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Proceedings of the II Symposium of Academic Exchange (SAE)

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FOREWORD

We proudly present the Proceedings of the [II Symposium of Academic Exchange \(SAE\)](#)¹, a satellite event to the 37th *Jornada Acadêmica Integrada* of the *Universidade Federal de Santa Maria* (UFSM), which offered a platform for undergraduate and graduate students of UFSM to develop their academic literacies in English as an Additional Language. In support towards Internationalization, the number one challenge in the 2016-2026 *Plan for Institutional Development* of UFSM, the II SAE provokes participants to present their research in English in up to 5 minutes, in an intelligible and compelling way so as to reach a multidisciplinary audience. Inspired on the international competition *Three Minute Thesis* (3MT), the event aims at 1) boosting academic literacies in English, more specifically, the writing of abstracts and the delivery of oral presentations; and 2) stimulating novice researchers' capacity to effectively explain a research topic to multidisciplinary audiences by emphasizing its potential impacts for the community.

The first issue of the SAE took place in 2019 as part of a series of initiatives by the Department of Foreign Modern Languages (DLTE), involving the offer of extracurricular language courses, lectures, workshops, and proficiency tests such as TOEFL-ITP® and TESLLE (Test of Sufficiency in Reading in Foreign Languages), an academic literacy technology devised and administered by the DLTE. The I SAE was coined by the team then in charge of the English sector of the *Language without Borders Program* at UFSM, which included the two first organizers of this publication² in collaboration with Amy Graham Lee and Daniela Schwarcke do Canto, from the Translation Sector of the Office of International Affairs (SAI) at UFSM. The third organizer of these proceedings was an award winning undergraduate student in the I SAE.

¹ Project GAP/CAL n. 058589

² Professor Roséli Nascimento was the English Pedagogical Coordinator and Gabriel Salinet Rodrigues, Nathieli Cipolat Cervo, Layla Ribas Shiefelbien and Thales Cardoso da Silva were the English teachers in the program.

In its second issue, the SAE is organized by the Laboratory of Research and Teaching of Reading and Writing (LabLeR), via Languages in the Campus Project (LINC)³, and was articulated under the *I Simpósio de Intercâmbio Acadêmico (SIA)*, also in collaboration with SAI and the Postgraduation Dean's Office (PRPGP). The I SIA allows for the convergence of the II SAE with the *II Pesquisadores/as sem Fronteiras: Mostra de Trabalhos em Andamento*, also by DLTE via the Portuguese as an Additional Language team of the Rede Andifes-IsF - UFSM (previous Languages without Borders). Such convergence is meant to encourage multilingual spaces for scientific dissemination and exchanges and to boost the visibility of the science produced at UFSM.

The II SAE received 64 submissions from young researchers from [the eight knowledge areas](#) (CNPQ). All abstracts were reviewed by an examining board following the criteria established in the [Public Notice](#), resulting in 58 acceptances. 46 delivered a presentation on November 10 and 11, 2022. These Proceedings contain the 19 abstracts returned by participants after the Committee sent their feedback with editing suggestions, including the awarded presentations.

On behalf of the organizing committee, we would like to express sincere appreciation to all of the young researchers who accepted the challenge of sharing their research findings during the II SAE. This gratitude is extensive to their research groups and to the university's administrative staff who supported the committee in the promotion of the event in the institutional media.

We would also like to express our gratitude to our sponsors in the community for prizes offered as a means to further stimulate these young researchers to engage in this innovative and challenging opportunity.

¹ Project GAP/CAL n. 057824. Website: ufsm.br/laboratorios/labler. Instagram: [instagram.com/linc_ufsm/](https://www.instagram.com/linc_ufsm/)

At closing, it is our hope that all of these efforts have helped to improve and promote an awareness of the strategic role of research, teaching, and extension actions in academic literacies and additional languages to better address the challenge of internationalization at UFSM. It is also our expectation to increase SAE's visibility as a substantial instance of contribution to the objectives of the institutional Language Policy (Resolution 018/2018), specifically academic literacies and science communication in a multilingual, multicultural university.

Roséli Gonçalves do Nascimento
Gabriel Salinet Rodrigues
Juliana Michelon Ribeiro



A SUSTAINABLE APPROACH FOR USING INSECT LARVAE MEAL IN BROILER CHICKEN PRODUCTION

Yuri Katagiri Dalmoro; Catarina Stefanello

The search for more eco-friendly ways to feed the world is always under debate. In this context, insects have been highlighted as new ingredients to use in animal production due to their nutritional composition and functional properties. The use of insects such as larvae of black soldier fly (BSF) can reduce the impacts on the environment, reducing generated food wastes and transforming low nutritional residues into a high protein ingredient, as well as presenting natural antimicrobial potential that comes from the insect exoskeletal and antimicrobial peptides. This study evaluated the effects of BSF meal on the growth performance of broilers under an imposed experimental intestinal challenge. Broilers were divided into four groups: non-challenged or challenged with an oral dose of bacteria and broilers fed on diets formulated with or without 5% BSF. Performance was evaluated weekly and in each growing phase. Results obtained indicated that broilers fed on diets containing or not 5% BSF had similar performance. The intestinal challenge resulted in decreased performance compared to non-challenged birds. The feed conversion ratio was improved in challenged broilers fed on BSF meal, probably due to its antimicrobial effect. In conclusion, the BSF meal can be used as a functional ingredient for broiler chickens reducing the effects of enteric dysbiosis.

Keywords: Animal nutrition. *Hermetia illucens*. Insect meal. Poultry. Sustainability.

BEHIND THE INK THERE'S NOT JUST WALL: STUDIES ABOUT GRAFFITI (TAGGING) AND GRAFFITI (AS ART)

Isabel dos Santos Rita; Cristina Marques Gomes

Since the revolutionary European Vanguards, there is a quote about what is art and if any human creation can be considered like that, and, in this debate, two contemporaneous manifestations are highlighted: the Graffiti (as art) and the Graffiti (tagging). The way how one of them is well-accepted by the public and the other one is punished reveals humanity's aesthetics and ethical values, as what people consider beauty and the bounds of art, which are fundamental factors to define and to understand why such segregation happens. Besides the aesthetic and ethical value, the social value was also considered. It is contemplated that understanding the tags of urban space is understanding the local population which lives in this space and why some manifestations such as public marches or, in this case, the practice of painting the walls and other public/private spaces often happen there. This work does not aim to defend any kind of urban expression presented; nevertheless, it aims to elucidate the historical, artistical, juridical, and social cases that define them.

Keywords: Aesthetic. Graffiti (art). Graffiti (tagging). Public Spaces.

BRAZILIAN SCIENCE DISSEMINATION: ANALYSING THE COMMUNICATION OF RESULTS IN THE BIOLOGICAL SCIENCES GRADUATE COURSES

Karine Gehrke Graffunder; Lenira Maria Nunes Sepel

Academic research has a competitive profile and the social importance of knowledge diffusion is not always valued. This pattern is present in graduate courses (GC) that train students for the production of knowledge without concern for communication with the general public. In this scenario, dissertations and theses have greater visibility only with specific academic communities. Science produced in academia should also be aimed at other audiences, including those responsible for public policies, influencers, and the population who is not directly related to science. This study aims to investigate how GC in the area of Biological Sciences promote scientific dissemination (SD). The first step is to investigate documents, GC websites, and interview professors and students. Data analysis will lead to the identification of dissemination strategies and gaps in postgraduate communication with society. The expected results will allow the didactic development approaches in the populations of graduate students, in order to stimulate the new generation towards a more effective communication with society. It is expected to collaborate for the appreciation of scientific knowledge with the general population, encouraging SD for non-specialized audiences.

Keywords: Biology. Higher education. Science popularization. Scientific education.

CONSTRUCTION OF AN ONTOLOGY FOR THE FIELD OF ANIMAL-COMPUTER INTERACTION

Ana Paula Militz Dorneles; Giovani Rubert Librelotto

The emergence of new research fields is greatly favored by the creation of ways to synthesize aspects covered by them. This study aims to design an ontology that meets such demand for the field of Animal-Computer Interaction (ACI), in order to provide the unification of its knowledge. With the use of the ontology software Protégé, multiple classes, object properties, and instances - as well as some restrictions and inference rules - were created. Resulting from that, the main elements of the ACI domain were represented in a conceptual model. Such representation has implications for the scientific community that include being a source of information, organizing data into knowledge, opening up possibilities for the improvement of problem-solving and answering substantial questions that regard the ACI field. Furthermore, this ontology can serve as a foundation for future research and development in the ACI field, facilitating collaboration and communication among researchers. It also provides a common language for researchers to share their findings, as well as constructively expand upon the scholarly contributions of their peers.

Keywords: Ontology. Animal-Computer Interaction (ACI). Protégé.

DIVERSITY WITHIN THE GENE *H3* IN CRUSTACEANS OF THE GENUS *AEGLA*

Diogo Alves da Silveira; Gislaine Puli; Marlise Ladvocat Bartholomei-Santos

The family Aeglidae Dana, 1852 (Decapoda: Anomura) is an ecologically and evolutionarily unique group of crustaceans encompassing 93 known species in the genus *Aegla* Leach, 1820, living in continental waters of meridional South America. About 70% of *Aegla* species are under some level of threat. However, this number may be much higher as a result of the recent unveiling of cryptic species complexes. Phylogeographic methods, utilizing nuclear and mitochondrial markers, aid these discoveries, but in aeglids only two nuclear genes have been employed with limited success. The nuclear gene *H3* has been used with variable success in phylogeographic studies in crustaceans but has never been tested in aeglids. To verify the utility of the gene *H3* for phylogeography in aeglids, we compared the *H3* sequence among different species, by calculating the intra and interspecific genetic distances. We also inferred a phylogenetic tree based on the *H3* sequences. . The interspecific distances varied from 0,000 to 0,014 and the obtained tree was not fully resolved. These results indicate that the gene *H3* is unsuited for phylogeographic analyses in the family, given its high conservation.

Keywords: *Aegla*. Phylogeny. Histone 3.

EVALUATION OF DLMS/COSEM DATA PROCESSING SETUPS APPLIED TO SMART METERING

Cristian Augusto Wülfing; Carlos Henrique Barriquello; Flávio Garlet Reck

Smart Grids' growth requires increased energy consumption data from users to ensure the correct grid management. This environment provides features such as energy quality monitoring, load demand prediction, remote billing, remote maintenance, and fraud detection. In this way, DLMS/COSEM is a protocol that standardizes the communication between smart meters and utility central systems, integrating independent device models from different manufacturers. With the objective of reducing costs related to data traffic over the network, two communication setups proposing different DLMS/COSEM processing environments were evaluated. In both cases, we present optimization implementations, such as indexing static headers and payload, which prevent repeated and known information being exchanged into the network. The proposed solution achieved a 96,5% reduction in data transmission and proved to be robust and replicable, considering the applied situations. As a result, it allows larger traffic without expensive link infrastructure upgrades, making it possible for utilities companies to collect consumer data within a shorter period to provide an almost instantaneous grid visualization. Moreover, the reduction allows energy efficiency improvements on the devices and makes the use of large coverage and low transmission rates communications protocols.

Keywords: Smart Meter. DLMS. Data Compression. Smart Grid. IoT.

EVALUATION OF TRPV4 INDUCED NOCICEPTION IN A MODEL OF COMPLEX REGIONAL PAIN SYNDROME TYPE I (CRPS-I) IN MICE

Náthaly Andrighetto Ruviaro da Silva; Gabriela Trevisan

Complex regional pain syndrome type I (CRPS-I) is a common disabling condition that occurs after limb trauma. Currently, there is still no standard treatment for CRPS-I pain, requiring the search for new pharmacological targets. Capsaicin patches (a Transient Receptor Potential Vanilloid 1, TRPV1, agonist) are already being used as an alternative to pain management in patients. However, adverse effects are present and still show limited efficacy. On the other hand, in clinical trials, a TRPV4 antagonist (GSK2798745) has been well-tolerated in healthy volunteers. Therefore, the present study used a mice model that emulates CRPS in patients to evaluate TRPV4 channel involvement. Animals under anesthesia were placed with a tourniquet in the left hind limb for 2 hours to establish ischemia, followed by reperfusion when removed. Through nociceptive test assessment, animals showed mechanical allodynia (von Frey test) and thermal hypersensitivity (hot plate test, 38°C). Additionally, treatment with a selective antagonist (HC067047) reduced the nociceptive parameters. Ischemia/reperfusion injury causes an inflammatory process that can lead to TRPV4 activation and evoke pain in patients. These findings corroborate with the literature, presenting a promising new target for CRPS-I pain, thus enhancing the quality of life of affected patients.

Keywords: Ischemia. Trauma. Inflammation. Allodynia.

FEMINISMS IN PERFORMANCE: (SELF)BIOGRAPHED CORPS COMMUNICATING PEDAGOGICAL MEANINGS

Cláudia Simone Oliveira do Nascimento; Marcelo de Andrade Pereira

This study proposes to investigate possibilities of a feminist pedagogy of performance from a critical performative pedagogy, having as poetic inspiration the body in artistic creation, which explores (self)biographic content on the issue of gender. It is dedicated to spreading feminist thought in dialogue with education and art, through Critical Performative Pedagogy, which prints a new paradigm of studies based on the body, supported by post-structuralist researchers, in a qualitative research. It aims to offer critical research to the field of education, updating it through performance, by redefining educational practice from an aesthetic and gender principle. The methodology applied uses archival and repertoire elements, the same used in Performance Studies at the New York University, in an initial sampling of 12 works, collected in the Americas, since 1960, in an interdisciplinary approach. This study, in addition to promoting and welcoming difference, especially in relation to gender, will allow us to draw a line of force that supports a political and creative approach to curriculum, course development and alternative forms of learning. It operates in the construction of meanings for a multiple education, which welcomes difference, producing new epistemologies of knowledge, in negotiation and close dialogue with contemporary art.

Keywords: Feminist Performance. Critical-Performative Pedagogy. Body.

IMPACT OF CONTROLS APPLIED TO SMALL GENERATIONS ON ANTI-ISLANDING PROTECTION

Gabriela Curin Zorzela; Gustavo Marchesan

Power generation capacity around the world is expanding to meet the growing demand for electricity. Thus, the presence of small generations is becoming larger, as they represent many benefits for the electrical system. However, they are susceptible to the occurrence of the event of unintentional islanding. Unintentional islanding occurs when a part of the electrical system is isolated from the main grid, but remains energized by small generations connected to it. This phenomenon can cause problems such as risk of electric shock to maintenance workers and damage to equipment. Studies in this area are focused on improving the methods of detection of islanding in order to obtain an efficient protection and minimize possible damages and risks. This work proposes the analysis of the influence of controls applied in small generations. Understanding this is important, because the parameters monitored by classical anti-islanding detection methods are also variables involved in the control of generations. Anti-islanding methods were implemented in code and simulations were run on a test system through software. With this, the results were analyzed by comparing the differences obtained between simulations with two different controls and concluded that the dynamics of neither control significantly impacted anti-islanding protection.

Keywords: Distributed Electrical Systems. Small Generations. Protection of Small Generations.

IMPLEMENTATION OF A LINEAR MODE MODULATOR CLASS AB WITH BIAS-S FOR VISIBLE LIGHT COMMUNICATION

Schaiane Rodrigues Machado; Lucas Teixeira

Light Emitting Diode (LED) has many advantages such as an increase in luminous efficiency, less consumption of energy, quality in the generated light, and a longer lifespan. In addition, another interesting feature of this semiconductor is the capability of adding additional functionalities to the light fixture. Thus, given the fast dynamic of the LED, it is possible to implement the Visible Light Communication (VLC). To implement VLC, it is necessary a driver circuit capable of modulating the generated light. Therefore, this work implemented a circuit using a Linear Mode Modulator (LMM) class AB with coupling in the LED through magnetic (Bias-S). This was accomplished by starting with a bibliography review about known drivers for LEDs, next the passive components were dimensioned, and after that, the circuit was simulated. Additionally, it is intended to realize an experimental validation to verify the circuit dynamic in the frequency range between 10 kHz and 30 MHz. Finally, it is expected to have results that contribute to the advance of VLC drivers.

Keywords: Visible light communication (VLC). LED drivers. Linear Mode Modulator (LMM).

IN SILICO STUDIES OF A NEW CLASS OF CEPHALOSPORIN DRUGS CONTAINING 1,2,4-THIADIAZOLE AGAINST SARS-COV-2 M^{PRO} AND PL^{PRO}

Cássia Pereira Delgado; João Batista Teixeira Rocha; Laura Orian; Marco Bortoli; Pablo Andrei Nogara

The SARS-CoV-2 proteases M^{pro} and PL^{pro} are important targets for the development of antivirals against COVID-19. The functional group 1,2,4-thiadiazole has been indicated to inhibit cysteinyl proteases enzymes, such as papain and cathepsins. Of note, the 1,2,4-thiadiazole moiety is found in a new class of FDA-approved cephalosporin antibiotics: ceftaroline fosamil, ceftobiprole, and ceftobiprole medocaril. The idea of starting research with previously approved drugs and redirecting the application aims to optimize the path to patients. We investigated the interaction of these new antibiotics and their main metabolites with the SARS-CoV-2 proteases by molecular docking, molecular dynamics (MD), and density functional theory (DFT) calculations. Our results indicated the PL^{pro} enzyme as a better *in silico* target for the new antibacterial cephalosporins. The results with ceftaroline fosamil and the dephosphorylate metabolite compounds should be tested as a potential inhibitor of PL^{pro}, M^{pro}, and SARS-CoV-2 replication *in vitro*. In addition, the data reported here can help in the design of new potential drugs against COVID-19 by exploring the reactivity of the S atom in the 1,2,4-thiadiazole fraction and understanding whether the possible inhibition of target enzymes would occur by a covalent mechanism.

Keywords: Drug repurposing. Computational Docking. 1,2,4-thiadiazoles. DFT. Molecular dynamics.

IN VITRO EFFECT OF TUCUMÃ ON STIMULATION OF COLLAGEN-PRODUCING SKIN CELLS

Tanize Louize Milbradt; Fernanda Barbisan

Introduction: Skin aging is physiological, often associated with reduced activity of fibroblasts, which are cells responsible for producing collagen. Therefore, the search for alternatives aimed at stimulating collagen by these aging cells is relevant. In Brazilian biodiversity, tucumã (*Astrocaryum acculeatum*), a plant from the Amazon, is an option for investigating collagen-producing cell stimulation. **Objective:** To evaluate, in vitro, the effect of tucumã in aged fibroblasts, through markers of cellular senescence and collagen synthesis. **Methodology:** Human fibroblasts were previously exposed to rotenone, an inducer of cellular aging. Subsequently, the cells were treated with tucumã for 72h, and the effect of stimulating collagen production was evaluated by the levels of beta-galactosidase (β -Gal) and the gene expression of type I collagen (COL-1) and metalloproteinases 1 (MMP-1), the latter associated with degradation of collagen fibers. **Results:** In the samples in which tucumã was involved, there was a decrease of β -Gal and MMP-1, as well as an increase of COL-1, compared to cells treated only with rotenone. **Conclusion:** Despite the limitations of the in vitro study, our results suggest that tucumã stimulates the production of collagen by cells and can be used as a therapeutic strategy for skin aging.

Keywords: Tucumã. Aging. Fibroblasts. Collagen.

POTENTIALLY INAPPROPRIATE MEDICATIONS INCREASE RISK OF INTRA-HOSPITAL MORTALITY

Carlos Fernando Antunes Gonçalves; Isis Niero Volpato; Ivana Beatrice Manica da Cruz; Thamara Graziela Flores; Ana Cristina Gularte; Melissa Agostini Lampert; Fernanda Barbisan

Elderly patients (>60 years old) have increased prevalence of noncommunicable diseases, often managed by prescription of four or more drugs (polypharmacy). These drugs, termed potentially inappropriate medications (PIM), can interact, altering their own pharmacodynamics and pharmacokinetics. This situation increases risk of adverse effects such as hospitalization and mortality. **Objective:** This study evaluated the impact of potentially inappropriate medications (PIM) use prior to hospitalization on mortality of hospitalized Brazilian elderly. **Methods:** An observational, longitudinal, prospective and descriptive investigation was performed on 318 hospitalized elderly patients. They were subjected to mortality follow-up for up to 30 days after release. **Results:** Previous PIM use prevalence was 49,7% (n=158) and 18 PIM-ph classes used prior to hospitalization were identified. Previous PIM-ph use for all drug classes increased intra-hospital mortality (risk = 1,891, CI 95% = 1,211-2,953) independent of sex, age, frailty, polypharmacy, social support, confusion symptoms and evolution of geriatric complications. 3 PIM-ph groups were significantly associated to increased mortality risk, independently of sex and age: benzodiazepines, digoxin and loop diuretics. **Conclusions:** Quick identification of previous PIM-ph use by older adult patients can be a relevant strategy in management of hospitalized patients.

Keywords: PIM. Mortality. Elderly.

SHARED SPACES IN A BODY-CITY: PICTORIAL INTERVENTIONS IN SITU IN THE URBAN SPACE OF SANTA MARIA

Amanda Pires de Deus Lima; Karine Gomes Perez Vieira

This project develops the perception of a city as a living organism. Just as people are formed by a coupling of systems, an organism, a city also has its own flows, organs, atrophies, and limbs. Therefore, the objective is to investigate how the language of pictorial intervention behaves directly in the urban environment and collaborates in the creation of new perceptions and subjective dimensions about the city of Santa Maria. The practice of drifting will be applied together with the methodology, which is a pushing concept for identifying the exact locations for the interferences to be developed, subjectively. In the practical dimension, anatomical fragments of the human body will be used in order to collaborate in the visuality and construction of pictorial artworks, initially in the wheatpaste technique. It is intended to interfere with the wheatpaste artworks in different locations of the city, in order to install these rips/windows of contact with the entrails of Santa Maria. The art intervention in the public environment of the city is considered important as it is a space where everything happens, where people circulate daily, having great relational potential and mutual contribution between the community and the urban body of the city.

Keywords: Contemporary Art. Art and Visuality. Urban Art.

SITUATION AND EVOLUTION OF THE VALUES OF PH, ORGANIC MATTER AND LIMESTONE NECESSITY IN CITIES OF THE CENTRAL REGION OF RIO GRANDE DO SUL STATE

João H. S. Silva; Fábio J. K. Mallmann; Guilherme B. da Silva; Lucas H. Klock; Eduardo Bernardt; Seninho J. Rodrigues; Jacson Hindersmann

Soil organic matter (OM) and pH interfere with the availability of essential and/or toxic elements in soil solution, affecting plant productivity. Understanding regional levels of these parameters could ensure better allocation of resources and acidity management with limestone for crops. Therefore, we evaluated the situation and evolution of pH, OM, and limestone necessity (LN) levels of soils sampled in the Central Region of Rio Grande do Sul State (CR-RS). The soil data (2010-2021 period) came from Laboratório de Análises de Solo (UFSM), using samples collected in the superficial layers of soil (from 0 to any depth between 5 and 20 cm), totaling 37,432 samples. Classified samples showed that 67% of pH values were in levels below 5,50. For OM, 58 and 38% of samples showed low (0,00-2,50%) and medium (2,51-5,00%) levels, respectively. Almost 30% of samples require very low (0,1-1,0 t/ha) LN, while 24%, were null. Therefore, although most samples from the CR-RS showed inadequate pH levels for most part of the crops, low levels of investment in limestone application may enhance soil pH to adequate levels. Furthermore, it is essential to focus on OM recovery to obtain a good crop environment in this region's soils.

Keywords: Crop development. Soil fertility. Toxic elements. Organic matter recovery.

“STILL, LIKE DUST, I’LL RISE”: THE RESISTANCE OF BLACK WOMEN THROUGH THE ANALYSIS OF SOCIAL WORK

Aline Vargas Escobar

The anti-racism fight is organized around the world through agreements among nations such as the International Decade for People of African Descent (2015-2024), which aims to promote social justice. In the Social Work area, it is a professional and ethical commitment (1993) to promote the end of racial and gender discrimination. Therefore, it is important to discuss these issues because of the historical invisibility that black women have suffered in academic literature. This is a qualitative research developed through the reading of six articles from the 16th Brazilian Congress of Social Workers (2016). Problems such as lack of access to education, unemployment, and different types of violence are still urgent to overcome due to the heritage of slavery in Brazil, a large period founded in physical and sexual exploitation. Black women are the ones that more often look for social programs, since the rates of social, economic, and cultural vulnerability are extremely high. They also carry the “strong Black Women” stereotype, but this is not a natural attribute. Being strong was the only way of surviving social exclusion, so it is important to promote specific public policies and to build intervention strategies to reach equality for all society.

Keywords: Social Work. Black woman. Racism.

THE INFLUENCE OF SOCIAL MEDIA ON THE CLOTHING OF YOUNG BRAZILIANS

Daniela Flores; Pedro Sousa¹ Luciana Battistella

With the advance of technology, online shopping is becoming more practical and, oftentimes, more economical than the traditional shopping model in physical stores. Social media has a very important role in marketing and fashion branding strategies and has become protagonist, especially because of the popularization of Tiktok in Brazil, a media app used to create and share short videos. Content made by digital influencers showing their daily life, products they like and dislike, what should be bought for being in the fashion trends, and where to buy them are heavily watched. In light of the described situation, the objective of this study is to analyze and understand how much social media can influence the decision on clothes and accessory shopping of their users and their behavior around fashion and style choice, more specifically younger people, who are the majority of the userbase in 2022.

Keywords: Social media. Digital Marketing. Brand. Fashion.

THE OBJECTS AS SOURCES: CONSUMPTION AND DAILY LIFE ON THE BRAZILIAN EMPIRE'S FRONTIER BETWEEN 1850 AND 1890

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My research is about consumption and daily life in the western frontier of Rio Grande do Sul in the 19th century. It seeks to understand the characteristics and distribution of objects that were found in inventories between 1850 and 1890. Considering the frontier region, a vital point of observation, this study seeks to understand what those individuals had in their homes and how these possessions could have influenced the practice of consumption in that specific period. Furthermore, it was organized in a serial history methodology with a quantitative analysis that led to a broader comprehension of how things, as analytical elements, can show the interaction of a remote region of the Brazilian empire with modernity. As a result, it is possible to refute some misconceptions about how the frontier region was pejoratively described in the 19th century as uncivilized, uneducated, and rustic. Therefore, we could say that marginalized regions of the Brazilian empire had their own cultural and social characteristics, economic development, and strong contact with other states such as Argentina and Uruguay. This complexity demonstrates that historical research may find new information and build more accurate knowledge about the past.

Keywords: Objects. Daily Life. Borderland. Nineteenth Century. Brazil Empire.

THERMO-HYDRAULIC MODEL FOR POWER TRANSFORMERS WINDINGS VALIDATED BY OPTICAL INSTRUMENTATION

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The power transformer's internal temperatures have a direct influence on the windings insulation deterioration, determining how long the equipment will be able to remain in operation. In order to better predict and study the transformer's thermal performance, a thermo-hydraulic model for power transformers is proposed. From the constructive dimensions and the operative characteristics of the transformer, the model quickly determines the complete oil flow and temperature distributions over the windings by solving a coupled thermal-hydraulic algorithm. Computational simulations were performed to help the model development, reproducing the transformer in the computational environment, and analyzing the temperature distribution according to the same construction and operative characteristics. To validate the proposed model, heating tests were performed on a transformer equipped with 29 fiber optical sensors as part of a temperature measurement system. The model temperatures showed a maximum relative error of 1.75% against experimental measurements, accurately describing the flow and temperature distributions of the transformer. The results indicate that the model can be satisfactorily used for predicting the hydraulic and thermal behaviors of electric transformers, being useful to the industry by contributing to better designs. In addition, it helps in decision-making to reduce costs and improve the electrical system reliability.

Keywords: Power Transformer. Thermo-hydraulic Model. Temperature Rise Test. Computational Simulation. Optical Fiber Sensor.