC-USP), Luis Gustavo **Nonato** (ICMC-USP), Francisco

Aparecido **Rodrigues** (ICMC-USP), Jó **Ueyama** (ICMC-USP) Adenilso da Silva **Simão** (ICMC-USP) and Julio **Stern** (IME-USP).

2.3 ASSOCIATE INVESTIGATORS

Optimization and Operations research

Marina **Andretta** (USP), Silvio A. de **Araujo**(UNESP), Victor Claudio Bento de **Camargo** (UFSCar) Eduardo Fontoura **Costa** (ICMC-USP), Carlile **Lavor** (IMECC-UNICAMP), Aline Aparecida de Souza **Leão** (USP), Reinaldo **Morabito Neto** UFSCar, Pedro Augusto **Munari Junior** (UFSCar), Valeriano Antunes de **Oliveira** (UNESP), Vitória **Pureza** (UFSCar), Helenice de Oliveira Florentino **Silva** (UNESP) and Edilaine Martins **Soler** (UNESP).

Fluid Dynamics

Roberto F. **Ausas** (ICMC-USP), Livia Souza Freire **Grión** (ICMC-USP), Adolfo Gomes **Marto** (IAE), José Antonio **Rabi** (FZEA-USP), Maria Luísa Colluci da Costa **Reis** (IAE), Roberto Gil Annes da **Silva** (ITA), Edson Cezar **Wendland** (EESC-USP) and William Roberto **Wolf** (FEM-UNICAMP).

Statistics and Data Sciences

Carlos **Affonso** (UNESP, Itapeva), Marinho G. **Andrade Filho** (ICMC-USP), Walther **Azzolini Júnior** (EESC-USP), Dennis **Brandão** (EESC-USP), Wallace Correa de Oliveira **Casaca** (UNESP), Katiane Silva **Conceição** (ICMC-USP), Fabio Gagliardi **Cozman** (EP-USP), Mariana **Curi** (ICMC-USP), Ronaldo **Dias** (IMECC-UNICAMP), Carlos A. R. **Diniz** (UFSCar), Júlio César **Estrella** (ICMC-USP), André **Fujita** (IME-USP), Filippo **Ghiglieno** (UFSCar), Jorge Luis Bazan **Guzman** (ICMC-USP), Seiji **Isotani**(ICMC-USP), Bruno **Kimura** (UNIFESP), Marcelo de Souza **Lauretto** (EACH-USP), Ana Carolina **Lorena** (ITA), Marcello Augusto Faraco de **Medeiros** (EESC-USP), Eduardo Mario **Mendiondo** (EESC-USP), Rodolfo Ipolito **Meneguette** (ICMC-USP), Cibele Maria Russo **Novelli** (ICMC-USP), Moacir de Miranda **Oliveira Junior** (FEA-USP), Afonso **Paiva Neto** (ICMC-USP), João Paulo **Papa** (UNESP), Gleici da Silva Castro **Perdoná** (FMRP-USP), Thomas Kaue Dal Maso **Peron** (ICMC-USP), Moacir Antonelli **Ponti** (ICMC-USP) Dimas Betioli **Ribeiro** (ITA), Evandro Marcos Saidel **Ribeiro** (USP), Laura Leticia Ramos **Rifo** (IMECC-UNICAMP). Ricardo Araújo **Rios** (UFBA), Tatiane Nogueira **Rios** (UFBA), Anderson de Resende **Rocha** (IC-UNICAMP), André Luis Debiase **Rossi** UNESP, Mariá Cristina Vasconcelos Nascimento **Rosset** (UNIFESP), João Carlos **Setubal** (IQ-USP), Paulo Henrique Ferreira da **Silva** (UFBA), Secundino **Soares Filho** (FEEC-UNICAMP), Adriano K. **Suzuki** (ICMC-USP), Renato **Tinós** (FFCLRP-USP) and Claudio Fabiano Motta **Toledo** (ICMC-USP) and Vera Lucia Damasceno **Tomazella** (UFSCar).

2.4 COMPLETED AND ONGOING POST-DOCTORATE PROJECTS

Ongoing

1. André Figueiredo Ribeiro. Start: 2021. ICMC-USP. FAPESP. Supervisor: Luis Gustavo Nonato
2. Antone dos Santos Benedito. Start: 2021. UNESP. FAPESP. Supervisor: Helenice de Oliveira Florentino Silva
3. Armando Maciel Toda. Start: 2022. ICMC-USP. Supervisor: Rodolfo Ipolito Meneguette



4. Bernardo Nunes Gonçalves. Start: 2020. USP. FAPESP. Supervisor: Fábio Cozman
5. Bruno Elias Penteado. Start: 2022. ICMC-USP. Supervisor: Rodolfo Ipolito Meneguette
6. Caetano Mazzoni Ranieri. Start: 2021. ICMC-USP. FAPESP. Supervisor: Jó Ueyama
7. Caroline de Arruda Signorini. Start: 2022. UNESP. Supervisor: Silvio Alexandre de Araujo
8. Clayton Reginaldo Pereira. Start: 2017. UNESP. CAPES. Supervisor: João Paulo Papa
9. Daniel Oliveira Dantas. Start: 2021. IME - USP. PRP USP. Supervisor: André Fujita
10. Danielli Araújo Lima. Start: 2020. ICMC-USP. Supervisor: Seiji Isotani
11. Danilo Samuel Jodas. Start: 2019. UNESP. FAPESP. Supervisor: João Paulo Papa
12. Dayse de Almeida. Start: 2021. ICMC-USP. Supervisor: Luis Gustavo Nonato
13. Didier Vega-Oliveros. Start: 2020. IC - UNICAMP. FAPESP. Supervisor: Anderson Rocha
14. Diego Trindade de Souza. Start: 2020. IME - USP. PRP USP. Supervisor: André Fujita
15. Diogo Henrique da Silva. Start: 2021. ICMC-USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues
16. Douglas Donizeti de Castilho. Start: 2022. ICMC-USP. Volt Robotics. Supervisor: André Carvalho
17. Douglas Rodrigues. Start: 2022. UNESP. Petrobrás S. A.. Supervisor: João Paulo Papa
18. Eddie Nijholt. Start: 2020. ICMC-USP. Supervisor: Tiago Pereira
19. Eduardo Ramos. Start: 2020. ICMC-USP. Supervisor: Francisco Louzada Neto
20. Erika Capelato. Start: 2021. ICMC-USP. Supervisor: Mariana Curi
21. Farney Coutinho Moreira. Start: 2021. ITA. FAPESP. Supervisor: João Luis Azevedo
22. Franciane Fracalossi Rocha. Start: 2020. ICMC-USP. Petrobras S.A.. Supervisor: Fabrício Simeoni de Sousa
23. Gabriel Cirac. Start: 2021. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
24. Gilson Shimizu. Start: 2021. ICMC-USP. PRP USP. Supervisor: André Carvalho
25. Guilherme Freire Roberto. Start: 2021. ICMC-USP. PRP USP. Supervisor: André Carvalho
26. Gustavo Bochio. Start: 2019. ICMC-USP. ANP. Supervisor: José Alberto Cuminato
27. Hugo Alberto Castillo Sanchez. Start: 2021. ICMC-USP. FAPESP. Supervisor: Antonio Castelo Filho
28. Hugo de Oliveira. Start: 2022. ICMC-USP. FAPESP. Supervisor: José Alberto Cuminato
29. Jorge Yoshio Kanda. Start: 2022. ICMC-USP. Supervisor: André Carvalho
30. Leopoldo Andre Dutra Lusquino Filho. Start: 2021. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
31. Luan Carlos de Sena Monteiro Ozelim. Start: 2022. ITA. Supervisor: Dimas
32. Luca Meacci. Start: 2022. ICMC-USP. PRP USP. Supervisor: Fabrício Simeoni de Sousa



33. Lucas moutinho bueno. Start: 2018. ICMC-USP. FAPESP. Supervisor: Antonio Castelo Filho
34. Luis Claudio Sugi Afonso. Start: 2021. UNESP. Supervisor: João Paulo Papa
35. Luisa Amélia Paseto. Start: 2021. ICMC-USP. PRP USP. Supervisor: André Carvalho
36. Manuel Castro Avila. Start: 2020. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
37. Marcelo Meireles dos Santos. Start: 2021. IME - USP. PRP USP. Supervisor: André Fujita
38. Marcio Dias. Start: 2021. ICMC-USP. PRP USP. Supervisor: André Carvalho
39. Marcos Cirne. Start: 2018. IC - UNICAMP. Motorola Mobility. Supervisor: Anderson Rocha
40. Marcos Cleison Silva Santana. Start: 2022. UNESP. SpotOn. Supervisor: João Paulo Papa
41. Marcos Severo. Start: 2021. IME - USP. PRP USP. Supervisor: André Fujita
42. Mohammed Manzur Hossain. Start: 2020. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
43. Müller Moreira Souza Lopes. Start: 2022. UNESP. FAPESP. Supervisor: Cassio Machiaveli Oishi
44. Nastaran Lotfi. Start: 2021. ICMC-USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues
45. Oilson Alberto Gonzatto Junior. Start: 2021. ICMC-USP. Supervisor: Francisco Louzada Neto
46. Pedro Ribeiro Mendes Jr. Start: 2020. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
47. Rafael de Oliveira Werneck. Start: 2020. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha
48. Rafael Gonçalves Pires. Start: 2022. UNESP. Petrobrás S. A.. Supervisor: João Paulo Papa
49. Rita Santos Guimarães. Start: 2019. UNICAMP. FAPESP. Supervisor: Lucio Tunes dos Santos
50. Rodrigo Contreras. Start: 2021. ICMC-USP. CNPq. Supervisor: Luis Gustavo Nonato
51. Rômulo Damasclin Chaves dos Santos. Start: 2021. IME - USP. PRP USP. Supervisor: André Fujita
52. Rubens Augusto Amaro Junior. Start: 2022. ICMC-USP. FAPESP. Supervisor: Fabrício Simeoni de Sousa
53. Samuel Conceição de Oliveira. Start: 2022. UNESP. Supervisor: Helenice de Oliveira Florentino Silva
54. Thomas Kauê Dal'Maso Peron. Start: 2017. ICMC-USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues
55. Valdemar Abrão Devesse. Start: 2022. ICMC-USP. Volt Robotics. Supervisor: André Carvalho
56. Víctor Eduardo Martínez Abaunza. Start: 2019. IC - UNICAMP. FAPESP. Supervisor: Anderson Rocha
57. Victor Hugo Barella. Start: 2021. ICMC-USP. Supervisor: Luis Gustavo Nonato
58. Vitor Hugo De Sousa Ferreira. Start: 2021. IC - UNICAMP. Shell Inc.. Supervisor: Anderson Rocha



Completed in the period

1. Adrielle Giaretta Biase. 2021. ICMC - USP. FAPESP. Supervisor: Luis Gustavo Nonato.
2. Adrien Brilhault. 2022. UFBA. Fundação de Amparo à Pesquisa do Estado da Bahia. Supervisor: Ricardo Araújo Rios.
3. Aurea Soriano Vargas. 2021. IC - UNICAMP. Shell Inc. Supervisor: Anderson de Rezende Rocha.
4. Dalton Borges. 2022. ITA. CAPES. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
5. Desiree Maldonado Carvalho. 2021. UNESP. FAPESP. Supervisor: Silvio Alexandre de Araujo.
6. Eder Angelo Milani. 2021. USP. Petrobras S. A.. Supervisor: Francisco Louzada Neto.
7. Eduardo dos Santos Pereira. 2021. IC - UNICAMP. Shell Inc. Supervisor: Anderson de Rezende Rocha.
8. Geovane Augusto Haveroth. 2021. Instituição Caruanas do Marajá Cultura e Ecologia. FAPESP. Supervisor: José Alberto Cuminato.
9. Gislaíne Mara Melega. 2021. UFSCar. FAPESP. Supervisor: Reinaldo Morabito Neto.
10. Gustavo Luiz Olichevis Halila. 2022. IAE. Embraer S A. Supervisor: Joao Luiz Filgueiras de Azevedo.
11. Hugo Neri Munhoz. 2022. USP. FAPESP. Supervisor: Fabio Gagliardi Cozman.
12. José Gilberto Rinaldi. 2021. UFSCar. Supervisor: Reinaldo Morabito Neto.
13. Juliana Bertoco. 2021. ICMC - USP. Supervisor: Antonio Castelo Filho.
14. Kelton Augusto Pontara da Costa. 2022. UNESP. Petrobras S. A.. Supervisor: João Paulo Papa.
15. Larissa Tebaldi Oliveira. 2021. USP. Supervisor: Franklina Maria Bragion de Toledo.
16. Luciano Carli Moreira de Andrade. 2022. USP. Volt Robotics. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
17. Marcelo Archanjo José. 2022. USP. FUSP. Supervisor: Fabio Gagliardi Cozman.
18. Maria Clara Fava. 2021. ICMC - USP. FAPESP. Supervisor: Alexandre Cláudio Botazzo Delbem.
19. Petra Maria Bartmeyer. 2021. ICMC - USP. FAPESP. Supervisor: Franklina Maria Bragion de Toledo.
20. Rafael Bizão. 2022. USP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
21. Rafael Gonçalves Pires. 2022. UNESP. Petrobras S. A.. Supervisor: João Paulo Papa.
22. Rafael Massambone de Oliveira. 2021. USP. FAPESP. Supervisor: Ernesto Julián Goldberg Birgin.
23. Ramiro James Rebolledo Cormack. 2021. ICMC - USP. FAPESP. Supervisor: José Alberto Cuminato.
24. Thiago Felipe de Souza Avanci. 2021. Università Mediterranea di Reggio Calabria. Mediterranea International Centre for Human Rights Research. Supervisor: Wallace Correa de Oliveira Casaca.
25. Tiago Botari. 2021. USP. FAPESP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
26. Tiago da Costa Menezes. 2022. USP. FAPESP. Supervisor: Ernesto Julián Goldberg Birgin.
27. Tiago Tiburcio da Silva. 2021. UNIFESP. CAPES. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.



Table 2.1 displays the Post-Doc grants awarded to members of the project during the report period, discriminated by the funding agency. The purpose of this table is to give an idea of the amount of grants awarded to CeMEAI from other funds than those of the project.

TABLE 2.1: POST-DOC GRANTS AWARDED (P) - PUBLIC FUNDS - (Pr) - PRIVATE FUNDS

Funding	Completed	Ongoing
Fapesp (P)	11	18
Capes (P)	2	1
CNPq (P)	0	1
Petrobras (Pr)	3	3
Motorola (Pr)	0	1
Shell (Pr)	2	7
Embraer S.A. (Pr)	1	0
Fundação de Amparo à Pesquisa do Estado da Bahia (P)	1	0
Mediterranea International Centre for Human Rights Research (Pr)	1	0
Volt Robotics (Pr)	1	2
FUSP/PRP USP (Pr) (P)	1	10
SpotOn (Pr)	0	1

3. High Impact Research and Projects

3.1 INTRODUCTION

This Chapter describes CeMEAI’s research projects of greatest impact either financially, scientifically or socially. Other projects can be found in the section **Projects** of the CeMEAI’s website.

(<http://www.cemeai.icmc.usp.br/projetos>).

We start with the impact of CeMEAI’s publications, **Table 3.1** shows the current h-index of the Center’s publications since the beginning of the project. **Figures 3.1 and 3.2** show screenshots of Publons’s page since we cannot turn it public.

TABLE 3.1: H-INDEX (2013-2022)

Site	h-index	Citations
Web of Science	55	21.817
Google Scholar	78	34.651

Web of Science Core Collection metrics

Citation counts are from Web of Science Core Collection.

2,251

Publications in Web of Science

21,817

Sum of Times Cited

55

H-Index

Número de citações e publicações ao longo do tempo

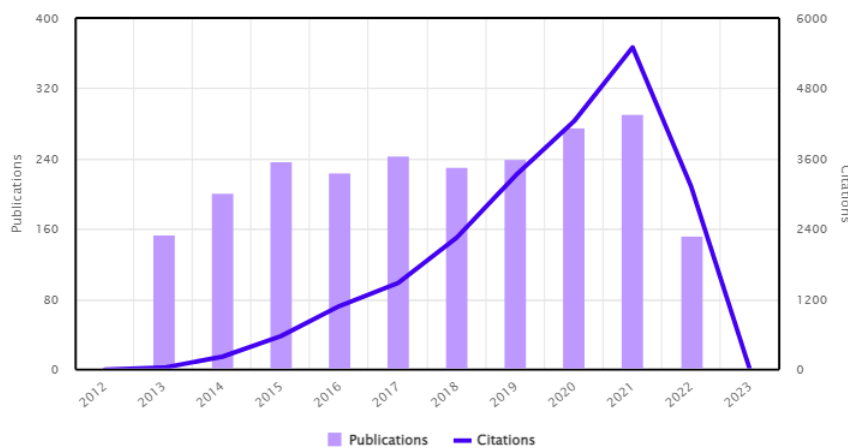


FIGURE 3.1: SCREENSHOT OF WEB OF SCIENCE METRICS

Google Scholar: <https://scholar.google.com.br/citations?user=qxiSYp4AAAAJ&hl=pt-BR>

Web of Science: <https://www.webofscience.com/wos/author/record/J-2417-2015>

3.2 HIGH IMPACT PUBLICATIONS

3.2.1 MOST CITED PAPERS 2021-2022

• **Boldfaced names** are members of CeMEAI

- W. A. O. Soler, **M. O. Santos**, and K. Akartunali. “MIP approaches for a lot sizing and scheduling problem on multiple production lines with scarce resources, temporary workstations, and perishable products”. In: *Journal of the Operational Research Society* 72.8 (Aug. 2019), published on 2021, pp. 1691–1706.
DOI: 10.1080/01605682.2019.1640588.
15 (Google Scholar) 9 (Web of Science)
- A. Z. Afify, **A. K. Suzuki**, C. Zhang, and M. Nassar. “On three-parameter exponential distribution: properties, Bayesian and non-Bayesian estimation based on complete and censored samples”. In: *Communications in Statistics - Simulation and Computation* 50.11 (July 2019) published on 2021, pp. 3799–3819.
DOI: 10.1080/03610918.2019.1636995.
12 (Google Scholar) 8 (Web of Science)
- F. S. dos Santos, M. K. Osako, **G. da Silva Castro Perdoná**, M. G. Alves, and K. U. Sales. “Virtual Microscopy as a Learning Tool in Brazilian Medical Education”. In: *Anatomical Sciences Education* 14.4 (Apr. 2021), pp. 408–416. DOI: 10.1002/ase.2072.
10 (Google Scholar) 6 (Web of Science)
- A. S. Ballarin, G. L. Barros, M. C. Cabrera, and **E. C. Wendland**. “A copula-based drought assessment framework considering global simulation models”. In: *Journal of Hydrology: Regional Studies* 38 (Dec. 2021), p. 100970. DOI: 10.1016/j.ejrh.2021.100970.
5 (Google Scholar) 5 (Web of Science)
- C. de Arruda Signorini, **S. A. de Araujo**, and G. M. Melega. “One-dimensional multi-period cutting stock problems in the concrete industry”. In: *International Journal of Production Research* 60.8, pp. 2386–2403. DOI: 10.1080/00207543.2021.1890261.
6 (Google Scholar) 4 (Web of Science)



3.2.2 PAPERS IN HIGH IMPACT JOURNALS 2021-2022 (JCR>5)

Tables 3.2 and 3.3 show the papers in high impact journals.

TABLE 3.2: PAPERS IN HIGH IMPACT JOURNALS 2021-2022 (JCR>10)

Paper number	Journal	JCR
[156]	Nature	69,504
[8]	Nucleic Acids Research	19,160
[48,185,283,284]	ACM Computing Surveys	14,324
[54,55]	Briefings in Bioinformatics	13,994
[97]	Computers in Industry	11,245
[216]	Journal of Cleaner Production	11,072
[61]	IEEE Transactions on Image Processing	11,041



TABLE 3.3: PAPERS IN HIGH IMPACT JOURNALS 2021-2022 (JCR>5)

Paper number	Journal	JCR
[7,84,200,333]	Chaos, Solitons & Fractals	9,022
[276]	International Journal of Epidemiology	9,685
[309]	Energy Economics	9,252
[30,143,176,177]	International Journal of Production Research	9,018
[38,53,87,115,142,159]	Expert Systems with Applications	8,665
[56,63,119,190,289,334]	Applied Soft Computing	8,263
[5,134]	Information Sciences	8,233
[151,224,261]	Knowledge-Based Systems	8,139
[19]	Mathematical Programming Computation	8,059
[271]	International Journal of Educational Technology in Higher Education	7,611
[260]	Clinical Epigenetics	7,259
[60,168]	Reliability Engineering & System Safety	7,247
[42,45,266]	IEEE Transactions on Information Forensics and Security	7,231
[236]	Computer Methods and Programs in Biomedicine	7,027
[220]	Bioinformatics	6,931
[131,325]	Computers and Electronics in Agriculture	6,757
[285]	Anatomical Sciences Education	6,652
[136,264,344]	Computer Methods in Applied Mechanics and Engineering	6,588
[116]	Ecology	6,431
[294]	CATENA	6,367
[68,258,301]	European Journal of Operational Research	6,363
[41]	Digital Communications and Networks	6,348
[146]	International Journal of Neural Systems	6,325
[183]	Water Resources Research	6,159
[77]	Automatica	6,150
[342]	Frontiers in Cell and Developmental Biology	6,081
[59]	Behavior Research Methods	5,953
[197,240]	Neurocomputing	5,779
[96]	International Journal of Electrical Power & Energy Systems	5,659
[194]	Ceramics International	5,532
[121,129]	Computer Networks	5,493
[34]	Journal of Hydrology: Regional Studies	5,437
[192,232]	International Journal of Heat and Mass Transfer	5,431
[81,215,222]	Machine Learning	5,414
[100,170]	Remote Sensing	5,349
[14]	Applied Mathematical Modelling	5,336
[81,215,222]	Machine Learning	5,414
[100,170]	Remote Sensing	5,349
[14]	Applied Mathematical Modelling	5,336
[122]	IEEE Transactions on Visualization and Computer Graphics	5,226
[217,273,316]	Journal of Petroleum Science and Engineering	5,168
[330]	Frontiers in Neuroscience	5,152
[16]	International Journal of Geographical Information Science	5,152



3.3 HIGH IMPACT PROJECTS UNRELATED TO COVID-19

3.3.1 MULTISCALE METHODS FOR THE NUMERICAL SIMULATION OF PETROLEUM RESERVOIRS

Coordinator: Fabrício Simeoni de Sousa (ICMC-USP)

The main goal of this project is the development of a two-phase simulation system, employing multiscale mixed finite element methods for the simulation of petroleum reservoir discretized by huge meshes, possibly with 1 billion cells.

The recently discovered off-shore region in Brazil, known as “pre-salt fields”, are huge in dimensions, compared to conventional reservoirs previously explored. This new length scale poses a problem for conventional commercial codes, that are not suitable to handle the huge dimensions involved, in order to give accurate predictions of the reservoir lifecycle. Therefore new simulation tools need to be developed. The sophisticated multiscale domain decomposition methods currently in development in this project, will allow near-perfect parallel speedup in the numerical computations, taking advantage of the state-of-the-art high performance computing multicore and GPU architectures. This will make possible the simulation of huge amounts of cells in feasible time, producing accurate predictions for realistic high heterogeneous porous media, such as the ones found in the pre-salt layer. The development of such tools will have a huge impact in the simulation capabilities of the Brazilian oil company Petrobras, consequentially improving the exploration of such fields. This project is an academic collaboration between ICMC/USP, IMECC/UNICAMP and The University of Texas at Dallas, USA.

Partnership: Petrobras S.A.

Funding: R\$:3.334.880,00

Researchers: Fabrício S. Sousa (Coordinator), Gustavo C. Buscaglia (ICMC-USP), Roberto F. Ausas (ICMC-USP), Luis Felipe Pereira (UT-Dallas), Eduardo Abreu (UNICAMP)

3.3.2 RECONSTRUCTION OF COMPLEX NETWORKS

Coordinator: Tiago Pereira da Silva (USP-ICMC)

This project aims at describing emergent behaviors in complex networks of nonlinear dynamic systems such as the brain, power networks, epidemics, social networks, protein networks, and smart city sensors. The goal is to predict critical transitions and to prevent catastrophes.

This project has had a great impact, and it has been supported by Serrapilheira Institute and The British Royal Society. The results of this project has been published on the Reviews of Modern Physics [323], a high impact journal.

This project was one of the 12 projects that were selected to receive an additional R\$1.000.000 from Serrapilheira Institute

Funding: R\$:1.100.000,00 (Serrapilheira) and R\$:400.000,00 (The Royal Society)



3.3.3 METHODOLOGIES AND RELIABILITY METRICS OF WELL-DRILLING EQUIPMENT

Coordinator: Francisco Louzada Neto (ICMC-USP)

The objective of this project is to develop statistical and computational methodologies, appropriate for the calculation of the reliability of various equipment used for the drilling wells, taking into consideration the provisions of the same throughout the system and their failure rates.

Institutional/Industrial Partnerships: ICMC-USP, Petrobras S.A.

Funding: R\$:4.722.991,00

3.3.4 EVA - VIRTUAL ASSISTANT FOR PREGNANT WOMEN: FOLLOW-UP OF PHYSICAL ACTIVITY

Coordinator: Gleici da Silva Castro Perdoná (FMRP-USP)

EVA is the world's first open source, Portuguese-speaking virtual personal assistant. Virtual assistants (AV) are software or a set of software capable of interacting with humans in natural language, such as writing and reading chats or speaking, listening and interpreting voice commands. Personal virtual assistants, on the other hand, are a category capable of adapting to a specific person, meeting their personal needs; the goal is - in the near future - to be something like a virtual friend with a unique personality, who has, for example, a tone of voice and behavior of his own.

EVA is an acronym for Virtual Analytical Assistant. The term Analytical because it is an auxiliary AV for data processing and statistical inferences based on Artificial Intelligence techniques and Mathematical Models.

The collected data will be obtained from around 200 volunteer pregnant women. The data will be generated by triaxial accelerometer sensors.

At the end of the project, the EVA and auxiliary software will be made available in open code (mostly) to researchers and enthusiasts, just mentioning the source in their respective projects.

Project website: <http://eva.fmrp.usp.br>

Institutional/Industrial Partnerships: PPSUS - FAPESP

Funding: R\$:157.641,40

3.3.5 GLASS PROPERTIES PREDICTION (CEMEAI-CERTEV)

Coordinator: André Carlos Ponce de Leon Ferreira de Carvalho (ICMC-USP)

This collaborative project between two RIDCs CeMEAI and CeRTEv investigates the use of artificial intelligence techniques, initially artificial neural networks, for the prediction of glass transition temperature in glasses, specifically non-metallic inorganic glasses. The project combines scientific research and innovation and also includes the construction of software that allows the use of tools developed by other groups



both in academia and industry. One of the results was a paper in Acta Materialia.

3.3.6 THEMATIC PROJECT 'COMPUTATIONAL METHODS OF OPTIMIZATION' (FAPESP 2018/24293-0)

Coordinator: Sandra A. Santos (IMECC-UNICAMP)

Among the main accomplishments of the period, we highlight: advances in complexity analysis of algorithms for structured nonlinear programming problems; development of constraint qualifications and optimality conditions for cone programming and related problems; development of sequential optimality conditions for nonsmooth optimization and mathematical programs with equilibrium constraints; analysis of higher-order regularization models; solution of noisy problem of parameter identification; theoretical discussion on electricity prices.

3.3.7 AGREEMENT FOR RESEARCH DEVELOPMENT

Coordinator: André Carlos Ponce de Leon Ferreira de Carvalho (ICMC-USP)

Institutional/Industrial Partnerships: Tribunal de Justiça do Estado de São Paulo-TJSP

Funding: R\$:1.241.700,48

3.3.8 CRIME PATTERN IDENTIFICATION IN THE 99 RIDE-HAILING SERVICE

Coordinator: Luis Gustavo Nonato (ICMC-USP)

This research project aims to develop exploratory data analysis tools aimed at studying the relationship between crime rates in the ride-hailing service and external variables such as urban characteristics, passengers and drivers data, and socio-economic indicators, seeking mainly to create risk indicators for 99 drivers. In addition to the exploratory analysis, the proposal includes a study of risk prediction techniques for drivers. The analytical tools are based on data science, visual analytics and artificial intelligence methods.

Institutional/Industrial Partnerships: 99

Funding: R\$:155.970,00

3.3.9 DEVELOPMENT OF DATA SCIENCE TECHNIQUES IN DCS

Coordinator: Luis Gustavo Nonato (ICMC-USP)

This research project aims to develop exploratory data analysis tools related to investigate Petrobras pipelines' clandestine derivations. The main focus of the research is to use data science and artificial intelligence tools to extract and analyze patterns that allow us to understand how urban, socio-economic, road network, crime dynamics, among other variables, are related to clandestine derivations. In particular, the project



seeks to provide subsidies for the future development of indicators that make it possible to identify places at greater risk of suffering a clandestine shunt.

Institutional/Industrial Partnerships: Petrobras Transportes (Transpetro)

Funding: R\$:527.400,00

3.3.10 OTIMIZAÇÃO DE PREÇO DE PRODUTOS E EQUALIZAÇÃO DE CONCORRÊNCIA

Coordinator: Francisco Louzada Neto (ICMC-USP)

Institutional/Industrial Partnerships: Porto Seguro - Seguros

Funding: R\$:216.313,00

3.4 COVID-19 RELATED PROJECTS

During 2021 CeMEAI researchers worked on several Covid-19 projects. More information about them can be found at this hotsite: <http://cemeai.icmc.usp.br/covid19/>. Some researchers created a special website to support managers, population and scientists <http://www.cemeai.icmc.usp.br/ModCovid19>.

3.4.1 MODCOVID19

ModCovid is a research group aiming at developing mathematical models for simulating COVID-19 Pandemic phenomenons, behaviour and possible scenarios.

Funding: R\$ 560.000,00 (Serrapilheira), R\$ 750.000,00 (Instituto D´Or) and R\$ 793.000,00 (CNPq)

Website <http://www.cemeai.icmc.usp.br/ModCovid19>

Researchers: Tiago Pereira, Luis Gustavo Nonato, José Alberto Cuminato and Francisco Louzada Neto (ICMC-USP), Paulo J. S. Silva and Claudia Sagastizábal (IMECC-Unicamp), Thales Vieira, Sérgio Lira, Krerley Oliveira (UFAL), Adriano Barbosa (UFGD), Claudio José Struchiner (UERJ), Dan Marchesin (IMPA) and Guilherme T. Goedert

DISTANCIAMENTO INTERMITENTE INTELIGENTE E INDIVIDUALIZADO. PROSPECÇÃO DE CENÁRIOS MODCOVID19

Coordinator: José Alberto Cuminato (ICMC-USP)

The goal is to establish intelligent protocols to control COVID-19 on the cities, evaluate public actions and the economic impact of this actions.

Funding: R\$ 793.000,00 (CNPq)



Researchers: José Alberto Cuminato (coordinator), Paulo J. S. Silva, Claudia Sagastizábal, Tiago Pereira, Francisco Louzada Neto and Luis Gustavo Nonato

VIDAS SALVAS (MODCOVID19)

Coordinators: Paulo J. S. Silva and Claudia Sagastizábal (Unicamp)

Vidas Salvas is a study that uses SEIR model to identify tendencies on the evolution of the COVID-19 pandemic and estimates the number of lifes saved by Public Health Measures.

website <http://www.cemeai.icmc.usp.br/ModCovid19/vidas-salvas/>

Researchers: Paulo J.S.Silva and Claudia Sagastizábal (Coordinators), Tiago Pereira and Alexandre Delbem (ICMC-USP)

VACCINATION PANEL (MODCOVID19)

The vaccination panel was created with the aim of informing the general public about the progress of vaccination in the country, states and municipalities. The data used come from the Ministry of Health.

website <http://http://vacinometro.icmc.usp.br/>

Researcher: Tiago Pereira (ICMC-USP)

3.4.2 SP COVID-19 INFO TRACKER

Coordinator: Wallace Casaca (UNESP)

SP Covid-19 Info Tracker is a freely available platform that daily collects Covid-19 data from more than 90 cities in the São Paulo state (<http://www.spcovid.net.br>). The system has been systematically improved so as to make available to society, journalistic class and public authorities a comprehensive Covid-19 database, which includes time-series data, epidemiological metrics, statistical scores and forecast results for each one of the monitored cities by the project. The Info Tracker platform has received more than 75,000 views since its creation, on June 10, and it has also contributed to the efforts promoted by Cepid-CeMEAI in the task of scientific dissemination and pandemic mitigation by means of various media reports and news broadcast by highly rated news agencies in Brazil.

In more specific terms, the project focuses on delivering an affordable, easy-to-use tool for navigating and interacting with COVID-19 data at municipal levels, giving to the society and public authorities an appropriate technology to explore the data interactively and with a high degree of details. Another interesting aspect of Info Tracker is that it has also been recurrently used by journalists and media companies to audit the Covid-19 pandemic in the monitored cities, including the use of the available data to support news and public inspections. Finally, the project has also led to new methodologies and computational solutions, more especially regarding the task of predicting the number of cases, deaths and the reproduction number $R(t)$ of coronavirus, serving as a basis for decision-making by government agents, as well as advancing in the epidemiology area.



Website <http://www.spcovid.net.br/>

Researchers: Wallace Casaca, Marilaine Colnago (UNIVESP) (Coordinators), Cassio Oishi (UNESP), José Alberto Cuminato (ICMC-USP), and Fábio Amaral (UNESP)

3.4.3 SAFETY-STOCK (ESTOQUE SEGURO)

Coordinator: Francisco Louzada Neto (ICMC-USP)

The main goal is to build an easy-to-use expert system to predict the demand for personal protective equipment in hospitals during the COVID-19 pandemic, which can be updated in real-time for short term planning.

partnership Bionexo

Researchers: Francisco Louzada Neto and Maristela de Oliveira Santos (Coordinators), Cibele Maria Russo Novelli (ICMC-USP)



4. Innovation and Technology Transfer Report

4.1 INTRODUCTION

During its ninth year of activities, the CEPID-CeMEAI's research team, have strived continuously for maintaining research and development of new and innovative methodologies up and running. Those technologies are based on mathematical sciences, aim to optimize designs and processes, to reduce costs, focusing on transference of mathematical technology to industry.

In the above context, the CEPID-CeMEAI provided an academic structure for the development of researches on the state-of-art of mathematical sciences, proposing innovation and transferring technology for companies, public institutions and the community, promoting the interaction and the application of mathematics to problems arising from the medical, industrial, agricultural, sport and financial areas, as well as oil and aeronautics sectors.

All the different groups, engaged in the CEPID-CeMEAI contributed to the technology transfer process. Although some groups used more specific approach models, generally, the focus was on thinking about practical problems and products, motivated by industrial/institutional projects or community needs, developing essential aspects of the projects in the academic environment, and training of human resources, mostly composed by post-docs, PhDs, Masters and IC students, to the best possible level.

From the industrial/institutional/community side, the partnership was generally informally driven by one or a group of industrial/institutional staff, responsible for the research, with which the academic team of the project maintains exchanges and collaboration, or by the community, that then absorbed the new technologies via software and systems.

4.2 CEMEAI'S ACTIVITIES

Several actions related to innovation and technology transfer were carried out. The highlights are as follows.

4.2.1 KNOWLEDGE TRANSFER WORKSHOPS

During the last period, CeMEAI promoted the following workshops:

- 2022-01-22, 2022-05-03. 2nd MBA on Data Science Workshop, which occurred remotely due to the Pandemic. There were presentations of 200 works distributed on virtual rooms.

More information can be found at

<https://cemeai.icmc.usp.br/eventos/event/110-2o-workshop-de-defesas-mba-ciencias-de-dados-cemeai>

- 2022-02-21 to 2022-02-26. VI Applied Mathematics School. There were 66 students participating.

More information can be found at

<https://cemeai.icmc.usp.br/noticias/noticias-cemeai/item/1252-cepid-cemeai-realizara-escola-de-r>

- 2021-09-06 to 2021-09-10. VII Study Group with Industry remotely. There were six problems from six different companies: Big data, Carteira global, Rumo, McKinsey & Company, GPP-Esalq and MPPB. More information can be found at <https://centropi.impa.br/7wsmpi/>;

- 2022-03-07 to 2022-03-11. VIII Study Group with Industry remotely. There were five problems from five different companies: Americanas S.A. (e-commerce), MRS (logistics), Imaflora (Eco) and CCEE/CEPEL (Energy).

More information can be found at <https://cemeai.icmc.usp.br/WSMPI/8a-edicao/>;

- The 9th Study Group with Industry will be promoted by CeMEAI in February 2023.

4.2.2 MEETINGS WITH PARTNERS

One of the main actions of CeMEAI is to search for industrial problems, opportunities and partnerships, providing advice to researchers, students and industries. In the present context, we have the Technological Clinics, a consultancy service for researchers, students and industries with needs for mathematical, statistical and computing solutions. We set up a team of research and staff of the CEPID-CeMEAI to listen and understand the problems and direct them to one of the CEPID-CeMEAI research groups so that solutions can be delivered quickly and effectively.

Although the COVID-19 pandemic partially affected our service. During the period of this report, we had 49 meeting with industrial partners.

Some of the companies that we met up are: Raízen, Inteli, Americanas SA, Sec da Fazenda, SBGf, EESC Jr, MRS, 1STI/Sofya, Fábrica de Inovação - Limeira, NVidia, CCEE, Versatus, TCE, FUGRO, EY, PGS, Tapete São Carlos, Grupo NC, CCR, AmDocs, SEFAZ/SP, INESC, IFOOD, Daedalus and Serasa.

4.2.3 CORPORATE EDUCATION AS AN TECHNOLOGY TRANSFER ACTIVITY

CeMEAI's objective is to promote closer ties between the academic and industrial communities, ensuring that academic, scientific and technological development is accessible to a wider range of users, enabling the development of new materials, processes, products and services, through efficient use of mathematical sciences in real problems of the most diverse areas of knowledge.

In this context, we created a quality CeMEAI Corporate Education structure, through which we are able to proceed with our technology transfer process in a structured and systemic manner, guaranteeing a vigorous learning process.

It is important to note that this technology transfer activity is integrated with the education and knowledge diffusion activities as described in Section 5, offering students a unique and very important opportunity: to bring a real problem of their companies to be solved with the support of the CEPID-CeMEAI supervisors throughout the course.



Thus, in addition to training and developing theoretical and practical skills in the field of data science, the student can also offer a solution to an industrial problem from his company.

Our courses are offered in different modalities, aligned with the practices and values that are part of your partner companies vision and mission, reflecting in the effective attendance of their needs.

We have the following training possibilities:

- Professional Master Program in Mathematics, Statistics and Computing Applied to Industry(MECAI);
- MBA on Data Science (online), 1st, 2nd and 3rd Editions;
- MBA on Data Security (online), 1st Edition;
- *In loco* and online Corporate Training Program;
- Specific short training.

We have trained staff from more than 400 companies and institutions, corresponding the following amount of staff from industries:

- 142 staff from the 1st Edition of the MBA in Data Science;
- 55 staff from the 1st Edition of the MBA in Data Security;
- 196 staff from the 2nd Edition of the MBA in Data Science;
- 260 staff from the 3rd Edition of the MBA in Data Science;
- 180 staff from the Statistics for Data Science;
- 19 staff from the Corporate Training Program in Data Science for the Sul America Insurance Company;

More information can be found at <http://cemeai.icmc.usp.br/acoes/educacao-corporativa>.

4.2.4 HYBRID PBL AS AN TECHNOLOGY TRANSFER ACTIVITY

The Problem Based Learning (PBL) methodology aims to increase the practicality, retention and applicability of knowledge. PBL has proved to be a good alternative to the traditional teaching methodology, with high levels of student satisfaction. Researchers at CEPID-CeMEAI have obtained positive results regarding the implementation of this methodology, adapted to statistical disciplines, both at undergraduate and graduate levels. In particular, we proceed with an adapted hybrid structure in which students, concomitantly, receive training on the course topics, but focusing on solving real industrial problems, on a vertical learning structure, which we named hybrid Problem Based Learning (hiPBL).

More information can be found at <http://cemeai.icmc.usp.br/acoes/educacao-e-difusao/item/941-aprendizado-baseado-em-problema-industrial-hibrido-hipbl>.



4.2.5 NEW CONTRACTS

- Volt Robotics. Coordinator: André Ponce Leon de Carvalho.
Funding: R\$ 648.000,00.
- Transpetro. Coordinator: Luis Gustavo Nonato.
Funding: R\$ 527.400,00.
- GrapeHawk SAS. Coordinator: Cláudio Fabiano Motta Toledo.
Funding: R\$ 46.200,00.

4.3 NEW INITIATIVES

As future initiatives, the strategy for innovation and technology transfer of the CEPID-CeMEAI should follow some basic lines of action in order to approximate academy and industry. Particularly, following the three initiatives below:

- Continue to encourage the Knowledge Transfer Workshops (KTW) and Study Groups with Industry (SGI);
- Continue to establish formal cooperation agreements and encourage applications for funding;
- Continue to incentive nucleation of start-ups/spin-off companies and the development of new products.
- Strive to make CeMEAI an EMBRAPII unit.



5. Education and Knowledge Diffusion Report

5.1 INTRODUCTION

The activities of Education and Knowledge Diffusion of CeMEAI focuses on the presentation of mathematical contents to students with different levels of knowledge, by organizing lectures and workshops for students visiting the university and visits to public schools. We believe that these activities contribute to a better dissemination of Mathematics both in itself but also in its interactions with the different areas of knowledge. In addition, the center's publications on the web, make it more visible to society the research activities carried out in universities. More information about the center and its projects can be found at www.cemeai.icmc.usp.br.

The COVID-19 Pandemic postponed or canceled several events and routine activities that were planned such as **Robotics Courses to K-12 students and teachers**, **Seminários de Coisas Legais** and **OBMEP at UNICAMP**.

5.2 ONGOING PROJECTS

5.2.1 MECAI

The Professional Master Program in Mathematics, Statistics and Computing Applied to Industry (MECAI) is a two-years-of-study course started in August 2014. It represents one of the main initiatives of the RIDC-CeMEAI for improving the mathematical sciences background of employees of high-tech selected industries. MECAI is a modular M. Sc. course that can be tailored to meet a given demand. The first module in Finances was targeted at the banking industry and started with 20 students, all employees of banks or brokers. In 2022 the 8th module on Data Science started with new 20 students.

The professional master's degree is the first professional master's degree in Brazil that covers, in a comprehensive way, specific areas of mathematics, statistics and computing applied to industry. The goal is to improve the training of professionals and meet the demand of industry for personnel with a better background in the mathematical sciences. It is a very successfully program, with students of different backgrounds from companies like: Bank of America, Itaú, Morgan Stanley, Bradesco, Siemens, SAP, Nielsen, Cielo, Monsanto, TAM, Embrapa, HP, Serasa Experian, Embraer and others. More information about the Professional Master Program is available at <https://www.icmc.usp.br/pos-graduacao/mecai>.

On 2021, we promoted the 1st MECAI Workshop. All the presentations are public at <https://cemeai.icmc.usp.br/1WMECAI/>

5.2.2 MBA IN DATA SCIENCE

The 440-hour online graduate course, the MBA in Data Science is on its third edition with less than 10% of dropouts and maintaining a high Net Promoter Score of 40 (ranking Great). The 4th edition is planned to 2023.

More information can be found at www.cemeai.icmc.usp.br/MBA.

5.2.3 MBA IN DATA SECURITY

Following the success of the MBA in Data Science, CeMEAI created another 400-hour online graduate course, the MBA in Data Security that started in June 2021. It has 55 students. More information can be found at www.cemeai.icmc.usp.br/MBASD.

5.2.4 EDUSCAR

By the end of 2018 the five RIDCs based in São Carlos together with the Engineering Research Center met at UFSCar, with the objective of improving education in São Carlos, using some schools as a test bed. The São Carlos' Education secretary and State Education Director were invited to this work-group, and we are working together since then. Several existing and new initiatives were proposed and are being carried out for the benefit of local public education. EduSCar activities are described on a separated report. Some of the results of the initiatives can be found in the Eduscar website <http://www.cemeai.icmc.usp.br/EduSCar/>

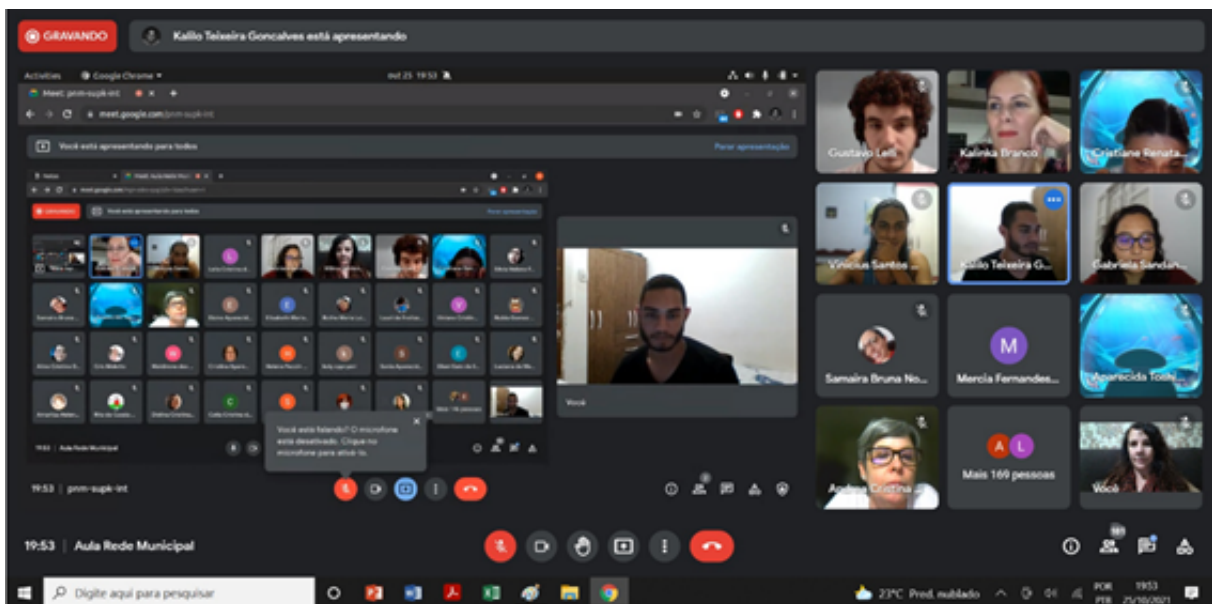


FIGURE 5.1: PROJECT - EDUSCAR

5.2.5 ACTA LEGALICUS

CeMEAI hosts a web journal based on "Seminários de Coisas Legais" to present papers to high school, freshman and senior college students. The first articles were published on August 2017, and now there are 30



articles available on <http://www.cemeai.icmc.usp.br/actalegalicus>.

5.3 DISSEMINATION

During the period of this report the number of unpaid followers of CeMEAI at Facebook grew to 2143, 18 videos were produced and published with more than 2805 views. Our YouTube Channel grew from 1000 to 1250 subscriptions with more than 122,000 views (23,000 new views last 12 months). The website had more than 3,200 users per month in last months. There were 70 press releases in the period with a total of more than 149,000 hits on the website.

CeMEAI clipping includes more than 796 appearances in media in this report period including:

- TV Channels: Rede Globo and local affiliates, CNN, Rede Record TV Cultura and SBT
- Newspapers: O Estado de São Paulo, Folha de São Paulo, O Globo and O Estado de Minas.
- Magazines and sites: Governo do Estado de São Paulo, UOL, Terra, G1, R7, Valor Econômico, Istoé, O Antagonista, Jovem Pan, CBN, Veja, Agência FAPESP and Pequenas Empresas, Grandes Negócios

5.3.1 COVID-19 RESEARCH MEDIA IMPACT

CeMEAI researches on COVID-19 appeared 600 times in media. The posts also had a good performance on social media with lots of interaction (likes, comments and shares).

APP PANDEMIC STATS BE É DESENVOLVIDO COM APOIO DE PESQUISADORES DO CEMEAI

Link <https://bit.ly/pandemics-stats-be>

Researchers: Cassio Oishi

Website views: 4020

ESTUDO RELACIONA USO CORRETO DE MÁSCARAS AO RETORNO SEGURO ÀS AULAS PRESENCIAIS

Link <https://bit.ly/retorno-seguro-aulas>

Researchers: Tiago Pereira

Website views: 6416

DELTA EXIGE INTERVALO MAIS CURTO ENTRE DOSES DE VACINA, SUGERE ESTUDO

Link <https://bit.ly/intervalo-vacina>

Researchers: Paulo J. S. Silva, Claudia Sagastizábal, Luis Nonato and Tiago Pereira

Website views: 3021



ARTIGO MOSTRA O IMPACTO DA PANDEMIA NA ECONOMIA MUNDIAL

Link <https://bit.ly/impacto-pandemia-economia>

Researchers: Francisco Louzada

Website views: 2446

PLATAFORMA RESOLVE COMO ALOCAR PESSOAS EM AMBIENTES FECHADOS

Link <https://bit.ly/distancia-segura>

Researchers: Francisco Louzada

Website views: 1896

EM AMBIENTES FECHADOS, RISCO DE CONTÁGIO DE COVID-19 SOBE PARA 80% SEM USO DE MÁSCARAS

Link <https://bit.ly/contagio-ambientes-fechados>

Researchers: Francisco Louzada

Website views: 1426

5.3.2 WEBSITE AND SOCIAL MEDIA

- **Website:** <http://www.cemeai.icmc.usp.br>
- **Facebook:** <https://www.facebook.com/cepid.cemeai>
- **YouTube:** <https://www.youtube.com/cepidcemeai>
- **Twitter:** <https://twitter.com/cepidcemeai>



6. Institutional Support to the Project

The University of São Paulo through the Institute of Mathematical and Computer Sciences (ICMC) as the host Institution for the project has provided adequate support for the smooth running of it. The main support provided by ICMC is:

1. Two full time staff working as industry liaison, knowledge and dissemination and full support for visitors, meetings, industry contacts and contracts
2. Office space for meetings and for the two staff. Computer infrastructure for the installation of the cluster Euler.
3. Cars and drivers for all the travel involved in the industrial contacts, workshops and visitors transfers
4. Full support for accounting and keeping track of expenses and the necessary documentation. Full support for purchasing goods, booking hotels, arranging and booking travel for all participants of Cepid-CeMEAI, including those from the associate institutions.
5. Full support for the organization of the Study Groups with Industry and Modeling Schools.
6. Full support for industry liaison and contracts conclusion.

7. Activities plan for the next period

As usual, for the next years, we intend to continue to organize the Study Groups with Industry (SGI). After the pandemic, we moved it from July to March and hope we will be able to do it then for the coming years. In 2022 it was organized in March as described in other parts of this report

With ten years of the project gone by, it became more realistic the idea of having research projects genuinely sponsored by the Center. CeMEAI sponsored the application of two new projects to Fapesp. One center for AI, was granted to Prof. André Carvalho and one NPOP was granted to Luiz Gustavo Nonato. CeMEAI also participated actively in the IBM center C4AI, which was granted to Prof. Fabio Gagliardi Cozman from Poli-USP and has the participation of Alexandre Delben from CeMEAI. We have also applied to the last round of the new EMBRAPII call from MCTI and have been selected for the next round.

USP provided funds for hiring one academic staff for CeMEAI. This new staff has already been contracted and we hope to improve our industry liaison capacity. USP also decided to grant CeMEAI with two new nonacademic staff that will provide support for the HPC users of Euler.

In an attempt to become more interdisciplinary we are contacting other RIDCs aiming at encouraging the possibility of having more mathematics in their activities. RIDCs that collaborate intensely with CeMEAI, at present, are CERTEV and NEV. In this regard, a joint NPOP project with NEV was approved but unfortunately, the industrial partner withdrew its financial support at the very last minute. We are also making arrangements for the Euler cluster upgrade in 2023.

Appendices

A. M.Sc. and PhD Students

A.1 ONGOING PHDS

1. Adele Behzad. TBD. Start: 2021. Thesis (Ph.D. in Applied Mathematics) - USP. Supervisor: Ernesto Julián Goldberg Birgin.
2. Alan Reis. Análise da interação rio-aquífero, a partir do uso de sensores de temperatura distribuídos. Start: 2018. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
3. Aldimir José Bruzadin. Segmentação Semântica de Imagens via Aprendizado por Reforço Profundo e Minimização de Funcionais de Energia em Grafos. Start: 2022. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Wallace Correa de Oliveira Casaca.
4. Alessandra Campos dos Santos. Aplicação do método Eddy Covariance e implementação de uma abordagem de fusão de imagens de sensoriamento remoto multi-escala para o monitoramento da evapotranspiração em área de Cerrado sensu stricto. Start: 2019. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
5. Alex de la Cruz Huayanay. Modelos alternativos para classificação na presença de dados desequilibrados. Start: 2019. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazan Guzman.
6. Alex Leal Mota. Não Definido. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Co-supervisor: Francisco Louzada Neto.
7. Alfredo Guilherme da Silva Souza. Proteonica aplicada a detecção de Cancer. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Adenilso da Silva Simão.
8. Aline Rodrigues Machado. Não definido. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
9. Alysson Alexander Naves Silva. Classificação de sementes e grãos com comitê de Redes Neurais Convolucionais Evolutivas usando Algoritmos Genéticos Multiobjetivo. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Claudio Fabiano Motta Toledo.
10. Ana Paula Jorge do Espirito Santo. Survival Model Induced by Frailty for Lifetime with long-Term Survivors and Unobserved Heterogeneity. Start: 2017. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Vicente Garibay Cancho.

11. Anderson Paulo Avila Santos. HostAssociatedMetagenomeDB: a public repository of curated and standardized metadata of non-human host-associated metagenomes. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
12. André Emilio Toscano. Planejamento da Operação Energética do SIN Usando Modelo de Controle Preditivo. Start: 2016. Thesis (Ph.D. in Electrical Eng.) - UNICAMP. Supervisor: Secundino Soares Filho.
13. André Luis Pilastrri. Reconstruction Algorithms based on Compressive Sensing approach. Start: 2016. Thesis (Ph.D. in Engenharia Informática) - Universidade do Porto, CAPES. CAPES. Co-supervisor: João Paulo Papa.
14. André Luiz Ortiz da Silva. Deep Learning e Coordenadas de Laplace: Aplicações de npainting Digital em Imagens de Alta Resolução. Start: 2021. Thesis (Ph.D. in Mathematics) - UNESP. Supervisor: Wallace Correa de Oliveira Casaca.
15. André Simões Ballarin. Eventos extremos em um contexto de mudanças climáticas: caracterização baseada em modelos climáticos e não estacionariedade. Start: 2021. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. FAPESP. Supervisor: Edson Cezar Wendland.
16. Andreza Beatriz Jacinto da Silva. Estudo da estabilidade de fluido não Newtoniano modelado pelo PTT. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Leandro Franco de Souza.
17. Angelo Garangau Menezes. Meta-learning applied to Continual Learning. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
18. Antonio Carlos Theophilo Costa Jr. Fighting "fake news" through authorship attribution and phylogeny analysis. Start: 2018. Thesis (Ph.D.) - UNICAMP. Fundação de Amparo à Pesquisa do Estado de Minas Gerais. Supervisor: Anderson de Rezende Rocha.
19. Antonio Marcos Almeida Ferreira. Otimização Multi-Objetivo Aplicada em Névoa para o Provisionamento Dinâmico de Recursos no Contexto de Internet das Coisas. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Júlio César Estrella.
20. Arianne Alves da Silva. Soluções Exatas e Heurísticas para Problemas de Estoque e Roteamento (Co-Supervisor Reinaldo Morabito DEP/UFSCar). Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Maristela Oliveira dos Santos.
21. Arthur Medeiros Figueiredo Barreto. Modelo matemático multiperíodo para o planejamento e controle da produção de biodigestores. Start: 2020. Thesis (Ph.D. in Production Eng.) - UNESP. CAPES. Co-supervisor: Helenice de Oliveira Florentino Silva.
22. Aruane Mello Pineda. Modelagem de dinâmicas sociais interagentes em redes complexas. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues.
23. Asrat Mekonnen. Epidemic Spreading with City mobility. Start: 2019. Thesis (Ph.D. in Applied Mathematics) - USP. CAPES. Supervisor: Tiago Pereira da Silva.



24. Beatriz Liara Carreira. Análise da estabilidade hidrodinâmica de escoamentos viscoelásticos em camada limite. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Leandro Franco de Souza.
25. Beatriz Regina Brum. Métodos de inferência em sistemas complexos. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Aparecido Rodrigues.
26. Brenno de Mello Alencar. Metodo De Concept Drift Contextual Para Aprendizado Online Em Redes Neurais Aplicadas Em Data Stream. Start: 2020. Thesis (Ph.D. in Computer Science) - UFBA. Supervisor: Ricardo Araújo Rios.
27. Breno Caetano da Silva. Medidas de distância baseadas em entropia e alinhamento de séries temporais para mineração de dados baseada em filogenias. Start: 2015. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Alexandre Cláudio Botazzo Delbem.
28. Bruna Cristina Braga. Aprendizado por representação em metaheurísticas para abordar o problema de graph drawing. Start: 2020. Thesis (Ph.D. in Operations Research) - UNIFESP, CAPES. CAPES. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
29. Bruno Goffert. Estudos Aerodinâmicos de Asa com Controle Ativo de Escoamento. Start: 2019. Thesis (Ph.D. in Space Sciences and Technologies) - ITA. CAPES. Supervisor: Maria Luísa Collucci da Costa Reis.
30. Caio Flávio Martinez Fontoura Junior. Análise e Validação Quantitativa de Técnicas de Inpainting Aplicadas no Contexto de Sensoriamento Remoto. Start: 2021. Thesis (Ph.D. in Cartographic Sciences) - UNESP. CAPES. Co-supervisor: Wallace Correa de Oliveira Casaca.
31. Caio Matheus Prates Batalha Faria. TBD. Start: 2018. Thesis (Ph.D. in Biochemistry) - USP. CAPES. Co-supervisor: André Fujita.
32. Caio Moura Quina. Two-stage long-term survival model with cure rate. Start: 2017. Thesis (Ph.D. in Statistics) - USP. Supervisor: Vicente Garibay Cancho.
33. Caio Paziani Tomazella. Solução de problemas integrados de aquisição de matéria-prima e dimensionamento de lotes com o auxílio de ferramentas de Big Data Analytics. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Maristela Oliveira dos Santos.
34. Calvin Rodrigues da Costa. Intelligent-Guided Adaptive Search Para Problemas de Otimização Multiobjetivo. Start: 2017. Thesis (Ph.D. in Operations Research) - UNIFESP. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
35. Camila Afonso Faria Lages. Métodos numéricos avançados e programação paralela em microfluídica computacional. Start: 2016. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Fabrício Simeoni de Sousa.
36. Camila Xavier Sá Peixoto Pinheiro. Multivariate graded response models for large-scale polytomous items data. Start: 2020. Thesis (Ph.D. in Statistics) - USP. Supervisor: Cibele Maria Russo Novelli.
37. Camilo Restrepo Estrada. Sistemas de alerta antecipado de cheias com base em sistemas geográficos voluntários. Start: 2014. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CNPq. Supervisor: Eduardo Mario Mendiondo.



38. Camyla Ferreira Moreno. Novas formulações para o problema de designação de locais de armazenagem. Start: 2021. Thesis (Ph.D. in Operations Research e Transporte Aereo) - ITA, CAPES. CAPES. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
39. Carla Cristina Doescher Fernandes. Um estudo do problema de previsão de demanda em comércio eletrônico para a alocação de estoques em Fullfiment Centers. Start: 2020. Thesis (Ph.D. in Computer Science) - UNIFESP. CNPq. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
40. Carla Micheli da Silva. Padrão de Atividade Física em Gestantes Usuárias do Sistema Único de Saúde da Cidade de Ribeirão Preto. Start: 2019. Thesis (Ph.D. in Community Health) - USP. Supervisor: Gleici da Silva Castro Perdoná.
41. Carlos Alberto Valentim Junior. Oncologia matemática fracionária: a dinâmica do câncer sob uma visão interdisciplinar. Start: 2019. Thesis (Ph.D. in Engineering and Materials Science) - USP. Supervisor: Jose Antonio Rabi.
42. Carlos Eduardo de Moraes Ferreira. Modelos e Métodos de solução para problemas de dimensionamento de lotes com múltiplas plantas. Start: 2020. Thesis (Ph.D. in Operations Research) - UNIFESP, CAPES. CAPES. Co-supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
43. Carlos Franklin Taco Pedraza. TBD. Start: 2020. Thesis (Ph.D. in Statistics) - USP. Supervisor: Vicente Garibay Cancho.
44. Clarissa Câmara de Freitas. Ferramentas de Suporte a Decisao para Seguranca Hidrica Multisetorial sob Condições de Não-Estacionariedade. Start: 2015. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Eduardo Mario Mendiondo.
45. Cláudia Evelyn Escobar Montecino. Using VAE for Incomplete Educational Data. Start: 2017. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Mariana Cúri.
46. Claudio Fogaça Truys. Metodologia para avaliação da incerteza de medição dinâmica em ensaios de verificação de funcionamento de anemômetros. Start: 2019. Thesis (Ph.D. in Space Sciences and Technologies) - ITA. Supervisor: Maria Luísa Collucci da Costa Reis.
47. Daniel Camilo F Guzman. Não Definido. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
48. Daniel Cunha Oliveira. TBD. Start: 2021. Thesis (Ph.D. in Computer Science) - USP. Supervisor: André Fujita.
49. Daniel Felipe da Silva Santos. Rastreamento de Pessoas em Vídeo Utilizando Aprendizado em Profundidade. Start: 2019. Thesis (Ph.D. in Computer Science) - UNESP. Petrobras. Supervisor: João Paulo Papa.
50. Daniel Morales. Line integral on discrete grids and applications. Start: 2020. Thesis (Ph.D. in Statistics) - USP. Supervisor: Nikolai Valtchev Kolev.
51. Danilo Adrian Marques. Características robustas de superfícies lineares por partes. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Antonio Castelo Filho.
52. Denilson Stefanelli. Inversão de Dados de Ressonância. Start: 2018. Thesis (Ph.D. in Petroleum Science and Engineering) - UNICAMP. Supervisor: Lucio Tunes dos Santos.



53. Diana Carolina Roca Arroyo. Reservoir Computing em Rede com Clusters. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Zhao Liang.
54. Diaulas Murize Santana Vieira Marcondes. Métodos de otimização para big data e problemas de grande porte com restrições. Start: 2020. Thesis (Ph.D. in Applied Mathematics) - USP. CAPES. Supervisor: Ernesto Julián Goldberg Birgin.
55. Diego Alejandro Guzmán Arias. Integração de Estratégias de Adaptação a Riscos Hidrológicos Visando Sistemas de Suporte à Decisão em Bacias Hidrográficas com Dados Escassos. Start: 2014. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. Supervisor: Eduardo Mario Mendiondo.
56. Diego Ferolla de Abreu. Simulação de Grandes Escalas para Representar a Saída de Jatos Turbulentos a Altos Números de Reynolds. Start: 2016. Thesis (Ph.D. in Space Sciences and Technologies) - ITA. Supervisor: Joao Luiz Filgueiras de Azevedo.
57. Diego Frazatto Pedroso. Estratégias para otimização de recursos computacionais em nuvens públicas e privadas. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Júlio César Estrella.
58. Diego Minatel. Aprendizado de Máquina não-discriminatório por meio de Funcionamento Diferencial dos Itens. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Co-supervisor: Mariana Cúri.
59. Dimaghi Schwambach. Dinâmica da infiltração e escoamento superficial em vertentes com diferentes usos do solo e mudanças climáticas em área de Cerrado. Start: 2020. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
60. Douglas Dias Lieira. TBD. Start: 2022. Thesis (Ph.D. in Computer Science) - UNESP. Supervisor: Rodolfo Ipolito Meneguette.
61. Éder Silva de Brito. Intensity Proportional Repair Alert Model systems under dependent competing risks. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Co-supervisor: Paulo Henrique Ferreira da Silva.
62. Edesio Pinto de Souza Alcobaça Neto. Automated Machine Learning: Learning to Learn. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
63. Edmilson Roque. Reconstruction of Networks from Data. Start: 2018. Thesis (Ph.D. in Mathematics) - USP. Supervisor: Tiago Pereira da Silva.
64. Edresson Casanova. Síntese de fala aplicada à geração de conjunto de dados para reconhecimento automático de fala. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Moacir de Miranda Oliveira Junior.
65. Eduardo dos Santos Teixeira. Otimização aplicada ao setor sucroalcooleiro. Start: 2019. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Silvio Alexandre de Araujo.
66. Eduardo Lira. TBD. Start: 2017. Thesis (Ph.D. in Computer Science) - USP. CAPES. Supervisor: André Fujita.
67. Eduardo Machado Silva. O problema de corte de estoque multiperíodo com setups. Start: 2018. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Silvio Alexandre de Araujo.



68. Elian Laura Riveros. Open-world Recognition. Start: 2021. Thesis (Ph.D.) - UNICAMP. Governo do Peru. Supervisor: Anderson de Rezende Rocha.
69. Elidiane Pereira dos Santos. Uma análise de algoritmos para detecção de obstáculos dinâmicos em apoio a portadores de deficiência visual. Start: 2017. Thesis (Ph.D. in Computer Science) - UFBA. Supervisor: Tatiane Nogueira Rios.
70. Eliézer Passos Moura. Mapeamento dos Rios da Amazônia Usando Veículos Autônomos Subaquáticos. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
71. Elizabeth Chipa Bedia. A new illness-death model with shared frailty. Start: 2017. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Vicente Garibay Cancho.
72. Emerson Cruz. Redes Sociais Modeladas por Redes Bayesianas Relacionais. Start: 2016. Thesis (Ph.D. in Electrical Eng.) - USP. Supervisor: Fabio Gagliardi Cozman.
73. Émerson Dutra. Geometria de Distâncias na Esfera. Start: 2022. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. Supervisor: Carlile Campos Lavor.
74. Emerson Yoshiaki Okano. Identificação de anomalias na necessidade de uso de recursos hospitalares. Start: 2020. Thesis (Ph.D. in Operations Research) - UNIFESP, CAPES. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
75. Érick Rúbens Oliveira Cobalchini. Identificação de áreas de recarga e descarga do Sistema Aquífero Guarani com o auxílio de sensoriamento remoto e traçador térmico. Start: 2019. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
76. Esteban Wilfredo Vilca Zuñiga. Análise de séries temporais utilizando redes complexas. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Zhao Liang.
77. Evandro Ortigosa. Explainable Machine Learning. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Luis Gustavo Nonato.
78. Ever Santoro. Logística de distribuição em uma fábrica de sorvetes. Start: 2018. Thesis (Ph.D. in Production Eng.) - UNESP. Supervisor: Edilaine Martins Soler.
79. Fabiano Rodrigues Coelho. Diagnóstico e seleção de variáveis em modelos de regressão b. Start: 2018. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Cibele Maria Russo Novelli.
80. Fabiano Rodrigues Coelho. Diagnóstico e seleção de variáveis em modelos de regressão binária com função de ligação assimétrica. Start: 2018. Thesis (Ph.D. in Statistics) - USP. CAPES. Co-supervisor: Jorge Luis Bazan Guzman.
81. Fabiano Ruano Neto. Análise numérica e Implementações Computacionais de Equações Constitutivas de Escoamentos não-Newtonianos. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Antonio Castelo Filho.
82. Fabio Vinícius Goes Amaral. Simulações computacionais e Inteligência Artificial na solução de escoamentos de fluidos não-Newtonianos (2021/07034-4). Start: 2021. Thesis (Ph.D.) - UNESP. FAPESP. Supervisor: Cassio Machiaveli Oishi.

83. Felipe Eduardo Atenas Maldonado. Variantes contemporâneas de métodos de decomposição para otimização de grande porte. Start: 2020. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. FAPESP. Supervisor: Paulo José da Silva e Silva.
84. Felipe Marino Moreno. Physics-Informed Machine Learning Applied to Forecast Metocean Conditions. Start: 2021. Thesis (Ph.D. in Mech. Eng.) - USP. FAPESP. Co-supervisor: Fabio Gagliardi Cozman.
85. Felipe Orlandi de Oliveira. Liquid animation. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Afonso Paiva Neto.
86. Fernanda Pereira Guidotti. Arquitetura 6C: Uma proposta para IA na Indústria. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Instituto SENAI de Inovação em Sistemas Embarcados. Supervisor: Claudio Fabiano Motta Toledo.
87. Fernando Abreu. Aspectos económicos dos impactos de inundações urbanas. Start: 2016. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Eduardo Mario Mendiondo.
88. Fernando Humberto de Almeida Moraes Neto., Não Definido. Start: 2020. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
89. Fernando Queiroz. Homoclinic Chaos in Networks. Start: 2018. Thesis (Ph.D. in Mathematics) - USP. CAPES. Supervisor: Tiago Pereira da Silva.
90. Filipe Aécio Alves de Andrade Santos. Resolução de problemas de Engenharia de Produção através de métodos de otimização (título provisório). Start: 2022. Thesis (Ph.D. in Production Eng.) - USP. Supervisor: Débora Pretti Ronconi.
91. Filipe de Carvalho Nascimento. Liquid animation. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Afonso Paiva Neto.
92. Filipe Loyola Lopes. Identificação e tratamento de inconsistências em dados médico-hospitalares. Start: 2020. Thesis (Ph.D. in Operations Research) - UNIFESP, CAPES. CAPES. Supervisor: Ana Carolina Lorena.
93. Filomen Incahuanaco Quispe. Liquid animation. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Afonso Paiva Neto.
94. Frederico Bolsoni Oliveira. Um Estudo de Limitadores para Formulações de Alta Ordem para Escoamentos Compressíveis. Start: 2021. Thesis (Ph.D. in Space Sciences and Technologies) - ITA. FAPESP. Supervisor: Joao Luiz Filgueiras de Azevedo.
95. Gabriel Capiteli Bertocco. Mining Persons, Objects and Places of Interest. Start: 2019. Thesis (Ph.D.) - UNICAMP. FAPESP. Supervisor: Anderson de Rezende Rocha.
96. Gabriel Tomiate. TBD. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
97. Gabriel Yudi Ragni Hamada. TBD. Start: 2022. Thesis (Ph.D. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.



98. Gabriela Faria Barcelos Gibim. Conhecimento especializado de professores que ensinam matemática: um olhar para o ensino de frações. Start: 2019. Thesis (Ph.D. in Teaching Science and Mathematics) - UNICAMP. Supervisor: Laura Leticia Ramos Rifo.
99. Gean Trindade Pereira. Meta-aprendizado aplicado a redes neurais profundas multitarefa. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
100. Gesiel Rios Lopes. algoritmos evolutivos multiobjetivos em modelagem de redes de múltiplas epidemias. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Fundação de Amparo à Pesquisa ao Desenvol. Científico e Tecnológico - MA. Supervisor: Alexandre Cláudio Botazzo Delbem.
101. Giovana Augusta Benvenuto. Detecção de Áreas de Desmatamento e Focos de Incêndio via Aprendizado Profundo: Métodos, Algoritmos e Aplicações em Biomas Brasileiros. Start: 2022. Thesis (Ph.D. in Computer Science) - UNESP. CAPES. Supervisor: Wallace Correa de Oliveira Casaca.
102. Gregori Pogorzelski. A Strategy for UAV Performance Enhancement Trough Atmospheric Energy Extraction Using MPC Techniques. Start: 2018. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
103. Guilherme Brandão Martins. Filtragem Colaborativa utilizando Aprendizado Ativo. Start: 2019. Thesis (Ph.D. in Computer Science) - UFSCar. CAPES. Supervisor: João Paulo Papa.
104. Guilherme Camargo de Oliveira. Affordable Diagnostics Using Deep Learning and AI. Start: 2021. Thesis (Ph.D. in Computer Science) - UNESP. CAPES. Supervisor: João Paulo Papa.
105. Guilherme Mendonça Freire. Investigação de Uma Arquitetura de Variational Autoencoder para Representar Múltiplos Grupos. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Mariana Cúri.
106. Guilherme Valderramos Montroni. Image processing. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Afonso Paiva Neto.
107. Gustavo Alencar Bisinotto. Development of an Environmental Monitoring System from On- Board Measurements of Vessel Movements with Machine Learning Techniques. Start: 2020. Thesis (Ph.D. in Mech. Eng.) - USP. Co-supervisor: Fabio Gagliardi Cozman.
108. Gustavo Alexandre Miziara. Simulação numérica de escoamentos viscoelásticos com aplicação em microfluidica. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Antonio Castelo Filho.
109. Gustavo David Quintero Alvarez. Algoritmos de ordem superior para problemas do tipo OVO e LOVO. Start: 2019. Thesis (Ph.D. in Applied Mathematics) - USP. CAPES. Supervisor: Ernesto Julián Goldberg Birgin.
110. Gustavo Henrique de Rosa. Aprendizado Adversarial em Processamento de Linguagem Natural. Start: 2019. Thesis (Ph.D. in Computer Science) - UNESP. FAPESP. Supervisor: João Paulo Papa.
111. Hans Muller Mendonca. Phase Dynamics of Complex Networks near Bifurcations. Start: 2018. Thesis (Ph.D. in Mathematics) - USP. Supervisor: Tiago Pereira da Silva.



112. Heitor Baldo. TBD. Start: 2021. Thesis (Ph.D. in Bioinformatics) - USP. CAPES. Co-supervisor: André Fujita.
113. Heitor Baldo. TBD. Start: 2020. Thesis (Ph.D. in Bioinformatics) - USP. CAPES. Co-supervisor: André Fujita.
114. Hélio Correia da Silva Jhuniór. Integração de imagens 3D com a geoestatística de multiponto para modelagem do escoamento de água e do transporte de contaminantes em aquíferos fraturados. Start: 2018. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CNPq. Supervisor: Edson Cezar Wendland.
115. Hermínio Paucar Curasma. Modelagem e implementação de uma arquitetura distribuída multinível para processamento de stream de dados. Estudo de caso em veículos aéreos não tripulados - VANTS. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Júlio César Estrella.
116. Hugo Felipe da Silva Lui. Shock-boundary layer interaction in supersonic axial turbines. Start: 2019. Thesis (Ph.D. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.
117. Hugo Leonardo França. Numerical simulation of complex fluid flows with free surface. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Co-supervisor: Cassio Machiaveli Oishi.
118. hugo Leonardo França. Simulação numérica de escoamentos de fluidos complexos com superfícies livres. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: José Alberto Cuminato.
119. Iman Ghodratitoostani. Modelagem neurocognitiva para doença do zumbido baseada em mineração de dados complexos. Start: 2016. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Alexandre Cláudio Botazzo Delbem.
120. Iury Batista de Andrade Santos. Aprendizado de máquina interpretável para aplicações médicas baseadas em imagens. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
121. Jamielli Tomaz Pereira. Regularidade em Controle ótimo com restrições mistas. Start: 2016. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. FAPESP. Supervisor: Roberto Andreani.
122. Janielly Matos Vieira. Estratégias de controle visando a redução de infecção por COVID-19. Start: 2022. Thesis (Ph.D. in Biometry) - UNESP. CAPES. Supervisor: Helenice de Oliveira Florentino Silva.
123. Jaqueline Alvarenga Silveira. Data science. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Afonso Paiva Neto.
124. Jário José dos Santos Junior. Modelos e técnicas para detecção de Ameaça de Estereótipo em ambientes educacionais online gamificados. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Seiji Isotani.
125. Jeanfranco David Farfan Escobedo. Data Assimilation in Oil Reservoirs. Start: 2021. Thesis (Ph.D.) - UNICAMP. Shell Inc. Supervisor: Anderson de Rezende Rocha.
126. Jessica Suzana Barragan Alves. Novos desenvolvimentos na Análise de Propensity Scores para dados multiníveis sob a abordagem bayesiana. Start: 2019. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazan Guzman.



127. Jing Yang. Event Reconstruction from Heterogeneous Visual Data. Start: 2019. Thesis (Ph.D.) - UNICAMP. FAPESP. Supervisor: Anderson de Rezende Rocha.
128. João Phillipe Cardenuto. Detecting forgeries in scientific images. Start: 2020. Thesis (Ph.D.) - UNICAMP. FAPESP. Supervisor: Anderson de Rezende Rocha.
129. Jonas Coelho Kasmanas. Análise e Classificação de Microbiomas Humanos: Detecção de Bioindicadores e Otimização por meio de Aprendizado de Máquina. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
130. José Carrion. PROPOSTA DE UM NOVO MODELO DE REGRESIÓN PARA ESTIMAR A IDADE GESTACIONAL UTILIZANDO ECOGRAFIA. Start: 2016. Thesis (Ph.D. in Community Health) - USP. Supervisor: Gleici da Silva Castro Perdoná.
131. José Dori Nascimento. Event filtering: determining pieces of evidence pertaining to a given event. Start: 2020. Thesis (Ph.D.) - UNICAMP. FAPESP. Supervisor: Anderson de Rezende Rocha.
132. Josimar Edinson Chire Saire. Análise de Sentimento de Video utilizando Redes Complexas. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Zhao Liang.
133. Jullian Souza Sone. Relações sinérgicas e economicas entre os serviços ecossistêmicos. Start: 2019. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
134. Junior Cesar Bonafim. Formulações p-step para o problema do caixeiro e o problema de caminho mínimo. Start: 2019. Thesis (Ph.D. in Production Eng.) - UFSCar. Supervisor: Pedro Augusto Munari Junior.
135. Junior Rodrigues Ribeiro. Um modelo de tempo híbrido para sistemas lineares com saltos Markovianos. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Eduardo Fontoura Costa.
136. Juniormar organista. Simulação de escoamentos bifásicos com método da interface imersa. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Leandro Franco de Souza.
137. Kamila Katayama Lyra. Dashboards como ferramenta de tomada de decisão sobre tecnologias educacionais. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Seiji Isotani.
138. Kamyla Maria Ferreira. Problema de Roteamento de Veículos com Restrições de Empacotamento Bidimensional e Entrega Fracionada para a Minimização da Emissão de Dióxido de Carbono. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Franklina Maria Bragion de Toledo.
139. Karelia Alexandra Vilca Salinas. Crime Prediction. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Luis Gustavo Nonato.
140. Kennedy Anderson Guimarães de Araujo. Problemas de scheduling com não linearidades. Start: 2019. Thesis (Ph.D. in Applied Mathematics) - USP. CAPES. Supervisor: Ernesto Julián Goldberg Birgin.



141. Kirstin Roster. Modelagem de doenças transmitidas por vetores. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues.
142. Kleber de Santana Souza. Problemas de empacotamento com peças irregulares. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Franklina Maria Bragion de Toledo.
143. Kleber Sartorio. TBD. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
144. Laison Junio da Silva Furlan. Estudo de escoamentos Transicionais Tridimensionais de Fluidos Viscoelásticos modelados por FENE-P. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Leandro Franco de Souza.
145. Laíza Ribeiro Silva. TBD. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Seiji Isotani.
146. Laurindo Daniel Silva da Rocha. Coordenadas Conformes em Microscopia Eletrônica. Start: 2020. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. Supervisor: Carlile Campos Lavor.
147. Leandro Anghinoni. Identificação de mudança de conceito em fluxo de dados através da modelagem e detecção de comunidades em redes multicamadas. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Zhao Liang.
148. Leo Sampaio Ferraz Ribeiro. Cross-domain feature learning with multi-stream neural network representations. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Moacir de Miranda Oliveira Junior.
149. Leonardo Motta Maia de Oliveira Carvalho. Simulação Numérica de Escoamentos em Regime de Transição Laminar-Turbulenta Sobre Geometrias Complexas. Start: 2018. Thesis (Ph.D. in Electronic and Computer Engineering) - ITA. CNPq. Supervisor: Joao Luiz Filgueiras de Azevedo.
150. Leonardo Murilo Nepomuceno. Estudo de técnicas de identificação de sistemas de aeronaves em sub-escala. Start: 2018. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
151. Leonardo Tortoro Pereira. Geração Procedural Adaptativa de Múltiplas Facetas Criativas para Jogos Eletrônicos Através da Criação de Modelos de Perfil e Desempenho de Jogadores. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Claudio Fabiano Motta Toledo.
152. Leonildo José de Melo de Azevedo. Estratégias para a fusão de dados em Internet das Coisas. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Júlio César Estrella.
153. Letícia Maria Miquelin. Modelos métodos de solução para otimização energética em redes de abastecimento. Start: 2019. Thesis (Ph.D. in Electrical Eng.) - UNESP. Supervisor: Edilaine Martins Soler.
154. Livia Teresa Minami Borges. Métodos híbridos para resolução de problemas de despacho. Start: 2020. Thesis (Ph.D. in Electrical Eng.) - UNESP. Supervisor: Edilaine Martins Soler.



155. Loriz Francisco Sallum. Não Definido. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
156. Lorrany Cristina da Silva. Otimização de uso da Pista no Gerenciamento de Fluxo de Tráfego Aéreo. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
157. Luan Vinicius de Carvalho Martins. Graph Neural Networks for Medical Data Visualization. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Zhao Liang.
158. Lucas Augusto Vieira Brito. modelo probabilísticos baseados em grafos para dados heterogêneos e aplicações. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Alexandre Cláudio Botazzo Delbem.
159. Lucas Pereira Lopes. New machine learning tools. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Supervisor: Nikolai Valtchev Kolev.
160. LUIZ FERNANDO RODRIGUES. MÉTODOS HEURÍSTICOS APLICADOS AO PROBLEMA DE PRODUÇÃO E DISTRIBUIÇÃO. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Maristela Oliveira dos Santos.
161. Luiz Henrique Romero. Controle e filtragem para Sistemas Lineares Sujeitos a Saltos Markovianos em Tempo Reverso. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Eduardo Fontoura Costa.
162. Luiz Otávio Toratti. Discrete differential geometry. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Afonso Paiva Neto.
163. Luiz Rodrigues. Geração Automática de Designs de Gamificação Baseada em Tipos de Atividades Educacionais. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Seiji Isotani.
164. Magna Paulina de Souza Ferreira. Modelagem Estocástica Aplicada a Problemas Industriais: Estudos de Casos Reais. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Claudio Fabiano Motta Toledo.
165. Marcelo Henrique de Almeida. Não Definido. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
166. Márcia Lorena Alves. Inferência em redes complexas. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Aparecido Rodrigues.
167. Marco Antonio Colombo da Silva. TBD. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
168. Marco Aurélio Leonel Matunaga. Arquitetura Flexível para Otimização Multidisciplinar de Projeto com Ênfase em Aspectos Aerodinâmicos. Start: 2018. Thesis (Ph.D. in Electronic and Computer Engineering) - ITA. CAPES. Supervisor: Joao Luiz Filgueiras de Azevedo.
169. Marcos Jardel Henriques. TBD. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Francisco Louzada Neto.



170. Marcos Vinícius dos Santos Ferreira. Análise de Série Temporal Fuzzy a partir da modelagem de componentes determinísticos e estocásticos. Start: 2020. Thesis (Ph.D. in Computer Science) - UFBA. Supervisor: Ricardo Araújo Rios.
171. Marcos Vinícius dos Santos Ferreira. Análise de Série Temporal Fuzzy a partir da modelagem de componentes determinísticos e estocásticos. Start: 2020. Thesis (Ph.D. in Computer Science) - UFBA. Co-supervisor: Tatiane Nogueira Rios.
172. Maria Clara Fava. Previsão de inundações urbanas usando sistemas de informações voluntárias. Start: 2015. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Eduardo Mario Mendiondo.
173. Maria Gabriela Valeriano. Sistemas de recomendação hospitalares. Start: 2020. Thesis (Ph.D. in Operations Research) - UNIFESP, CAPES. CAPES. Supervisor: Ana Carolina Lorena.
174. Mariana Rodrigues. CloudSphere: A Connected Unmanned Aerial Vehicle Security Approach. Start: 2016. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Kalinka Regina Lucas Jaquie Castelo Branco.
175. Marília Costa Rosendo Silva. Machine Learning Automático: Recomendação de ferramentas e modelos de processamento de textos. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
176. Marina Alencar Valença. Uma nova abordagem e resolução para problemas de Fluxo de Potência Ótimo com restrições de complementaridade. Start: 2019. Thesis (Ph.D. in Electrical Eng.) - UNESP. Supervisor: Edilaine Martins Soler.
177. Marina Batalini de Macedo. Reúso de Águas Pluviais visando a Segurança do Nexo Água-Energia-Alimentos. Start: 2017. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CNPq. Supervisor: Eduardo Mario Mendiondo.
178. Marina G de Oliveira. Modelo de regressão bivariado para dados funcionais. Start: 2019. Thesis (Ph.D. in Statistics) - UFSCar. CAPES. Co-supervisor: Carlos Alberto Ribeiro Diniz.
179. Marina Gandolfi. Modelo Skellam modificado. Start: 2019. Thesis (Ph.D. in Statistics) - UFSCar. CAPES. Co-supervisor: Carlos Alberto Ribeiro Diniz.
180. Marina Gandolfi. Modelo Skellam Modificado. Start: 2018. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Katiane Silva Conceição.
181. Marlon Jeske. Ciência de dados para o planejamento da implementação de redes mesh. Start: 2019. Thesis (Ph.D. in Operations Research) - UNIFESP, CNPq. CNPq. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
182. Mateus Paranaíba Ribeiro. Simulação da camada-limite atmosférica utilizando Large-eddy simulation. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Co-supervisor: Leandro Franco de Souza.
183. Mateus Roder. Aprendizado Profundo para Auxílio ao Diagnóstico de Acidente Vascular Cerebral. Start: 2021. Thesis (Ph.D. in Computer Science) - UNESP. FUSP. Supervisor: João Paulo Papa.
184. Matheus de Padua Severino. Mixing-controlled supersonic combustion: effects of hydrodynamic instabilities. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Leandro Franco de Souza.



185. Maurício Rocha Gonçalves. Análise de flexibilidade em problemas de dimensionamento de lotes. Start: 2020. Thesis (Ph.D. in Mathematics) - UNESP. FAPESP. Supervisor: Silvio Alexandre de Araujo.
186. Michel Alexandre da Silva. Complexidade em Sistemas Econômicos. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Francisco Aparecido Rodrigues.
187. Michelle Fernandino Westin. POST-FLUTTER ANALYSIS OF AEROELASTIC SYSTEMS. Start: 2019. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
188. Milton Miranda Neto. Não Definido. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
189. Moisés Rocha dos Santos. Meta-aprendizagem aplicada à previsão de séries temporais. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
190. Mônica Paula de Souza Martins. Abandono em Cálculo I: Investigando essa Realidade. Start: 2019. Thesis (Ph.D. in Teaching Science and Mathematics) - UNICAMP. Supervisor: Lucio Tunes dos Santos.
191. Murilo Cunha dos Santos. Reconhecimento de padrões de dados heterogêneos de múltiplas fontes em tempo real. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Alexandre Cláudio Botazzo Delbem.
192. Naiara Caroline Aparecido dos Santos. Novos desenvolvimentos na contagem de dados para variáveis latentes. Start: 2019. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazan Guzman.
193. Nicolas Samuel Assis. TBD. Start: 2020. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Maria do Socorro Nogueira Rangel.
194. Normando Amazonas. Predicting Deforestation from Transportation Data. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Luis Gustavo Nonato.
195. Oliviana Xavier do Nascimento. Modelagem e resolução de problemas de empacotamento irregular em faixa bidimensional com incerteza na demanda. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Marina Andretta.
196. Osafu Augustine Egbon. Não Definido. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
197. Pâmela de Souza Dias. Sustentabilidade na saúde suplementar: uma aplicação do process mining para melhorias no setor. Start: 2018. Thesis (Ph.D. in Administration of Organizations) - USP. CAPES. Supervisor: Evandro Marcos Saidel Ribeiro.
198. Patricia Stülp. Novos modelos bivariados para resposta limitada e discreta. Start: 2019. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazan Guzman.
199. Paula Toledo Palomino. Gamification of Virtual Learning Environments: A Narrative and User Experience Approach. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Seiji Isotani.



200. Paulo Cesar Ventura da Silva. Propagação de informação em redes multicamadas. Start: 2017. Thesis (Ph.D. in Applied Physics) - USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues.
201. Paulo Henrique das Chagas Silva. A resolução de problemas sob a ótica da aprendizagem significativa, na Olimpíada Brasileira de Matemática das Escolas Públicas. Start: 2019. Thesis (Ph.D. in Teaching Science and Mathematics) - UNICAMP. Supervisor: Laura Leticia Ramos Rifo.
202. Pedro Arbs Paiva. An instance space analysis of classification datasets. Start: 2019. Thesis (Ph.D. in Electronic and Computer Engineering) - ITA. Supervisor: Ana Carolina Lorena.
203. Pedro Henrique Toledo de Oliveira Sousa. Clustering Functional Data via high order derivatives. Start: 2019. Thesis (Ph.D. in Statistics) - UNICAMP. CAPES. Supervisor: Ronaldo Dias.
204. Priscylla Silva. Explainable Machine Learning. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Luis Gustavo Nonato.
205. Rafael Cerqueira de Campos. Liquid animation. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Afonso Paiva Neto.
206. Rafael de Lima Sterza. Estabilidade de Escoamento de Jato Viscoelástico Tridimensional. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Leandro Franco de Souza.
207. Rafael Delalibera Rodrigues. Análise de EEGs utilizando redes complexas. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Zhao Liang.
208. Rafael Rodrigues dos Santos. Índices de variabilidade da frequência cardíaca e apneia obstrutiva do sono: diagnóstico e severidade. Start: 2020. Thesis (Ph.D. in Physiology) - USP. CAPES. Co-supervisor: Renato Tinós.
209. Rafael Soares Padilha. Learning visual clues of the passage of time. Start: 2018. Thesis (Ph.D.) - UNICAMP. FAPESP. Supervisor: Anderson de Rezende Rocha.
210. Renan Willian Prado. Um método de otimização contínua com critério de parada baseado em uma nova condição sequencial de otimalidade. Start: 2019. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. FAPESP. Supervisor: Sandra Augusta Santos.
211. Renato da Silva Fernandes. Método de estimação para modelos de diagnóstico cognitivo. Start: 2019. Thesis (Ph.D. in Statistics) - USP. Supervisor: Jorge Luis Bazan Guzman.
212. Renato Fuzaro Miotto. Simulation and analysis of compressibility and kinematic effects in deep dynamic stall. Start: 2017. Thesis (Ph.D. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.
213. Ricardo Aurélio Fragoso de Sousa. TBD. Start: 2022. Thesis (Ph.D. in Mech. Eng.) - UFPE. Co-supervisor: Paulo Henrique Ferreira da Silva.
214. Ricardo de J. C. Assis. Uma nova alternativa de algoritmo de predição. Start: 2021. Thesis (Ph.D. in Statistics) - UFSCar. Supervisor: Carlos Alberto Ribeiro Diniz.
215. Robson Parmezan Bonidia. Biological Sequence Analysis: A Generic Pipeline with Metaheuristics, Mathematical, and Ensemble Models. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.



216. Rodrigo Aécio Felix. Desenvolvimento e aplicação de avaliações formativas em rede de ensino utilizando testes adaptativos computadorizados. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Mariana Cúri.
217. Rodrigo Barbosa Moreira. Condições de Otimalidade Sequenciais em Controle Ótimo. Start: 2020. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Valeriano Antunes de Oliveira.
218. Rodrigo Franciquini da Silva. Análise espectral para detecção de anomalias em redes dinâmicas com atributos. Start: 2017. Thesis (Ph.D. in Computer Science) - UNIFESP. FAPESP. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
219. Rodrigo Henrique Ramos. Discovery of cancer genes patterns using super pathways networks topology. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Adenilso da Silva Simão.
220. Rodrigo Koiti Ishizaka. Modelagem Matemática de Gestão de Carteiras. Start: 2019. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Franklina Maria Bragion de Toledo.
221. Rogério da Silva Matos. TBD. Start: 2022. Thesis (Ph.D. in Applied Mathematics) - USP. CAPES. Supervisor: Ernesto Julián Goldberg Birgin.
222. Rômulo da Silva Marques. Novas Ordens para o Problema do Loop Fechado. Start: 2021. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Carlile Campos Lavor.
223. Rosalía Taboada Leiva. Simulação numérica de escoamentos bifásicos viscoelásticos aplicados a microfluidica. Start: 2017. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Antonio Castelo Filho.
224. Samuel Rocha Silva. Liquid animation. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Afonso Paiva Neto.
225. Saulo Martiello Mastelini. Multi-target data stream mining. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
226. Sherlon Almeida da Silva. TBD. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Moacir de Miranda Oliveira Junior.
227. Soroor Salavati. Rock-type classification in pre-salt fields. Start: 2020. Thesis (Ph.D.) - UNICAMP. Shell Inc. Supervisor: Anderson de Rezende Rocha.
228. Tarcísio Costa Déda Oliveira. Feedback control strategies for comperssible unsteady flows. Start: 2019. Thesis (Ph.D. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.
229. Thales de Oliveira Gonçalves. Análise e Predição de Crimes em Ambientes Urbanos. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Luis Gustavo Nonato.
230. Thiago José dos Santos Vieira. Formulações e métodos exatos e heurísticos para o roteamento de aeronaves com restrições de tripulação. Start: 2020. Thesis (Ph.D. in Production Eng.) - UFSCar. CAPES. Supervisor: Pedro Augusto Munari Junior.

231. Thyago Tenório Martins de Oliveira. Abordagem baseada em sabedoria das multidões para criação de loops internos em Sistemas Tutores Inteligentes. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Seiji Isotani.
232. Tiago Martinelli. Causalidade em sistemas complexos. Start: 2018. Thesis (Ph.D. in Applied Physics) - USP. FAPESP. Supervisor: Francisco Aparecido Rodrigues.
233. Tiago Priolli Monteiro. Coupled Simulations of Leading-Edge Suction Parameter Modulated Non-Linear Unsteady Vortex Lattice Method with Wind Tunnel Validation. Start: 2016. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
234. Uebert Gonçalves Moreira. Multiscale methods for fractured petroleum reservoirs. Start: 2019. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Petrobras S A. Supervisor: Fabrício Simeoni de Sousa.
235. Valdir Mendes da Silva. Modelagem matemática de preços de opções de índices no mercado financeiro. Start: 2019. Thesis (Ph.D. in Mathematics) - UNESP. Supervisor: Franklina Maria Bragion de Toledo.
236. Verônica Vannini. Proposta de arquitetura inteligente para VANTs. Start: 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Claudio Fabiano Motta Toledo.
237. Victor Hugo Nascimento Rocha. Detecção de Argumentos Probabilísticos. Start: 2021. Thesis (Ph.D. in Electrical Eng.) - USP. CAPES. Supervisor: Fabio Gagliardi Cozman.
238. Vinicius Godoi Fernandes. TBD. Start: 2020. Thesis (Ph.D. in Bioinformatics) - USP. Co-supervisor: André Fujita.
239. Vinicius Jardim Carvalho. TBD. Start: 2018. Thesis (Ph.D. in Bioinformatics) - USP. CAPES. Supervisor: André Fujita.
240. Vinicius Lopes. TBD. Start: 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Seiji Isotani.
241. Walter Affonso Junior. Análise exergética de aeronaves de propulsão híbrido elétrica. Start: 2019. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
242. Wanderley Pires Cunha. Avaliação metrológica em laboratório de configurações de propriedades de massa de engenhos espaciais com voo propulsado e autômato. Start: 2021. Thesis (Ph.D. in Space Sciences and Technologies) - ITA. Supervisor: Maria Luísa Collucci da Costa Reis.
243. Wilk Oliveira dos Santos. Automatic Student's Flow Experience Detection in Gamified Educational Systems. Start: 2018. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Seiji Isotani.
244. Wilmax Marreiro Cruz. Luvas Sensitivas no Aprendizado de Piano. Start: 2016. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Seiji Isotani.
245. Ximena Pocco. Crime Pattern Understanding. Start: 2020. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Luis Gustavo Nonato.



246. Yangyang Chen. Deformação em Processos Espaço-Temporal via Wavelets. Start: 2019. Thesis (Ph.D. in Statistics) - USP. FAPESP. Co-supervisor: Ronaldo Dias.
247. Yuri Verges. Line integral on discrete grids and applications. Start: 2022. Thesis (Ph.D. in Statistics) - USP. Supervisor: Nikolai Valtchev Kolev.
248. Zeray Hagos. Dynamical Bayesian Methods in Complex Systems. Start: 2018. Thesis (Ph.D. in Mathematics) - USP. CNPq. Supervisor: Tiago Pereira da Silva.
249. Zheng Bian. Reduction Techniques in Heterogeneous Networks via Ergodic Theory. Start: 2018. Thesis (Ph.D. in Applied Mathematics) - USP. FAPESP. Supervisor: Tiago Pereira da Silva.

A.2 COMPLETED PH.D'S

1. Ana Flávia da Cunha Lima. Geometria de Distâncias e o Cálculo de Estruturas de Proteínas usando dados de RMN. 2021. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CNPq. Supervisor: Carlile Campos Lavor.
2. Armando Maciel Toda. Contributions for Gamification Design in Educational Contexts. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Seiji Isotani.
3. Bruno Malveira Peixoto. Violence Detection in Images and Videos. 2021. Thesis (Ph.D.) - UNICAMP. Supervisor: Anderson de Rezende Rocha.
4. Caio Benatti Moretti. Biomarcadores baseados em aprendizado de máquina para customização de tratamentos de reabilitação robótica para pacientes com AVC. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Alexandre Cláudio Botazzo Delbem.
5. Camila Pereira dos Santos Tautenhain. Spectral Theory and Heuristics for Graph Clustering and Embedding. 2021. Thesis (Ph.D. in Computer Science) - UNIFESP. FAPESP. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
6. Caroline de Arruda Signorini. One-dimensional cutting stock problems with multiple periods applied to the precast slab industry. 2021. Thesis (Ph.D. in Mathematics) - UNESP. FAPESP. Supervisor: Silvio Alexandre de Araujo.
7. Cesar Dario Alvarez Cruz. Modelos de otimização e métodos de solução para o problema de alocação de veículos. 2021. Thesis (Ph.D. in Production Eng.) - UFSCar. CNPq. Supervisor: Reinaldo Morabito Neto.
8. Claudio Filipi Gonçalves dos Santos. Avoiding Overfitting: New Algorithms to Improve Convolutional Neural Networks. 2022. Thesis (Ph.D. in Computer Science) - UFSCar. Petrobras S. A.. Supervisor: João Paulo Papa.
9. Debora de Oliveira Medeiros. Métodos numéricos para escoamentos não-Newtonianos com superfície livre: efeitos de tensão superficial. 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Co-supervisor: Cassio Machiaveli Oishi.



10. Douglas Donizeti de Castilho Braz. Previsão de Redes Financeiras Utilizando Aprendizado de Máquina para Gerenciamento de Portfólio. 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
11. Eduardo Schneider Bueno de Oliveira. Contributions in Cognitive Diagnostic Models. 2021. Thesis (Ph.D. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazán Guzmán.
12. Felipe Teles. Modelagem Matemática de processos de biodigestão. 2021. Thesis (Ph.D. in Biometry) - UNESP. CAPES. Supervisor: Helenice de Oliveira Florentino Silva.
13. Gabriela Colovati de Almeida. O IMPACTO DA TEMPERATURA AMBIENTAL E PRECIPITAÇÃO PLUVIAL SOBRE A DINÂMICA DE TRANSMISSÃO DA DENGUE. 2021. Thesis (Ph.D. in Biometry) - UNESP. Supervisor: Helenice de Oliveira Florentino Silva.
14. Geise Kelly da Silva Santos. Pattern Analysis and Reasoning for Motion Sensors Data. 2021. Thesis (Ph.D.) - UNICAMP. CAPES. Supervisor: Anderson de Rezende Rocha.
15. Geoffrey Converse. Interpretable Neural Networks Applications. 2021. Thesis (Ph.D. in Applied Mathematical and Computational Sciences) - University of Iowa. Applied Mathematical and Computational Sciences Fellowship. Co-supervisor: Mariana Cúri.
16. Giovana Jaskulski Gelatti. Detecção de anomalia através da comparação de modelos representativos. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
17. Giseli Pulgrossi. Lixo urbano, consumo e sustentabilidade-reflexões no espaço escolar com auxílios de TICs. 2022. Thesis (Professional M.Sc. in Teaching Environmental Sciences) - USP. Supervisor: Kalinka Regina Lucas Jaquie Castelo Branco.
18. Grover Enrique Castro Guzman. Métodos estatístico-computacionais baseados na densidade espectral de grafos e suas aplicações. 2021. Thesis (Ph.D. in Computer Sciences) - USP. CAPES. Supervisor: André Fujita.
19. Guilherme Nakakogue Barufaldi. Performance Analysis of Electric Aircraft. 2021. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. CAPES. Supervisor: Roberto Gil Annes da Silva.
20. Gustavo Pires Villela de Almeida. Implementation of Hematocrit-Dependent Viscosity Model for Blood Flow Predictions Using CFD. 2021. Thesis (Ph.D. in Electronic and Computer Engineering) - ITA. CAPES. Supervisor: Joao Luiz Filgueiras de Azevedo.
21. Hério Ênio de Sousa Paz. Contributions for active querying in constrained clustering with neighborhood based methods. 2022. Thesis (Ph.D.) - UNIFESP. CAPES. Supervisor: Ana Carolina Lorena.
22. Ivan Xavier Moura do Nascimento. Sobre o problema de decomposição matricial em componentes esparsa e de posto baixo com exemplos em videovigilância. 2021. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CNPq. Supervisor: Sandra Augusta Santos.
23. Jennifer Cristina Borges. Um Estudo sobre Métodos de Solução para o Problema de Corte de Estoque Biobjetivo. 2021. Thesis (Ph.D. in Mathematics) - UNESP. CAPES. Supervisor: Maria do Socorro Nogueira Rangel.
24. John Frank Matos Ascona. Problemas de Controle Ótimo Discreto com Restrições Mistas: Um Estudo das Condições de Otimalidade. 2021. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Valeriano Antunes de Oliveira.



25. Jorge Sebastián Leiva. Desarrollo de una estrategia de acoplamiento para sistemas de componentes dimensionalmente heterogéneos, con aplicación en hemodinámica computacional. 2022. Thesis (Ph.D. in Ciencias de la Ingeniería) - Instituto Balseiro (Univ Nac de Cuyo). Comision Nacional de Energia Atomica. Supervisor: Gustavo Carlos Buscaglia.
26. José Clelto Barros Gomes. Estimation methods in heavy-tailed nonlinear mixed effects models. 2019. Thesis (Ph.D. in Statistics) - USP. Fundação de Amparo a Pesquisa do Estado do Amazonas. Supervisor: Cibele Maria Russo Novelli.
27. José Ricardo Silva Scarpari. Autorrotação: Métodos objetivos de mensuração de carga de trabalho por meio de sensores fisiológicos. 2021. Thesis (Ph.D. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
28. Julian Ricardo H. Mariño. Synthesizing interpretable strategies for real-time planning in zero-sum games. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Claudio Fabiano Motta Toledo.
29. Kemilly Dearo Garcia. Unsupervised learning approaches for non-stationary data streams. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
30. Leandro Willian Marcucci. OTIMIZAÇÃO DA PRODUÇÃO DE BIOGÁS EM BIODIGESTORES ACOPLADOS. 2021. Thesis (Ph.D. in Biometry) - UNESP. Supervisor: Helenice de Oliveira Florentino Silva.
31. Lívia Malacarne Pinheiro Rosalem. Monitoramento e modelagem do processo de interceptação em área de Cerradão. 2021. Thesis (Ph.D. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
32. Luis Antonio de Souza Júnior. Auxílio ao Diagnóstico Automático do Esôfago de Barrett Utilizando Aprendizado de Máquina. 2022. Thesis (Ph.D. in Computer Science) - UFSCar. FAPESP. Supervisor: João Paulo Papa.
33. Luiz Gustavo Lyra. Estudo Computacional de um Modelo Espaço-Temporal para Controle de Vetores Causadores de Doenças. 2021. Thesis (Ph.D. in Biometry) - UNESP. Co-supervisor: Helenice de Oliveira Florentino Silva.
34. Luiz Henrique Fernandes. Meta-analysis of clustering problem instances and techniques in Machine Learning. 2022. Thesis (Ph.D. in Operations Research) - UNIFESP. Supervisor: Ana Carolina Lorena.
35. Marco Antonio Costa Simões. Aprendizagem por demonstração de planos coordenados em Sistemas Multiagentes. 2022. Thesis (Ph.D. in Computer Science) - UFBA. Supervisor: Tatiane Nogueira Rios.
36. Matheus Tozo de Araujo. Estudo de Escoamentos Transicionais Tridimensionais de Fluidos Viscoelásticos modelados por Giesekus. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Leandro Franco de Souza.
37. Milton de Oliveira Assunção Junior. Modelagem matemática de macrosegregação em ligas metálicas binárias induzida por convecção. 2021. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: José Alberto Cuminato.
38. Oilson Alberto Gonzatto Junior. Frailty model for multiple repairable systems hierarchically represented in serial/parallel structures under assumption of ARAm imperfect repairs. 2021. Thesis (Ph.D. in Statistics) - UFSCar. Petrobras S. A.. Supervisor: Francisco Louzada Neto.



39. Pedro Rochavetz De Lara Andrade. OPTIMIZATION OF THE PRODUCTION PROCESS IN AN AUTOMOTIVE SPRING INDUSTRY. 2021. Thesis (Ph.D. in Production Eng.) - UNESP. Supervisor: Silvio Alexandre de Araujo.
40. Rui Marques Carvalho. Uma Abordagem Quasi-Newton às Equações Generalizadas com Restrições. 2021. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. Supervisor: Roberto Andreani.
41. Taiane Coelho Ramos. Técnicas de clusterização e estratificação de indivíduos para estudo de redes funcionais cerebrais. 2021. Thesis (Ph.D. in Computer Sciences) - USP. CNPq. Supervisor: André Fujita.
42. Vinícius Riter de Faria. Álgebra Geométrica e Matrizes de Distâncias. 2022. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Carlile Campos Lavor.
43. Vinícius Rosa Máximo. Diversity Control Mechanisms in Iterated Local Search to Solve Vehicle Routing Problems. 2021. Thesis (Ph.D. in Computer Science) - UNIFESP. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
44. Vitor Alves Pires. Métodos de volumes finitos com decomposição de domínio baseada no método Multiscale Robin Coupled para a solução do modelo black-oil. 2022. Thesis (Ph.D. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Fabrício Simeoni de Sousa.
45. Wagner Alan Aparecido da Rocha. Ordenação em vértices de grafos de proteínas. 2022. Thesis (Ph.D. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Carlile Campos Lavor.

A.3 ONGOING M.Sc.

1. AFONSO ANDRE RIBEIRO. ASSESSMENT OF THE BROOKS POPE AND MARCOLINE (BPM) AIR-FOIL NOISE PREDICTION MODEL. Start: 2019. Thesis (M.Sc. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
2. Aguiar Ribeiro Junior. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
3. Alex Lira. Tecnicas de otimização aplicadas ao processo de coleta de resíduos para alimentação de biodigestores. Start: 2019. Thesis (M.Sc. in Agronomy) - UNESP. Co-supervisor: Helenice de Oliveira Florentino Silva.
4. Alexandre Morelli Alves De Oliveira. Modelos matemáticos para otimização energética. Start: 2021. Thesis (M.Sc. in Production Eng.) - UNESP. CAPES. Supervisor: Edilaine Martins Soler.
5. Aline Marra Campos. Otimização de redes de abastecimento: estudo de caso em São Carlos-SP. Start: 2021. Thesis (M.Sc. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Edson Cezar Wendland.
6. Alysson Matos. Modelo Conforme para o Espaço 3D. Start: 2021. Thesis (M.Sc. in Applied Mathematics) - UNICAMP. Supervisor: Carlile Campos Lavor.
7. Amanda Carrijo Viana Figur. Extração de Características Robustas de rostos humanos. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Antonio Castelo Filho.



8. Amanda Hellen de Avellar Sarmiento. TBD. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Moacir de Miranda Oliveira Junior.
9. Ana Claudia Guimarães Santos. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Seiji Isotani.
10. Ana Cláudia Piau. Trigonometria na Babilônia. Start: 2020. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. Supervisor: Lucio Tunes dos Santos.
11. Ana Cristina Neves Carloni. Análise Aeroelástica de Flutter Transônico com Modelo de Ordem Reduzida Baseado em Resultados de CFD. Start: 2022. Thesis (M.Sc. in Space Sciences and Technologies) - ITA. FAPESP. Supervisor: Joao Luiz Filgueiras de Azevedo.
12. Ana Rosalia Huaman Reyna. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Rodolfo Ipolito Meneguette.
13. Andreza Ferreira. TBD. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Seiji Isotani.
14. Angelo Victor Kraemer Foletto. Combinando as camadas IoT de sensores e do portal para detectar enchentes. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Jó Ueyama.
15. Anna Bárbara Coré Pinto. Proposição de um Modelo Epidemiológico pela Abordagem dos Fenômenos de Transporte. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jose Antonio Rabi.
16. Antonio Alberto Ibiapina Costa Filho. Modelo de regressão logística para avaliar adesão às medidas de prevenção da COVID-19 e sofrimento mental de profissionais da SEPLAN-PI. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jose Antonio Rabi.
17. ARIEL MENEZES DE ALMEIDA JUNIOR. Uso de Inferência Causal para análise de eventos contrafactuais em doenças raras. Start: 2021. Thesis (M.Sc. in Computer Science) - UFBA. CAPES. Supervisor: Ricardo Araújo Rios.
18. Artur Souza Freitas. Avaliação do desempenho de características sociais do nó como medida de seleção de veículos em redes veiculares de aprendizado federado. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Júlio César Estrella.
19. Atila Ferreira Pessoa. Técnicas de Machine Learning aplicadas ao estudo de intrusão de vapores. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Fabrício Simeoni de Sousa.
20. Augustin Masson. Ice Accretion on swept back wings. Start: 2019. Thesis (M.Sc. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
21. Augusto Sebastião Ferreira. O problema de nesting tidimensional com rotações livres. Start: 2019. Thesis (M.Sc. in Computer Science) - Universidade Federal de Lavras. CAPES. Co-supervisor: Marina Andretta.



22. Benedito Faustinoni. TBD. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Victor Claudio Bento de Camargo.
23. Benedito Faustinoni Neto. Estudo comparativo na mensuração do Value at Risk e Expected Shortfall em uma carteira de ativos: Abordagens clássicas versus Processos gaussianos. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Vicente Garibay Cancho.
24. Bernardo Mota Barbosa. Análise de risco de equipamentos da indústria do petróleo. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Antonio Castelo Filho.
25. Brenda Lima Boaventura. TBD. Start: 2021. Thesis (M.Sc. in Mathematics) - UFBA. Fundação de Amparo à Pesquisa do Estado da Bahia. Co-supervisor: Paulo Henrique Ferreira da Silva.
26. Bruno Suguimoto Iwami. Uso de RFID no rastreamento de caçambas de entulhos. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jó Ueyama.
27. Caio Fabrício Deberaldini Netto. Interpretando Sistemas de Perguntas/Respostas Baseados em Métodos Neuro-Simbólicos. Start: 2021. Thesis (M.Sc. in Electrical Eng.) - USP. FUSP. Supervisor: Fabio Gagliardi Cozman.
28. Cairo Mateus Neves Ribeiro. Fluxos de trabalho inteligentes para a coleta, processamento e armazenamento de dados de sensores em Smart Building. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Júlio César Estrella.
29. Camila Castro Moreno. Mapping the competences of Machine Learning classifiers in Instance Spaces. Start: 2021. Thesis (M.Sc. in Operations Research) - UNIFESP. CAPES. Supervisor: Ana Carolina Lorena.
30. Camila Machado de Araujo. Inteligência Artificial para Descoberta de Materiais Supercondutores. Start: 2021. Thesis (M.Sc.) - UNICAMP. Instituto Serrapilheira. Co-supervisor: Anderson de Rezende Rocha.
31. Carlos Alonso Rodrigues. TBD. Start: 2022. Thesis (M.Sc. in Mech. Eng.) - UNICAMP. Supervisor: William Roberto Wolf.
32. Caroline Amantéa Stella. TBD. Start: 2019. Thesis (M.Sc. in Statistics) - USP. Supervisor: Adriano Kamimura Suzuki.
33. Celina Moraes Lima. Ciência de Dados no setor educacional privado: Uso de modelos de Churn com análise de risco de crédito de clientes para tornar as finanças mais eficientes - Aplicações a dados reais. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Antonio Castelo Filho.
34. César Ambrogi Ferreira do Lago. Otimização de Medidas Mitigadoras da Drenagem Urbana usando Biorretenção. Start: 2016. Thesis (M.Sc. in Hydraulic Engineering and Sanitation) - USP. CAPES. Supervisor: Eduardo Mario Mendiondo.
35. Connor Davis Sterrett. TBD. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Gleici da Silva Castro Perdoná.



36. Daniel Augusto dos Santos. Um modelo baseado em algoritmos genéticos para explicabilidade de decisões tomadas por redes neurais artificiais. Start: 2019. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Renato Tinós.
37. Daniel Coutinho Ayub. Não Definido. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Francisco Louzada Neto.
38. Daniel Moraes Cardozo. Detectando desvios em rotas de caminhões no manejo de resíduos sólidos. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
39. Daniel Shinoda Pascoal. Modelo automatizado para avaliação de risco de crédito baseado em indicadores competitivos de pequenas e médias empresas de uma plataforma de marketplace. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Victor Claudio Bento de Camargo.
40. David Melo da Luz. Machine learning e políticas públicas educacionais: utilização de robôs para auxiliar técnicos no planejamento de programas de formação à distância. Start: 2022. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jose Antonio Rabi.
41. Débora Fonseca de Abreu Rangel. Abordando Fundamentos de Matemática no Ensino Médio,. Start: 2018. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. CAPES. Supervisor: Lucio Tunes dos Santos.
42. Diego de Douza Oliveira. TBD. Start: 2020. Thesis (M.Sc. in Computer Science) - UNESP. Petrobras. Supervisor: João Paulo Papa.
43. Diego Yoshihiro Hono. O problema de empacotamento 2D em bin: uma abordagem combinando aprendizado de máquina e otimização. Start: 2022. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Franklina Maria Bragion de Toledo.
44. Douglas Luan de Souza. Sistema de Recomendação com Capacidade de Explicação. Start: 2021. Thesis (M.Sc. in Electrical Eng.) - USP. FUSP. Supervisor: Fabio Gagliardi Cozman.
45. Douglas Queiroz Glaucio Batista. Explorando a técnica de pruning em aprendizado profundo em aplicações com processamento de imagens. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
46. Eder Almeida Batista de Oliveira. Otimização evolutiva robusta em robôs móveis. Start: 2019. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Renato Tinós.
47. Edilson do Carmo. Data science. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Afonso Paiva Neto.
48. edson luiz ferreira dos santos. Linear Response in Macroscopic fields. Start: 2020. Thesis (M.Sc. in Mathematics) - USP. Supervisor: Tiago Pereira da Silva.
49. Eduardo da Silva Afonso. Explainable AI. Start: 2021. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Zhao Liang.
50. Eduardo Santos Carlos de Souza. Segmentação e Classificação de Terreno a Partir de Imagens Aéreas em Cenários com Poucos Recursos. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.



51. Eleandro Santana Bernachi. Aproximação Numérica de Funções Transcendentes. Start: 2018. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. Supervisor: Lucio Tunes dos Santos.
52. Erivelton Souza Antonio. Aplicação da análise Big Data na Gestão da Cadeia de Suprimento e de Recursos de Produção. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Maristela Oliveira dos Santos.
53. Euclides Nasorri Gottsfritz. TBD. Start: 2021. Thesis (M.Sc. in Computer Science) - UNESP. Supervisor: Rodolfo Ipolito Meneguette.
54. Felipe Alves Siqueira. Deep Learning applied to Portuguese text data. Start: 2022. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: André Carlos Ponce de Leon Ferreira de Carvalho.
55. Felipe Augusto Arguello de Souza. Observatório Cidadão para a Segurança Hídrica. Start: 2017. Thesis (M.Sc. in Hydraulic Engineering and Sanitation) - USP. CNPq. Supervisor: Eduardo Mario Mendiondo.
56. Felipe Jordão Xavier. Aprendizado de máquina em dados de futebol. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CNPq. Supervisor: Francisco Aparecido Rodrigues.
57. Felipe Marins Beloso. Tópicos Interdisciplinares de Matemática Geografia. Start: 2018. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. CAPES. Supervisor: Lucio Tunes dos Santos.
58. Fernanda Tostes Marana. Recommendation System Applying Cognitive Diagnostic Models to Predict User's Rating. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Mariana Cúri.
59. Frederico de Castro Neto. Otimização do processo de rebitagem na produção de peças para aeronaves. Start: 2021. Thesis (M.Sc. in Production Eng.) - UNESP. Supervisor: Edilaine Martins Soler.
60. Gabriel Augusto Zutião. Preservando privacidade em ambiente de Internet das Coisas. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
61. Gabriel Biscaro Cavallari. Estudo de representações de imagens de múltiplos domínios a partir de aprendizado profundo não supervisionado e semi-supervisionado. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. FAPESP. Supervisor: Moacir de Miranda Oliveira Junior.
62. Gabriel Couto Tabak. Título a definir. Start: 2022. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Mariana Cúri.
63. Gabriel Gazetta de Araujo. Explainable Machine Learning. Start: 2019. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Luis Gustavo Nonato.
64. Gabriel Gomes Ferreira. Avaliação da performance de métodos de estimação da AUC. Uma aplicação em dados de marketing digital. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jorge Luis Bazan Guzman.
65. Gabriel Lino Garcia. TBD. Start: 2020. Thesis (M.Sc. in Computer Science) - UNESP. Supervisor: João Paulo Papa.



66. Gabriel Lucas da Silva. Smoke animation. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Afonso Paiva Neto.
67. Gabriel Rodrigues Félix. Impactos da Formação de Gelo no Desempenho de Hélices. Start: 2020. Thesis (M.Sc. in Aeronautical and Mechanical Engineering) - ITA. CAPES. Supervisor: Roberto Gil Annes da Silva.
68. Gabriel Rodrigues Silva Grillo. Minimização parcialmente suave de funções não suaves e aplicações a problemas inversos lineares. Start: 2022. Thesis (M.Sc. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Sandra Augusta Santos.
69. Gabriel Souto Ferrante. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Rodolfo Ipolito Meneguette.
70. Gabriel Tupinambá da Cunha Leandro. Previsão de Resultados de Partidas de Futebol: Uma Aplicação no Campeonato Brasileiro. Start: 2022. Thesis (M.Sc. in Statistics) - USP. Supervisor: Adriano Kamimura Suzuki.
71. Gabriela Nunes Martins. Um estudo do problema de designação de locais de armazenagem no contexto de e-commerce. Start: 2021. Thesis (M.Sc. in Operations Research) - UNIFESP. Supervisor: Mariá Cristina Vasconcelos Nascimento Rosset.
72. Genicleito Carvalho Beltrão Gonçalves. Investigando a interpretabilidade de funções de pertinência fuzzy. Start: 2021. Thesis (Ph.D. in Computer Science) - UFBA. Supervisor: Tatiane Nogueira Rios.
73. Gilsiley Henrique Darú. Análise de dados aplicados à distribuição geográfica de redes de transporte. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Antonio Castelo Filho.
74. Guilherme de Carvalho. Redes Neurais de Grafos: teoria e aplicações. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CNPq. Supervisor: Francisco Aparecido Rodrigues.
75. Gustavo Contini Torres. Mineração de dados e aprendizado de máquina aplicados em uma operação de factoring para gestão eficiente do risco de crédito. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Victor Claudio Bento de Camargo.
76. Gustavo Freire. Otimização Multiobjetivo como estratégia para diminuição do tempo de resposta em aplicações de Internet das Coisas. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Júlio César Estrella.
77. Gustavo Henrique Nunes. Instance hardness in curriculum learning. Start: 2021. Thesis (M.Sc. in Computer Science) - UNIFESP. Supervisor: Ana Carolina Lorena.
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79. Gustavo Torquette. Revisiting instance hardness measures for classification problems. Start: 2021. Thesis (M.Sc. in Computer Science) - UNIFESP. Supervisor: Ana Carolina Lorena.
80. Hericson dos Santos. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.



81. Herlisson Maciel Bezerra. MODELOS DE REGRESSÃO ESPACIAL APLICADOS À PREVISÃO DE PEDIDOS DE ONLINE FOOD DELIVERY. Start: 2018. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Vicente Garibay Cancho.
82. Isadora Ferrão. Resilient architecture to dynamically manage unmanned aerial vehicle networks under attack. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Kalinka Regina Lucas Jaquie Castelo Branco.
83. Ismael Ferreira da Silva. Desenvolvendo o código de barras para detectar enchentes. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
84. Jaqueline Lopes Dias. Aplicação de técnicas de aprendizado de máquina na identificação de beneficiários propensos ao desenvolvimento de doenças crônicas. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jose Antonio Rabi.
85. Jheovany Henrique Martins Pereira. Polo Olímpico de Treinamento Intensivo: habilidades desenvolvidas na preparação para Olimpíadas de Matemática. Start: 2018. Thesis (M.Sc. in Teaching Science and Mathematics) - UNICAMP. Supervisor: Laura Leticia Ramos Rifo.
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89. João Luiz Santos Gomes. Sobre noções distintas de posto para tensores e implicações práticas em problemas envolvendo redução de dimensionalidade. Start: 2021. Thesis (M.Sc. in Applied Mathematics) - UNICAMP. CAPES. Supervisor: Sandra Augusta Santos.
90. Jorge André D. Barreto. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
91. Jose Alberto Coretti. TBD. Start: 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Rodolfo Ipolito Meneguette.
92. Jose Alexandre Ferreira da Silva. Não Definido. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Francisco Louzada Neto.
93. José Guilherme Santana de Sena. Modelos espaço-temporais aplicados no Controle Estatístico de Processo na presença de dados contínuos no intervalo unitário. Start: 2021. Thesis (M.Sc. in Mathematics) - UFBA. Fundação de Amparo à Pesquisa do Estado da Bahia. Supervisor: Paulo Henrique Ferreira da Silva.
94. José Vitor Couventaris Sammour. Otimização de processo industrial em indústria moveleira (provisório). Start: 2020. Thesis (M.Sc. in Applied Mathematics) - UNICAMP. FUNCAMP. Co-supervisor: Paulo José da Silva e Silva.



95. Josimara Cristina da Silva. Ensino de matemática e linguagem de sinais. Start: 2020. Thesis (M.Sc. in Teaching Science and Mathematics) - UNICAMP. Supervisor: Laura Leticia Ramos Rifo.
96. Juliana Shibaki Camargo. Uso de técnicas de aprendizado de máquina para combinar métodos de previsão. Start: 2020. Thesis (M.Sc. in Statistics) - USP. Co-supervisor: Marinho Gomes de Andrade Filho.
97. Juliano Negri. Predição de medidas em redes complexas com aprendizagem de máquina. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Francisco Aparecido Rodrigues.
98. Kennedy Bacule dos Santos. Aprendizagem profunda para dados de sobrevivência e genética. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Mariana Cúri.
99. Laleska Aparecida Ferreira Mesquita. Usando blockchain para rastreamento de extração de madeira. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Jó Ueyama.
100. Leandro Júnio de Oliveira Silva. TBD. Start: 2022. Thesis (M.Sc. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.
101. Leticia de Faria Correia. Sobre projeções em politopos. Start: 2019. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. Supervisor: Sandra Augusta Santos.
102. Leticia Ferreira Reis. Não Definido. Start: 2021. Thesis (M.Sc. in Statistics) - USP. Supervisor: Francisco Louzada Neto.
103. Lohan Rodrigues Narcizo Ferreira. Sistema de Recomendação Baseado em Modelo de Diagnóstico Cognitivo. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Mariana Cúri.
104. Lucas Akio Senaga Onuki. Count Regression Models with alternative distributions. Start: 2021. Thesis (Ph.D. in Statistics) - USP. Supervisor: Jorge Luis Bazan Guzman.
105. Lucas Feitosa de Souza. Numerical investigation of an airfoil under light dynamic stall. Start: 2022. Thesis (M.Sc. in Mech. Eng.) - UNICAMP. FAPESP. Supervisor: William Roberto Wolf.
106. Lucas Thomaz Januário Pinto. Modelo de Otimização Matemática para Redução de Custos com Manufatura e Distribuição de Cartões de Crédito. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Maristela Oliveira dos Santos.
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108. Luísa Coelho Bolsoni. Modelos de Séries Temporais Financeiras com Técnicas de Ciência de Dados. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Marinho Gomes de Andrade Filho.
109. Luiz Augusto Vieira Manoel. Avaliando e corrigindo viés de seleção em bases de dados e modelos de reconhecimento facial. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Moacir de Miranda Oliveira Junior.



110. Luiz F. de A. Silva. Classificação politômica: Um algoritmo alternativo. Start: 2022. Thesis (M.Sc. in Statistics) - USP. CAPES. Supervisor: Carlos Alberto Ribeiro Diniz.
111. Luiz Guilherme Giordani. Data science. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Afonso Paiva Neto.
112. Luiz Gustavo Ribeiro. Desenvolvendo um modelo para reconhecimento de produtos de varejo usando visão computacional e Machine Learning. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Fabrício Simeoni de Sousa.
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114. Marcos Menon José. Aprendizado por Reforço em Chatbot sobre a Amazônia Azul. Start: 2020. Thesis (M.Sc. in Electrical Eng.) - USP. FUSP. Supervisor: Fabio Gagliardi Cozman.
115. Marcus Vinícius Malta Conceição. Título em desenvolvimento. Start: 2021. Thesis (Professional M.Sc. in Instrumentation, Control and Automation of Mining Processes) - Universidade Federal de Ouro Preto. Co-supervisor: Dennis Brandão.
116. Maria Luiza Teixeira Santos. Uma abordagem do problema de distribuição em um contexto de e-commerce. Start: 2022. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. FAPESP. Supervisor: Franklina Maria Bragion de Toledo.
117. Maria Victoria Paulino de Souza. Implementação de métodos multiescala para escoamento em meios porosos na plataforma de elementos finitos Fenics. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Roberto Federico Ausas.
118. Mariana Aparecida Ferreira. Score de sucesso na recuperação de mulheres com câncer de mama e tempo estimado total de tratamento. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Jose Antonio Rabi.
119. Mario Muramatsu Junior. TBD. Start: 2021. Thesis (Professional M. Sc in Computer Sciences) - USP. Supervisor: André Fujita.
120. Mateus Leonel Souto Alonso. Algoritmos de otimização qualidade-diversidade para o problema de escalonamento em enfermagem. Start: 2022. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Renato Tinós.
121. Matheus Diniz Ferreira. Otimização da cadeia de suprimentos utilizando Big Data. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Maristela Oliveira dos Santos.
122. Matheus Henrique Junqueira Saldanha. TBD. Start: 2021. Thesis (M.Sc. in Statistics) - USP. CAPES. Supervisor: Adriano Kamimura Suzuki.
123. Matheus Pereira Leal. TBD. Start: 2021. Thesis (M.Sc. in Computer Science) - UNESP. Supervisor: Rodolfo Ipolito Meneguette.
124. Matheus Sanches Quessada. TBD. Start: 2020. Thesis (M.Sc. in Computer Science) - UNESP. Supervisor: Rodolfo Ipolito Meneguette.



125. Mauro Rober Junior. TÉCNICAS DE OTIMIZAÇÃO APLICADAS AO JOB SHOP FLEXÍVEL PARA MINIMIZAÇÃO DO ATRASO PONDERADO TOTAL. Start: 2018. Thesis (M.Sc. in Production Eng.) - USP. Supervisor: Débora Pretti Ronconi.
126. Naiara Pereira Magro Faccioli. Auditoria de Enfermagem X Pandemia: o impacto financeiro nas contas hospitalares de um hospital referência no tratamento de pacientes com Covid-19 na cidade de Ribeirão Preto. Start: 2021. Thesis (M.Sc in Community Health) - USP. Supervisor: Gleici da Silva Castro Perdoná.
127. Natalia da Silva Rodrigues. Otimização de processo industrial em indústria moveleira (provisório). Start: 2020. Thesis (M.Sc. in Applied Mathematics) - UNICAMP. FUNCAMP. Co-supervisor: Paulo José da Silva e Silva.
128. Nicole do Vale Dalarmelina. TBD. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Rodolfo Ipolito Meneguette.
129. Patricia Bruniero Franciscato Augusto. Análise de descalculia via redes complexas. Start: 2020. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Zhao Liang.
130. Patricia P. M. de Castro. TBD. Start: 2019. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Gleici da Silva Castro Perdoná.
131. Paula Cristina Rohr Ertel. Métodos de resolução para o problema do carteiro viajante contínuo. Start: 2021. Thesis (M.Sc. in Applied Mathematics) - USP. CAPES. Supervisor: Ernesto Julián Goldberg Birgin.
132. Paula Giovana Rodrigues. Cooperação em redes complexas. Start: 2021. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Francisco Aparecido Rodrigues.
133. Paula Jaíne Alves da Silva. Aplicação de técnicas de Deep Learning em microfluidica. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Roberto Federico Ausas.
134. Paulo Henrique Lima de Paula. Detecção e Análise de Comunidades de Redes Cerebrais em Acidentes Vascular Cerebral (AVC). Start: 2019. Thesis (M.Sc. in Applied Computing) - USP. Supervisor: Zhao Liang.
135. Pedro Lamkowski dos Santos. Modelos de Atenção Visual Baseados em Técnicas de Análises de Vídeos no Domínio Comprimido. Start: 2021. Thesis (M.Sc. in Computer Science) - UNESP. FAPESP. Supervisor: João Paulo Papa.
136. Pedro Paiola. TBD. Start: 2020. Thesis (M.Sc. in Computer Science) - UNESP. Supervisor: João Paulo Papa.
137. Percy Eduardo Palma Chavez. Organizational Information Security Adaptative Model. Start: 2022. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Mariana Cúri.
138. Philippe Dias de Almeida. TBD. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. Supervisor: Gleici da Silva Castro Perdoná.



139. Públío Netto de Almeida. TBD. Start: 2022. Thesis (M.Sc. in Operations Research) - UNIFESP. Supervisor: Ana Carolina Lorena.
140. Quinhones Furtunato de Souza Dutra. PROBLEMA DE ROTEIRIZAÇÃO DE VEÍCULOS COM FROTA FIXA, HETEROGÊNEA, JANELAS DE TEMPO, ENTREGAS FRACIONADAS E RESTRIÇÃO DE ACESSO. Start: 2018. Thesis (M.Sc. in Production Eng.) - USP. Supervisor: Débora Pretti Ronconi.
141. Rafael Ajudarte de Campos. Roteamento de aeronaves sob incertezas via otimização robusta. Start: 2020. Thesis (M.Sc. in Production Eng.) - UFSCar. FAPESP. Supervisor: Pedro Augusto Munari Junior.
142. Rafael da Silva Alves. THEORETICAL FATIGUE METHODOLOGY IN AERONAUTICAL PANELS ON POST-BUCKLING REGIME DUE TO AEROELASTIC EFFECTS IN SUPERSONIC FLOW. Start: 2020. Thesis (M.Sc. in Aeronautical and Mechanical Engineering) - ITA. Supervisor: Roberto Gil Annes da Silva.
143. Rafael dos Santos Braz. Verificação da Transformadores de Código. Start: 2020. Thesis (Professional M.Sc. in Applied Mathematics, Statistics and Computing Applied to Industry) - USP. CAPES. Supervisor: Adenilso da Silva Simão.
144. Rafael Gardel Azzariti Brasil. Resolução de problemas de Engenharia de Produção através de métodos de otimização (título provisório). Start: 2020. Thesis (M.Sc. in Production Eng.) - USP. Supervisor: Débora Pretti Ronconi.
145. Rafael Junqueira Martarelli. Estratégias para Seleção de Classificadores Baseadas em Programação Genética para Reconhecimento de Dados Multimídia. Start: 2021. Thesis (M.Sc. in Computer Science) - UNESP. FAPESP. Supervisor: João Paulo Papa.
146. Rafael Kenji Nissi. TBD. Start: 2020. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. Supervisor: Seiji Isotani.
147. Rafael Pavan. Matheurística para resolução do problema de Fluxo de Potência Ótimo Discreto. Start: 2021. Thesis (M.Sc. in Electrical Eng.) - UNESP. CNPq. Supervisor: Edilaine Martins Soler.
148. Rafael Peçanha Weissman. Proposta de Extensões ao Método de Alocação Fortuita. Start: 2019. Thesis (M.Sc. in Modeling Complex Systems) - USP. Supervisor: Marcelo de Souza Lauretto.
149. Rameyli Godoi. Estudo numérico de escoamento viscoelástico e eletroosmótico. Start: 2018. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CNPq. Supervisor: Antonio Castelo Filho.
150. Renan de Oliveira da Cruz. TBD. Start: 2022. Thesis (M.Sc. in Statistics) - USP. Supervisor: Adriano Kamimura Suzuki.
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28. Giovanni Pastori Piccirilli. Regression models to limited response based in type Johson SB distribution. 2021. Thesis (M.Sc. in Statistics) - USP. CAPES. Supervisor: Jorge Luis Bazán Guzmán.
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36. Juliana Shibaki Camargo. Método bagging para aprimoramento de previsões de séries temporais. 2021. Thesis (M.Sc. in Statistics) - UFSCar. CAPES. Supervisor: Carlos Alberto Ribeiro Diniz.
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39. Lara Beatriz Carvalho Marins. Modelos de otimização para a cadeia de suprimentos de milho considerando mercado interno e exportação. 2021. Thesis (M.Sc. in Production Eng.) - UFSCar. CAPES. Supervisor: Reinaldo Morabito Neto.
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43. Luisa Hebling. Distribuições k_1 e k_2 Modificadas. 2021. Thesis (M.Sc. in Statistics) - USP. CAPES. Supervisor: Katiane Silva Conceição.
44. Marcos Cavalcante de Melo. Avaliação da influência dos parâmetros ambientais nas medições espectrorradiométricas em laboratório. 2021. Thesis (M.Sc. in Space Sciences and Technologies) - ITA. Supervisor: Maria Luísa Collucci da Costa Reis.
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48. Mateus Roder. Máquinas de Boltzmann em Profundidade para Reconhecimento de Eventos em Vídeos. 2021. Thesis (M.Sc. in Computer Science) - UNESP. FAPESP. Supervisor: João Paulo Papa.
49. Mateus Santana. Otimização na reprogramação de transporte aéreo de passageiros para unidades marítimas por meio de heurísticas MIP. 2021. Thesis (M.Sc. in Production Eng.) - UFSCar. CNPq. Supervisor: Reinaldo Morabito Neto.
50. Matias Emir Luemba. Análise Exploratória e Visualização de Dados de Origem Florestal a partir do Sistema DOF do IBAMA. 2021. Thesis (M.Sc. in Computer Science) - UNESP. Instituto Nacional de Gestão de Bolsas (Agência de Fomento de Angola). Supervisor: Wallace Correa de Oliveira Casaca.
51. Natan Bissoli. Problemas de roteamento. 2021. Thesis (M.Sc. in Computer Sciences and Computational Mathematics) - USP. CAPES. Supervisor: Franklina Maria Bragion de Toledo.
52. Otávio Gonçalves Vicente Ribeiro Filho. Uma Nova Arquitetura de Rede Neural Artificial para abordagens end-to-end de classificação de sinais. 2021. Thesis (M.Sc. in Computer Science) - UFBA. Supervisor: Ricardo Araújo Rios.
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55. Renata Cristina Carregari. Um novo modelo de sobrevivência Bell-Inversa Gaussiana com fração de cura. 2021. Thesis (M.Sc. in Statistics) - USP - ICMC. Supervisor: Adriano Kamimura Suzuki.
56. Renato Mucciaccito. Logaritmos: História. Aplicações e Vídeos Animados. 2021. Thesis (Professional M.Sc. in Mathematics) - UNICAMP. CAPES. Supervisor: Lúcio Tunes dos Santos.
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61. Tatiana Félix da Matta. Novos modelos de regressão binária usando funções de ligação simétricas e assimétricas. 2021. Thesis (M.Sc. in Mathematics) - UFBA. CAPES. Supervisor: Paulo Henrique Ferreira da Silva.
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B. Publications

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B.2 BOOK CHAPTERS

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B.3 PAPERS

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B.4 PAPERS IN CONFERENCE PROCEEDINGS

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