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FEDERAL DE
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NIPPEC

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Anuário da Produção Científica do Campus
Professor Alberto Carvalho - 2021

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I. ARTIGOS PUBLICADOS EM 2021

[P01-2021] “Origin of a large difference of power conversion efficiency between the hexagonal LuMnO₃ and the hexagonal LuFeO₃ ferroelectric photovoltaics”

D. M. S. Brito, A. T. Melo, **A. F. Lima**, M. V. Lalic

Hexagonal LuMnO₃ (h-LMO) and LuFeO₃ (h-LFO) compounds, in their ferroelectric phases (space group $P6_3cm$), are promising ferroelectric photovoltaic materials for converting sunlight into electricity. However, the recent experimental studies demonstrate that the h-LMO exhibits much higher solar to electric power conversion efficiency (PCE) than the h-LFO. In this study, we explain the origin of this difference, basing our analysis on the electronic structure of both compounds, determined from the first-principles calculations at the density functional theory level. Our results demonstrate that the h-LMO PCE is higher than the h-LFO PCE because of the two facts: (1) the effective mass of the photogenerated charges in the h-LFO is larger than in the h-LMO, (2) the binding energy of the photogenerated electron-hole pairs (excitons) is higher in the h-LFO than in the h-LFO. We also report a high anisotropy of the electronic photocurrent in both compounds: due to much larger electron effective mass along the *c*-axis direction, the photocurrent flow along any direction within the hexagonal basal plane is much more efficient.

Materials Chemistry and Physics, 263, 124344, 2021. DOI 10.1016/j.matchemphys.2021.124344

[P02-2021] “Ab *initio* study of the phonon and thermodynamic properties of the scheelite MWO₄ (M = Ba, Sr or Ca) compounds”

I. P. Carvalho, **A. F. Lima**, M. V. Lalic

In this work, we performed the calculations based on density functional theory with different exchange and correlation energy approximations and employed the method of the constant force within the harmonic approximation, to study the phonon and thermodynamic properties of the three MWO₄ (M = Ca, Sr or Ba) compounds with scheelite-type structure. In the first part of the work, we carried out an analysis of the performance of the local density approximation (LDA) and generalized gradient approximation of the Perdew-Burke-Ernzerhof revised for solids (GGA-PBEsol) on the computed phonon density of states, specific heat at constant volume, entropy and Gibbs free energy of the scheelite BaWO₄ compound. Comparisons between calculated and experimental data showed that the GGA-PBEsol approach exhibited better performance. In the second part of the work, we extended the study of the thermodynamic properties to the SrWO₄ and CaWO₄ compounds, which are

not presented in the literature, using the GGA-PBEsol approximation. It was found that the magnitude of the specific heat at the constant volume at high temperature respects the following order: BaWO₄ > CaWO₄ > SrWO₄. Moreover, it was verified a relation between M²⁺ ionic radius in the scheelite MWO₄ (M = Ba, Sr or Ca) and their entropy, Gibbs energy, and Helmholtz free energy.

Solid State Communications, 333, 114290, 2021. DOI 10.1016/j.ssc.2021.114290.

[P03-2021] “Exchange interactions in hexagonal YMnO₃ and LuMnO₃ multiferroic compounds”

Adilmo F. de Lima

In this work, spin density functional theory calculations are employed to obtain the exchange interactions in hexagonal YMnO₃ and LuMnO₃ multiferroic compounds, which have been a matter of debate in the literature. The exchange and correlation electronic effects are approximated using the local spin density approximation (LSDA) with the inclusion of the effective Hubbard U correction (U_{eff}). The intraplane superexchange interaction (J_{nn}) decreases with increasing U_{eff} . Moreover, the J_{nn} value with the best agreement with experiment is found for U_{eff} values between 2.55 and 4.0 eV. Without the addition of U_{eff} corrections, i.e., with standard LSDA calculations, the magnitude of J_{nn} is overestimated. The Bader topological analysis of the electron density at the bond critical point shows that the closed-shell interaction of the Mn–O3 and Mn–O4 bonds in both materials increases with increasing U_{eff} , which justifies the decrease of J_{nn} with increasing U_{eff} . Additionally, both interplane and intraplane super-superexchange interactions are computed and compared with previous studies.

Journal of Solid State Chemistry, 299, 122175, 2021. DOI 10.1016/j.jssc.2021.122175

[P04-2021] “Non-magnetic ions doping effects in the magnetic properties of zircon-type GdCrO₄ compound”

A. C. B. Jesus, J. R. Jesus, E. M. Bittar, **J. G. S. Duque**, **C. T. Meneses**

In this paper, we report the effect of V and Y-doping on the structural and magnetic properties of the GdCrO₄ compound obtained by the co-precipitation method. The analysis of the X-ray diffraction data using the Rietveld refinement confirm the formation of a single phase consistent with the zircon-type structure (tetragonal and $I4_1/amd$ space group) and a decreasing of lattice parameter with increasing of doping. The T-dependent magnetic susceptibility is consistent with a ferromagnetic and an antiferromagnetic orders for YCrO₄ and GdVO₄ samples, respectively. On the other hand, the positive signal of Curie–Weiss constants of doped samples indicate

the predominance of ferromagnetic correlations. Furthermore, the displacement of the maximum of susceptibility and the thermal hysteresis as a function of doping can be an indication of frustration effects. Isothermal magnetization measured at $T = 2$ K show a change of slope at low magnetic fields for V-doped samples and a decrease of the magnetic moment for Y-doped GdCrO_4 . At $T = 15$ K, the analysis of M vs H curves reveal that only part of Gd^{3+} magnetic moments are ordered.

Journal of Magnetism and Magnetic Materials **533**, 167953, 2021. DOI 10.1016/j.jmmm.2021.167953

[P05-2021] “Crystalline electrical field effects on powdered RECu_4Al_8 (RE = Tb, Dy, Ho and Er) intermetallic compounds”

S. G. Mercena, L. S. Silva, R. Lora-Serrano, D. J. Garcia, J. C. Souza, P. G. Pagliuso, **J. G. S. Duque**

In this work, structural and magnetic properties RECu_4Al_8 (RE = Tb, Dy, Ho and Er) family of compounds are reported. Measurements of X-ray diffraction, temperature (T) and magnetic field (H) dependencies of magnetization are presented for each compound. The analysis of X-ray diffraction patterns shows a small variation in a (8.705824–8.734991 Å) and c (5.123802–5.135258 Å) lattice parameters as a function of the rare earth. The T-dependent magnetic susceptibility reveals the Curie-Weiss-like behavior at high-T evolving to antiferromagnetic transitions at low-T ($6 < T_N < 28$ K) for all studied materials. Measurements of magnetization as a function of magnetic field show field-induced transitions for RE = Dy, Ho and Er, which present larger magnetic moments, though no magnetic saturation is attained ($4.4 < M_{max} < 7.3 \mu_B$) for none of the studied compounds. This fact is an indicative of strong crystalline electrical field (CEF) effects. We have conducted a detailed analysis, based on a mean-field spin model, in order to determine the CEF parameters from the macroscopic data of the studied powdered samples. Finally, to show the reliability of our calculations, the obtained CEF energy levels and wave functions are compared with previous CEF studies in single crystalline samples of ErCu_4Al_8 , including results obtained from inelastic neutron scattering data.

Intermetallics **130**, 107040, 2021. DOI 10.1016/j.intermet.2020.107040

[P06-2021] “Effect of the Ni content on the thermal and magnetic properties of Fe–Ni–Co alloys”

A. Paganotti, C. V. X. Bessa, C. C. S. Silva, E. B. Peixoto, **J. G. S. Duque**, R. A. G. Silva

In this study, the influence of the Ni content on the phase transformations of FeNiCo alloys was evaluated by analyzing seven different alloys with Fe- x %at.Ni-10%at.Co

composition, in which $x = 30, 24.5, 20, 15, 10, 5,$ and 0. These alloys were initially annealed and then studied by different experimental techniques. The results showed that the Ni concentration plays an important role in the magnetic transition temperature of the FeNiCo alloys, changing the magnetic and structural transition temperatures and promoting a magnetic hysteresis as high as 500 K. From these results, it was possible to propose a scheme for phase transformation of the Fe-Ni-Co alloys with 10%at.Co and content of nickel lower than 30%at. **Materials Chemistry and Physics** **261**, 124215, 2021. DOI 10.1016/j.matchemphys.2020.124215

[P07-2021] “Bainite precipitation in a Cu–Al–Mn–Gd shape memory alloy”

A. B. Oliveira, E. B. Peixoto, **J. G. S. Duque**, L. S. Silva, R. A. G. Silva

In this study, the aging effects and bainite formation kinetics in the $\text{Cu}_{71.2}\text{Al}_{18.6}\text{Mn}_{10.2}$ and $\text{Cu}_{69.7}\text{Al}_{18.9}\text{Mn}_{10.3}\text{Gd}_{1.10}$ shape memory alloys are evaluated using different experimental techniques. The results show that the $\text{Cu}_{71.2}\text{Al}_{18.6}\text{Mn}_{10.2}$ and $\text{Cu}_{69.7}\text{Al}_{18.9}\text{Mn}_{10.3}\text{Gd}_{1.10}$ alloys exhibit aging hardening during bainite precipitation, reaching hardness values at about 370 HV. It is verified that the ferromagnetic β_3 phase is produced during the bainite precipitation on the aging. The kinetic process is evaluated, and for the $\text{Cu}_{69.7}\text{Al}_{18.9}\text{Mn}_{10.3}\text{Gd}_{1.10}$ alloy, the activation energy value is 42 kJ/mol while the alloy without Gd presents an activation energy value at about 62 kJ/mol. Gadolinium modifies the reaction mechanism analyzed due to their interaction with β_1 and α phases, and the phase decomposition with Gd. In the studied alloys the bainite formation shows to be strongly related to the diffusive processes.

Materialia **16**, 101101, 2021. DOI 10.1016/j.mtla.2021.101101

[P08-2021] “Estudo da Licenciatura em Ciências Naturais: o Que os Dados Estatísticos Podem nos Dizer”

Marília Alana Costa de Jesus, **Renato Santos Araujo**, Deise Miranda Vianna

Os concursos para lecionar ciências no ensino fundamental privilegia o licenciado em ciências biológicas ou em ciências naturais, em detrimento do licenciado em química ou física. Uma revisão bibliográfica na literatura ou no Conselho Nacional de Educação mostra que pouco se sabe sobre os diplomados do curso de licenciatura em ciências naturais. Nesse contexto, esse trabalho tem por finalidade selecionar, organizar e analisar uma série de dados estatísticos a respeito do curso de Licenciatura em Ciências da Natureza no período compreendido entre 2000 e 2019. A pesquisa teve uma abor-

dagem quantitativa, se configurou como bibliográfica e teve, como fonte de dados, estatísticas oficiais publicadas pelo INEP/MEC. Dentre os achados, destaca-se a intensa redução de vagas e concluintes nesse curso, o que leva à conclusão de que a política de ampliação de vagas nos cursos de licenciatura não ocorreu para os professores de ciências naturais.

Brazilian Journal of Development, 7,49728, 2021. DOI 10.34117/bjdv.v7i5.29967

[P09-2021] “Mudaram Minha Sala de Aula: E Agora?”

Deise M. Vianna, Maria da Conceição Barbosa-Lima, **Renato Santos Araújo**

Neste ano de 2020 passamos por mudanças radicais na vida social, escolar, particular. Um novo vírus (denominado SARS-CoV-2), que provocou a COVID-19, transformou as atividades escolares de maneira radical. Estudantes, professores e pessoal de apoio às escolares tiveram que fechar as escolas, assim como todas as cidades, foram esvaziadas. Para a vida escolar foram realizadas alternativas de continuidade, através de comunicação via Internet. Várias dificuldades, para implantação de ensino remoto, são analisadas, como: material didático e acesso para os estudantes, produção de aulas com metodologias interativas, meios digitais, infraestrutura das escolas para divulgar produções docentes, entre outras questões. As perguntas que levantamos são as seguintes: mesmo depois da pandemia, nossas escolas apresentarão um novo modelo? O novo ensino presencial sofrerá modificações com maior entrosamento entre escola-comunidade-instituições de pesquisa?

Revista Ciências em Foco 14, 1, 2021. DOI -

[P10-2021] “Natural history note of the endangered psammophilous lizard *Eurolophosaurus amathites* (Squamata: Tropicuridae) from Caatinga domain, Brazil”

Maria Aldenise Xavier, Tainara Lima da Silva, Gabriel Deyvison dos Santos Carvalho, and **Eduardo José dos Reis Dias**

Herpetology Notes 14, 27, 2021. DOI -

[P11-2021] “*Lygodactylus klugei* (Smith et al., 1977) as a fruit eater on the cactus *Cereus jamacaru* DC. subsp. *jamacaru* in the Caatinga of northeastern Brazil (Squamata: Gekkonidae)”

Tainara Lima da Silva, Hugo Andrade, Wesla Marcelina Dantas, and **Eduardo José dos Reis Dias**

Herpetology Notes 14, 67, 2021. DOI -

[P12-2021] “Parasites of the lizard *Strobilurus torquatus* Wiegmann, 1834 in Northeastern Brazil (Squamata:

Tropicuridae)”

Tainara Lima da Silva, Maria Aldenise Xavier, Gabriel Deyvison dos Santos Carvalho, Luciano Alves dos Anjos, Ingrid Benevides Machado, and **Eduardo José dos Reis Dias**

Herpetology Notes 14, 769, 2021. DOI -

[P13-2022] “Parasitism in the endemic and saxicolous lizard *Tropicurus pinima* (Squamata: Tropicuridae) from the Caatinga domain, Brazil”

M. Aldenise Xavier, Tainara Lima-Silva, Gabriel D. dos Santos-Carvalho, Ingrid B. Machado, Luciano A. dos Anjos, and **Eduardo J. R. Dias**

Herpetology Notes 14, 1187, 2021. DOI -

[P14-2021] “Balance alterations and reduction of pedunculopontine cholinergic neurons in early stages of parkinsonism in middle-aged rats”

Thassya F. O. dos Santos, Edson R. Santos, José M. M. Bispo, Marina F. de Souza, Auderlan M. de Gois, Lívia C. R. F. Linsa, Regina H. Silva, Alessandra M. Ribeiro, Murilo Marchioro, **José R. dos Santos**

The purpose of the present study was to investigate balance alterations and the possible role of the cholinergic neurons in the pedunculopontine nucleus (PPN) in the early stages of a progressive animal model of Parkinson’s disease (PD). Twenty-eight middle-aged (8–9 months) male Wistar rats received 4 or 10 subcutaneous vehicle (control, CTL) or reserpine (RES) injections (0.1 mg/kg). The animals were submitted to different behavioral tests. Forty-eight hours after the 4th injection, half of the animals of each group ($n = 7$) were perfused and submitted to immunohistochemical analysis for tyrosine hydroxylase (TH) and choline acetyltransferase (ChAT). The remaining animals ($n = 7$ per group) were killed 48 h after the 10th injection. RES group presented motor deficits in the catalepsy and open field tests starting at days 12 and 20 of treatment, respectively (only for the animals that received 10 injections). On the other hand, dynamic and static balance changes were observed at earlier stages of RES treatment, starting at days 6 and 4, respectively. At this point of the treatment, there was no decrease in the number of TH immunoreactivity neurons in the substantia nigra pars compacta (SNpc), ventral tegmental area (VTA) and dorsal striatum (DS). However, a decrease was observed in SNpc and dorsal striatum of animals that received 10 injections. In contrast, there was a decrease in the number of ChAT immunoreactive cells in PPN concomitantly to the balance alterations at the early stages of treatment (after 4 RES injections). Thus, by mimicking the progressiveness of PD, the reserpine model made it possible

to identify static and dynamic balance impairments prior to the motor alterations in the catalepsy and open field tests. In addition, changes in balance were accompanied by a reduction in the number of ChAT immunoreactive cells in NPP in the early stages of treatment.

Experimental Gerontology **145**, 111198, 2021. DOI 10.1016/j.exger.2020.111198

[P15-2021] “Nociception alterations precede motor symptoms in a progressive model of parkinsonism induced by reserpine in middle-aged rats”

Rachel R. Cintra, Lívia C. R. F. Lins, Katty A. A. L. Medeiros, Marina F. Souza, Auderlan M. Gois, José M. M. Bispo, Mônica S. Melo, Pollyana C. Leal, Ywlliane S. R. Meurer, Alessandra M. Ribeiro, Regina H. Silva, Murilo Marchioro, **José R. dos Santos**

Nociception alterations are frequent non-motor symptoms of the prodromal phase of Parkinson’s disease (PD). The period for the onset of symptoms and the pathophysiological mechanisms underlying these alterations remain unclear. We investigated the course of nociception alterations in a progressive model of parkinsonism induced by reserpine (RES) in rats. Male Wistar rats (6–7 months) received 5 or 10 subcutaneous injections of RES (0.1 mg/kg) or vehicle daily for 20 days. Motor evaluation and nociceptive assessment were performed throughout the treatment. At the end of the treatment rats were euthanized, the brains removed and processed for immunohistochemical analysis (TH and *c-Fos*). The RES-treated rats exhibited an increased nociceptive response to mechanical and chemical stimulation in the electronic von Frey and formalin tests, respectively. Moreover, these alterations preceded the motor impairment observed in the catalepsy test. In addition, the RES treatment reduced the TH-immunoreactivity in the ventral tegmental area (VTA) and increased the *c-Fos* expression in the ventral-lateral periaqueductal gray (vlPAG), rostral ventral medulla (RVM) and dorsal raphe nucleus (DRN) after noxious stimuli induced by formalin. Taken together, our results reinforce that nociceptive changes are one of the early signs of PD and monoamine depletion in basal ganglia can be involved in the abnormal processing of nociceptive information in PD.

Brain Research Bulletin **171**, 1, 2021. DOI 10.1016/j.brainresbull.2021.03.001

[P16-2021] “Myrtenol complexed with β -cyclodextrin ameliorates behavioural deficits and reduces oxidative stress in the reserpine-induced animal model of Parkinsonism”

Suellen Silva-Martins, Jose Ivo Araújo Beserra-Filho, Amanda Maria-Macêdo, Ana Cláudia Custódio-Silva, Beatriz Soares-Silva, Sara Pereira Silva, Rafael Herling Lambertucci, Regina Helena Silva, **José R. dos Santos**, Sathiyabama Rajiv Gandhi, Lucindo José Quintans-

Júnior, Alessandra Mussi Ribeiro

Current pharmacological approaches to treat Parkinson’s disease have low long-term efficacy and important adverse side effects. The development of new pharmacological therapies has focused on novel plant-derived phytochemicals. The alcoholic monoterpene myrtenol has been isolated from several plant species, and has anxiolytic, analgesic, anti-inflammatory and antioxidant actions. Our study evaluated the neuroprotective potential of myrtenol complexed with β -cyclodextrin (MYR) on a progressive parkinsonism model induced by reserpine (RES) in mice. The complexation with cyclodextrins enhances the pharmacological action of monoterpenes. Male Swiss mice were treated daily with MYR (5 mg/kg, p.o.) and with RES (0.1 mg/kg, s.c.) every other day during 28 days. Behavioural evaluations were conducted across treatment. At the end of the treatment, immunohistochemistry for tyrosine hydroxylase (TH) and oxidative stress parameters were evaluated. Chronic MYR-treatment protected against olfactory sensibility loss, restored short-term memory and decreased RES-induced motor impairments. Moreover, this treatment prevented dopaminergic depletion and reduced the oxidative status index in the dorsal striatum. Therefore, MYR ameliorated motor and non-motor impairments in the progressive animal model of parkinsonism, possibly by an antioxidant action. Additional research is needed to investigate the mechanisms involved in this neuroprotective effect.

Clinical and Experimental Pharmacology and Physiology **0**, 1, 2021. DOI 10.1111/1440-1681.13563

[P17-2021] “Palatable high-fat diet intake influences mnemonic and emotional aspects in female rats in an estrous cycle-dependent manner”

Sara Pereira Silva, José Ivo Araújo Beserra-Filho, Melina Chiemi Kubota, Gabriela Nascimento Cardoso, Francisca Rayanne Silva Freitas, Bianca Santos Martins Gonçalves, Wilson Vicente-Silva, Suellen Silva-Martins, Ana Cláudia Custódio-Silva, Beatriz Soares-Silva, Amanda Maria-Macêdo, **José R. dos Santos**, Debora Estadella and Alessandra Mussi Ribeiro

Worldwide, the excessive consumption of fat and/or sugar has increased considerably. Palatable high-fat diets (HFDs) lead to metabolic disturbances and obesity, and impact emotional and cognitive processes. Previous studies in rodent models suggested that HFDs often cause multiple behavioral alterations, such as learning and memory deficits, and anxiety-like behaviors. Different sexes imply different behavioral and cognitive abilities; yet, most of these studies dealt with male or ovariectomized rats. We evaluated HFD effects in female rats submitted to different behavioral tasks, considering the effects of endogenous hormonal variations throughout estrous cycle. Female Wistar rats in each phase of the estrous

cycle using commercial chow (CC) or HFD for 32 days. During treatment, behavioral assessments using sucrose preference (SP), elevated plus-maze (EPM), open field (OF) and novel-object recognition (NOR). At the end of the behavioral tests, animals were euthanized, and performed an immunohistochemical analysis of the brains by brain-derived neurotrophic factor (BDNF) and tyrosine hydroxylase (TH). The main results demonstrated that (1) HFD-fed rats had higher body mass gain and food intake, without altering caloric intake, (2) rats in diestrus had lower sucrose intake, (3) females in metestrus and diestrus showed deficits in the novel-object recognition memory. Furthermore, TH-immunoreactivity decreased in the dorsal striatum and BDNF in the hippocampus in HFD-fed females. These results suggest that HFD alters neurochemical and metabolic aspects that may induce phase-dependent behavioral changes in female rats.

Metabolic Brain Disease **36**, 1717, 2021. DOI [10.1007/s11011-021-00812-6](https://doi.org/10.1007/s11011-021-00812-6)

[P18-2021] “Invasão Biológica na Área de Proteção Ambiental Morro do Urubu”

K. C. T. Araújo, A. B. S. Cruz, **J. R. Fabricante**

Revista de Biologia e Ciências da Terra **21**, 72, 2021. DOI -

[P19-2021] “Modelagem de Nicho Climático Presente e Futuro do Umbuzeiro”

T. S. Almeida, **J. R. Fabricante**

Revista de Biologia e Ciências da Terra **21**, 91, 2021. DOI -

[P20-2021] “Atualização da Categorização do Risco de Extinção de *Catasetum uncatum* Rolfe (Orchidaceae) e Seleção de Áreas para a Conservação da Espécie”

D. A. Mendonça, D. O. Reis, T. S. Almeida, **J. R. Fabricante**

Revista de Biologia e Ciências da Terra **21**, 63, 2021. DOI -

[P21-2021] “Análise de risco de invasão biológica no Brasil por *Paulownia tomentosa* (Thunb.) Steud. (kiri-japonês) por meio da modelagem de nicho ecológico”

Diego de Andrade Mendonça, Williane Lima Santana, Daniel Oliveira Reis, Josias Gomes Junior and **J. R. Fabricante**

Dentre as aplicações possíveis, a modelagem de nicho ecológico pode ser utilizada para a predição de áreas susceptíveis a invasão biológica. Diante disso, o presente trabalho teve como objetivo avaliar o risco de in-

vasão biológica da espécie *Paulownia tomentosa* (Thunb.) Steud. no Brasil. Para isso, pontos de ocorrência da espécie foram obtidos na base de dados online GBIF. Para realizar a análise de modelagem foi utilizado o algoritmo Bioclim. O software usado foi o DIVA-GIS 7.5. *P. tomentosa* apresentou suscetibilidade de invasão biológica em todos os biomas brasileiros. Devido aos impactos que a espécie pode causar, o plantio da mesma sem um rigoroso manejo é desaconselhado, especialmente nas regiões onde a susceptibilidade variou de média a extremamente alta.

Natureza online **19** (1): 001, 2021. DOI -

[P22-2021] “AMacrófitas Aquáticas do Parque Nacional Serra de Itabaiana, Sergipe, Brasil”

Thieres Santos Almeida, and **J. R. Fabricante**

As macrófitas aquáticas são um grupo de plantas de extrema importância para os ecossistemas aquáticos. Apesar dessa relevância, não existem trabalhos direcionados ao grupo no Parque Nacional Serra de Itabaiana (PARNASI), importante unidade de conservação do estado de Sergipe. Assim, este estudo objetivou inventariar as macrófitas aquáticas presentes no PARNASI e em áreas vizinhas. O levantamento florístico foi realizado por meio de busca ativa em nove diferentes ambientes. Ao todo foram inventariadas 63 espécies pertencentes a 29 famílias, sendo Cyperaceae (14,28%) e Lentibulariaceae (12,7%) as famílias com mais representantes. As espécies da família Lentibulariaceae e *Apteria aphylla* (Nutt.) Barnhart ex Small foram os táxons mais frequentes. Esses resultados sugerem que os ambientes aquáticos amostrados possuem boas condições de conservação, uma vez que estas espécies são bioindicadoras de qualidade ambiental. A forma de vida com mais representantes foi a anfíbia com 55 espécies (87,3%). A baixa ocorrência de outras formas de vida deve-se às características dos ambientes amostrados, sistemas lóticos com fortes correntezas. Além de possuir uma riqueza de espécies maior quando comparada com outras áreas estudadas no Nordeste, a comunidade de macrófitas aquáticas do PARNASI apresenta uma composição única, atributos que refletem a importância do local estudado para a conservação desse grupo de plantas.

Revista de Ciências Ambientais (UNILASALLE) **15**, 1, 2021. DOI [10.18316/rca.v15i1.7538](https://doi.org/10.18316/rca.v15i1.7538)

[P23-2021] “Componente epifítico vascular de Brejo de altitude no nordeste do Brasil: composição florística e estrutura fitossociológica”

T. Randolpho Gonçalves Dias-Terceiro Claretiano, Vitor Serrano Gomes, R. Diógenes Chianca, Marcelo Costa de Menezes, Layon Oreste Demarchi, **J. R. Fabricante**, Manoel Bandeira Albuquerque

Os brejos do nordeste brasileiro são uma importante área

de biodiversidade na Floresta Atlântica. No entanto, pouco se sabe sobre a composição de espécies epífitas nesse tipo de vegetação. Este estudo teve como objetivo caracterizar a estrutura florística e fitossociológica de epífitas vasculares em uma área de Brejo do nordeste brasileiro. Todas as espécies de epífitas observadas na área foram coletadas e comparadas com outros trabalhos, por meio de uma NMDS. Para a estrutura fitossociológica de epífitas, foram instaladas 60 parcelas de amostragem de 10 x 10 m. O levantamento florístico de epífitas registrou 23 espécies, distribuídas em 19 gêneros e dez famílias. Nas parcelas, foram amostrados 65 forófitos e foram registradas a ocorrência de 197 epífitas vasculares, distribuídas em 12 espécies, 12 gêneros e cinco famílias. A composição florística difere de outras áreas da Mata Atlântica, incluindo o nordeste, tornando o Brejo uma área muito peculiar e com extrema necessidade de um plano para conservação destas espécies.

Biotemas, 34, 1, 2021. DOI 10.5007/2175-7925.2021.e76492

[P24-2021] “Modelagem de nicho ecológico de musgos bioindicadores”

Anny Bianca Santos Cruz, **J. R. Fabricante**, Thieres Santos Almeida

As briófitas podem ser utilizadas como bioindicadoras, no entanto, uma das limitações desse uso são as lacunas no conhecimento sobre a ocorrência das espécies. Assim, o presente estudo teve como objetivo realizar a modelagem de nicho ecológico para *Helicodontium capillare* (Hedw.) A. Jaeger e *Thuidium tomentosum* Schimp., duas espécies de musgos bioindicadores. Os dados de ocorrência das espécies foram obtidos na plataforma Global Biodiversity Information Facility (GBIF) e SpeciesLink. As variáveis bioclimáticas foram coletadas do WorldClim 2.0. Para selecionar as menos correlacionadas foi realizada a análise de correlação de Pearson. A modelagem foi feita utilizando os algoritmos Generalized Additive Models, Gaussian Process, MaxEnt, Random Forest e Support Vector Machine. Usando os melhores modelos foi gerado um modelo consenso. A validade dos modelos foi testada utilizando a métrica True Skill Statistic (TSS). Os resultados indicam que as duas espécies apresentam maior adequabilidade ambiental em ambientes com alta precipitação principalmente em países industrializados da América Latina à exemplo do Brasil e Colômbia. Além disso, as áreas de maior adequabilidade também correspondem à grandes centros urbanos com altos índices de poluição. Portanto, essas espécies podem ser utilizadas como bioindicadoras nessas regiões, auxiliando assim no processo de identificação e gestão do problema.

Acta Brasiliensis 5(2), 83, 2021. DOI 10.22571/10.22571/2526-4338485

[P25-2021] “Invasive alien plants in Sergipe, north-

eastern Brazil”

J. R. Fabricante, Kanny Bianca Santos Cruz, Francielle Mathias dos Reis, Thieres Santos Almeida

Restinga is an important Brazilian ecosystem that has been affected by environmental problems, such as biological invasions. Thus, we aim to carry out a survey of invasive or current alien species in Restinga in the Northeast of Brazil. The survey took place through walks where the species were recorded by photographs. Each species was classified as naturalized or invasive through in situ observations and specific literature. The species composition of the areas was compared using Jaccard Similarity (Sj) in three situations: complete list, only invasive and only naturalized. The Mantel test was performed to verify whether the size and distance between areas influence the similarity. 42 species were sampled, of which 33 were invasive and nine were naturalized. The *Leucena leucocephala* (Lam.) de Wit, *Terminalia catappa* L. and *Cenchrus echinatus* L. were the only ones occurring in all areas. The floristic similarity varied greatly between tested situations. Mantel test did not show significant values. Our findings are worrying, due to high number of species and high quantity of invasive species.

Neotropical Biology and Conservation 16, 89, 2021. DOI 10.3897/neotropical.16.e56427

[P26-2021] “Biological invasion in Restinga sites in northeastern Brazil”

J. R. Fabricante, Kelianna Carolina Targino de Araújo, Thieres Santos Almeida, João Paulo Bispo Santos, Daniel Oliveira Reis

Biological invasions are considered one of the greatest threats to global biodiversity. In addition, they cause substantial economic impacts. However, studies about the subject in Brazil are still scarce. The aim of the present study was to prepare an inventory of non-native flora with invasive potential from Sergipe, Brazil. The inventory was carried out along the entire length of the sites. The species with potential invaders were grouped according to the biome/ecosystem and classified according to their habit and origin. Eighty-five species with invasive potential were sampled, 43 in the Caatinga, 75 in the Atlantic Forest, 36 in Sandbank and 22 in Mangrove. From these species, 17 were inventoried in all the biomes/ecosystems and 36 were observed in only one of them, six in the Caatinga, 27 in the Atlantic Forest and three in Sandbank. The number of potentially-invasive species sampled in Sergipe is alarming. The present study showed nearly twice the species listed by other authors for the entire northeast Brazil. This high number of taxa may be a consequence of facilitating the transfer of these species and the conservation conditions of the ecosystems studied in Sergipe. Another very worrying factor is that many of the species sampled are extremely

aggressive and cause a series of impacts.

Research, Society and Development 10, e48410615942, 2021. DOI 10.33448/rsd-v10i6.15942

[P27-2021] “Bovine manure as a dispersing agent for weeds and invasive alien plants”

Diego de Andrade Mendonça, Daniel Oliveira Reis, Josias Gomes Junior, **J. R. Fabricante**

Fertilization is the act of adding fertilizers to the soil in order to provide essential nutrients for the development of cultivated plants. However, the use of bovine manure can act as a source of weed propagules, including non-native species. Due to the importance and lack of research on the topic, the objective of the present study was to evaluate the seed bank present in bovine manure used by farmers in the municipality of Itabaiana, SE. For that, samples of bovine manure were collected in 10 rural properties in the municipality of Itabaiana, SE. The evaluation of the seed bank was carried out by accounting for emerged seedlings. Usual phytosociological indices were calculated for each species. Altogether 35 species were sampled, of which 28 native and seven non-native. The native species with the highest importance value was *Euphorbia hirta*, as it has the highest density ($AD = 1122 \text{ ind.m}^{-2}$) and is present in 28 sample units. The non-native species with the highest importance value was *Eleusine indica*, because it has the third highest density ($AD = 171.2 \text{ m}^2$) and is present in 21 sample units. The obtained results reveal that bovine manure has a high number of weed, which is quite worrying, as they are species that generate important environmental and economic impacts.

Research, Society and Development 10, e9410816833, 2021. DOI 10.33448/rsd-v10i8.16833

[P28-2021] “Variáveis climáticas influenciam a riqueza, composição e distribuição de plantas exóticas invasoras?”

Thieres Santos Almeida, Rony Peterson Santos Almeida **J. R. Fabricante**

Neste trabalho buscamos avaliar a influência das variáveis climáticas (precipitação e temperatura) na distribuição de plantas exóticas invasoras em Sergipe, Brasil. Para isso, percorremos 550 km de rodovias do Estado registrando as plantas exóticas invasoras e relacionamos posteriormente com variáveis climáticas disponíveis em base de dados. No total foram amostradas 46 espécies distribuídas em 17 famílias. Nossos resultados demonstram que a comunidade é influenciada pelas variáveis climáticas testadas. A maior riqueza de espécies ocorreu na zona semiárida de Sergipe. A riqueza foi influenciada principalmente pela precipitação anual, apresen-

tando uma relação negativa. A composição de espécies, por sua vez, foi afetada por quatro variáveis (precipitação anual, sazonalidade da precipitação, temperatura máxima no mês mais quente e temperatura média anual) que determinam suas distribuições. Algumas exóticas invasoras agressivas foram limitadas principalmente pela precipitação anual e sazonalidade de precipitação. No entanto, outras apresentaram alta amplitude de ocorrência, podendo assim se dispersar por diversas regiões já que não apresentam limitações perante as condições climáticas. Assim, concluímos que as condições climáticas podem influenciar de forma positiva ou negativa a composição, riqueza e distribuição de espécies exóticas invasoras no Estado. Nossos resultados auxiliam na compreensão dos efeitos das condições do ambiente na distribuição de espécies exóticas invasoras.

Scientia Plena 17, 1, 2021. DOI 10.14808/sci.plena.2021.072401%20

[P29-2021] “Ecological attributes and climate niche modelling of *Allagoptera brevicalyx* Moraes, an endangered species”

Daniel da Paixão Menezes, Edineide Leite Santos, Lara Fabian Rodrigues de Jesus, Daniel Oliveira Reis, Rony dos Santos Nascimento, Mylena Mayara dos Santos Macedo, Beatriz de Mendonça Santos, **J. R. Fabricante**

This study aims to evaluate the population structure of *Allagoptera brevicalyx* Moraes in the Parque Nacional Serra de Itabaiana, SE and its susceptibility to occurrence in the northeastern of Brazil. For this, 20 plots of 25 m^2 were plotted, as all individuals of the species were counted and measured inside these sampling units. With these data, density, spatial dispersion, correlation between ontogenetic stages and individuals were calculated in diametric and hypsometric frequency classes. For modeling, georeferenced occurrence points of the species were collected in SpeciesLink and GBIF. Different algorithms were used to generate a consensual model and the maps were made in Qgis. A total of 111 individuals (0.22 ind.m^2) were sampled, of which 44 (0.09 ind.m^2) were adults and 67 (0.13 ind.m^2) were regenerating. The species showed aggregated dispersion for the entire population ($Id = 1.12$), as well as for adults ($Id = 1.18$) and for regenerants ($Id = 1.51$). Concerning to the distribution of individuals in diametric frequency classes, an inverted “J” distribution was obtained. Regarding the distribution of individuals in hypsometric frequency classes, the highest concentration of individuals was observed in the intermediate classes. The species showed an occurrence susceptibility ranging from medium to high in a good part of the northeastern coast and in some wild areas. The species *A. brevicalyx* showed low density, however the population is stable. The potential distribution of the species indicates the northeastern coast as the most favorable region for its conservation and for the search for new populations.

Research, Society and Development 10, e02101219630, 2021. DOI 10.33448/rsd-v10i12.19630

[P30-2021] “Phylogenetic structure of lichen metacommunities in Amazonian and Northeast Brazil”

Edvaneide Leandro de Lima Nascimento, Leonor Costa Maia, **Marcela Eugenia da Silva Cáceres**, Robert Lücking

Amazon, Atlantic forest, Brejos de Altitude, Caatinga, Carrasco, Cerradão and Restinga are major vegetation units in North and Northeast Brazil. Little is known about lichen metacommunity structure in these habitats. While species richness and composition generally depend on climatic factors, in azonal vegetation edaphic factors may have a filtering effect on tree bark structure and hence the composition of epiphytic lichen communities. We hypothesized that climatic stress and a tree bark filtering effect would result in reduced richness and phylogenetic clustering in Caatinga, Carrasco, Cerradão and Restinga, whereas high richness and phylogenetic overdispersion were predicted for Amazon and Atlantic Forest. To test this, we analyzed 2,090 lichenized species in the study area, with a supertree to assess phylogenetic metacommunity structure. Amazon and Atlantic forest exhibited high richness and phylogenetic diversity, with phylogenetic overdispersion only in the Amazon. The zonal Caatinga with drought stress and the extrazonal Brejos both exhibited phylogenetic clustering. Among the azonal, edaphic vegetation units, Cerradão exhibited phylogenetic overdispersion, whereas Restinga showed phylogenetic clustering. Nearest taxon phylogenetic distance indicated a close relationship between Amazon and Atlantic forest, Atlantic forest and Brejos and Atlantic forest and Caatinga. Carrasco was mostly closely related to Cerradão, and Restinga was distantly related to any other unit. These findings indicate more complex patterns in the phylogenetic structure of lichen metacommunities, partly reflecting those of plant metacommunities, as a result of concurrent macroecological evolutionary histories. Our data supported floristic evidence that Carrasco is part of the Cerrado complex and not related to Caatinga.

Ecological Research 36, 1440, 2021. DOI 10.1111/1440-1703.12206

[P31-2021] “Comparative analyses of sooty mould communities from Brazil and Central Europe”

Fabienne Flessa, Janno Harjes, **Marcela E. S. Cáceres** and Gerhard Rambold

To gain an insight into fungal sooty mould communities on leaves of trees and shrubs in the tropics and in temperate regions, 47 biofilms of the Mata Atlântica rainforest relic and the Caatinga vegetation in the state of Sergipe,

Northeast Brazil, and from Central European colline and alpine zones were compared. The four sampling sites clearly differed in composition of their epiphyllous fungal communities. The fungal OTUs from all sites belonged mainly to the Ascomycota, with Dothideomycetes being the dominant class. The core community group consisted of a few site-specific representatives in co-occurrence with the ubiquitous *Mycosphaerella tassiana* and *Aureobasidium pullulans*. Most species of the core community were dark pigmented and were accompanied by facultative unpigmented or lightly pigmented species. Among the cultivable fungal species, the proportion of melanised species was significantly more abundant in samples from the two European sites, which supports the theory of thermal melanism. The identity of the host plant had a stronger impact on fungal community composition than the presence of sap-feeding insects.

Mycological Progress 20, 869, 2021. DOI 10.1007/s11557-021-01700-0

[P32-2021] “Saxicolous Lichens in the Semi-Arid Caatinga in Brazil Show Substratum Shifts”

André Aptroot, Lidiane Alves dos Santos, **Marcela Eugenia da Silva Cáceres**

Saxicolous lichens were investigated for the first time in the southern reaches of the Caatinga biome in Sergipe, NE Brazil. Only 20 species could be identified, and three more are described as new to science: *Cresponea quinseptata* Aptroot & M.Cáceres, sp. nov. with 5-septate ascospores and yellow pruinose discs; *Fulgo-gasparrea intensa* Aptroot & M.Cáceres, sp. nov. with a cinnabar red, appressed thallus with marginally elongated lobes; and *Peltula nigrotetudinea* Aptroot & M. Cáceres, sp. nov. with flat, black, isolated areoles. A number of substrate shifts was observed: 1) the new species of *Peltula* Nyl. does not grow in places with run-off as usual, but on top of the boulders, where it is in the best position to catch the precipitation, which is the limiting factor here; 2) *Synalissa matogrossensis* (Malme) Henssen, which was previously known only from the type locality, where it grows on limestone, was found on granite; the apparently considerable width of its ecological amplitude is unusual. Its position inside the Lichinaceae was confirmed by sequence data; 3) *Xanthoparmelia succedans* Elix & J.Johnst. was found growing on bark, rather high on trees. The corticolous occurrence is attributed to high diaspores pressure; 4) the area and thus the tree bark is wet enough part of the year to sustain the growth of a corticolous Lichinaceae (one of only two compared to 340 saxicolous and terricolous species in the family) and other cyanophilic lichens; and 5) the new *Cresponea* *Egea* & *Torrente* is the first saxicolous species in the genus in the tropics, where the genus is most speciose; its thallus is deeply endolithic.

Cryptogamie, Mycologie 42(11), 181, 2021. DOI 10.5252/cryptogamie-mycologie2021v42a11

[P33-2021] “Lichens from Brazil: a checklist of lichenized fungi from Acre, in the Amazon”

André Aptroot, Lidiane Alves dos Santos, Isaias Oliveira Junior, Janice Gomes Cavalcante, **Marcela Eugenia da Silva Cáceres**

Mycotaxon is pleased to add a new annotated species distribution list to our 144 previously posted free access fungae. The 49-page “Lichens from Brazil: a checklist of lichenized fungi from Acre, in the Amazon” by Aptroot, Santos, Oliveira, Cavalcante, and Cáceres may be downloaded from our website via <http://www.mycotaxon.com/mycobiota/index.html>.

Mycotaxon 136 (2), 241, 2021. DOI 10.5248/136.541

[P34-2021] “Checklist of the lichens of The Reserva Florestal Adolphe Ducke in Manaus (Amazonas, Brazil)”

André Aptroot, Janice Gomes Cavalcante, Lidiane Alves dos Santos, Isaias Oliveira, Dayane de Oliveira Junior, **Marcela Eugenia da Silva Cáceres**

Mycotaxon is pleased to add a new annotated species distribution list to our 146 previously posted free-access fungae. The 39-page “Checklist of the lichens of The Reserva Florestal Adolphe Ducke in Manaus” by Aptroot, Cavalcante, Santos, Junior, Lima, and Cáceres may be downloaded from our website via <http://www.mycotaxon.com/mycobiota/index.html>.

Mycotaxon, 136 (3), 685, 2021. DOI 10.5248/136.685

[P35-2021] “Population structure and phenology of *Discocactus zehntneri* Britton & Rose subsp. *petr-halfarii* (Zachar) M.R. Santos & M.C. Machado (Cactaceae), a critically endangered Brazilian cactus subspecies”

Joana Paula Bispo Nascimento, **Marcos Vinicius Meiado**

Discocactus zehntneri Britton & Rose subsp. *petr-halfarii* (Zachar) M.R. Santos & M.C. Machado (Cactaceae) is a Critically Endangered Brazilian cactus subspecies. There is no information on its population structure and phenological pattern. Thus, this study characterises population structure and determines the phenological pattern and germinative behaviour of this subspecies. We marked all individuals in the population and measured their diameter to create four age categories: seedling, juvenile, stem > 5cm diameter without cephalium and reproductive plant. To carry out phenological assessments, we selected fifty plants. We monitored the plants monthly for two years. For each plant, we observed the number of reproductive structures and correlated them

with climatic data. We found 1975 individuals grouped in subpopulations that grow in areas ranging from 800 to 2000 m². Most individuals were seedlings and juveniles, and adult plants accounted for about 25% of the population. The flowering period started in November and extends to June, peaking in flower production between November and February, the months with higher rainfall and maximum temperatures. Fruiting was shorter, less intense and occurred between December and April. We observed only thirty-seven fruits in 163 flowers (22.7%) and recorded seed germination only in the presence of light (> 90%). The results indicate that this cactus subspecies has a well-defined period of flowering and fruiting. Reproductive plants, fruits and seeds are few, which may affect the species maintenance in the environment.

Bradleya 39, 116, 2021. DOI 10.25223/brad.n39.2021.a10

[P36-2021] “Hydropriming changes temperature thresholds for seed germination of tree species from the Caatinga, a Brazilian tropical dry forest”

Joana Paula Bispo Nascimento, Bárbara França Dantas, **Marcos Vinicius Meiado**

This study evaluates the effects of hydration and dehydration cycles (HD cycles) on seed germination of four Caatinga tree species (*Anadenanthera colubrina* var. *cebil*, *Enterolobium contortisiliquum*, *Pityrocarpa moniliformis* and *Pterogyne nitens*) subjected to different temperatures and determine the thermal upper and lower limits of germination. For this, seeds were subjected to 0, 1, 2 and 3 HD cycles and set to germinate at temperatures of 5, 10, 15, 25, 35, 40 and 45 °C. Germinability and t50 were calculated and the differences of these parameters were compared by two-way ANOVA. In addition, germination rate ($GR = 1/t50$), as well as ceiling (Tc), optimum (To) and base (Tb) temperatures were calculated to estimate the limits below or above which the seeds fail to germinate. We observed that the more HD cycles, the better the seed responds, especially at extreme temperatures. Seeds of all studied species showed To between 25 and 35 °, Tb < 10 °, and Tc > 40 °. The slope of regression curves for germination rate showed that submitting seeds to HD cycles expands its thermal tolerance range, revealing that this seed pre-treatment can be efficient for species as it increases their tolerance to thermal stress.

Journal of Seed Sciences (antiga Revista Brasileira de Sementes) 43, 1, 2021. DOI 10.1590/2317-1545v43238649

[P37-2021] “Floristic and functional-reproductive diversity of arboreal and shrub species present in the ornamentation of squares in São Raimundo Nonato, PI, Brazil”

Táise dos Santos Silva, **Marcos Vinicius Meiado**,

Sheila Milena Soares

We evaluated the urban green area of the São Raimundo Nonato city (PI), regarding the floristic composition and the pollination service, comparing it with the natural ecosystem (caatinga). We employed indices of functional diversity of the reproductive traits by means of the usual procedures of collect and identification of species, classification (the origin, floral attributes, and pollination syndromes), followed by data analysis. The results show that the urban area presents a greater functional diversity because of the richness of exotic species, but with specialized pollination systems and resources inaccessible to native pollinators. By removing them, the rates are higher in the caatinga, revealing the need for planning in afforestation with native species suggested.

Terr@ Plural (Uepg. Online) 15, 1, 2021. DOI 10.5212/TerraPlural.v.15.2117015.016

[P38-2021] “Seed discontinuous hydration does not benefit germination, but improves drought tolerance of *Triplaris gardneriana* seedlings”

Rafael Silva Freitas, **Marcos Vinicius Meiado**, Elizamar Ciríaco da Silva

The discontinuous seed hydration enables the acquisition of tolerance to environmental stresses, causing a stress imprint. It may modify metabolic patterns and lead to improved stress responses. This study aims to evaluate the effects of discontinuous hydration on germination and on seedling growth of *Triplaris gardneriana* Wedd. under intermittent drought. The seeds have gone through cycles (0, 1, 2 and 3) of hydration and dehydration (HD). The seedlings produced were subjected to water deficit (daily watering and intervals of seven and fourteen days between watering). Seed germinability parameters and, relative growth rate (RGR) of seedling, leaf area, dry matter yield and leaf relative water content (RWC) were evaluated. The HD cycles did not benefit germination, but two HD cycles induced a better biomass accumulation and increased leaf area in seedlings under moderate water deficit, while three HD cycles promoted an increase in RGR and influenced the RWC values. Severe stress affects seedling growth, but subjection to HD cycles minimizes the deleterious effects of drought, suggesting discontinuous hydration acts leading stress imprint in plants.

Acta Scientiarum. Biological Sciences (Online) 43, e.55992, 2021. DOI 10.4025/actasciobiolsci.v43i1.55992

[P39-2021] “Seed germination of *Melocactus zehntneri* (Cactaceae) submitted to water and saline stress”

Anny Bianca Santos Cruz, Joana Paula Bispo Nascimento, **Marcos Vinicius Meiado**

The seeds are subject to multiple stresses, such as water and salt stress, which limit imbibition and its chances of germination. Therefore, the aim of this study was to evaluate the germination behavior of seeds of *Melocactus zehntneri* (Britton & Rose) Luetzelb. (Cactaceae) when subjected to water and saline stress. From a completely randomized block experimental design, the water deficit was simulated with PEG6000 solutions at potentials: 0.0 (distilled water); -0.1; -0.3; -0.6 and -0.9 MPa, the same was done with NaCl for salt stress. Non-germinated seeds were washed and replaced to germinate in distilled water to assess recovery, and germinability (%) and t50 (days) were evaluated. Seeds subjected to water stress germinated up to the potential of -0.3 MPa ($82.0 \pm 16.2\%$), without germination at -0.6 and -0.9 MPa. Under salt stress, the seeds germinated up to the potential of -0.6 MPa, with a reduction in germination as the NaCl concentration increased. When placed back in distilled water, the seeds that had been subjected to water stress germinated at -0.6 MPa and -0.9 MPa, but with a delay in germination (0.0 MPa: 5.96 ± 0.32 days; -0.3 MPa: 11.10 ± 0.76 days). Under salt stress, seeds submitted to -0.9 MPa germinated, demonstrating that NaCl did not cause damage (0% stress versus $39.0 \pm 14.7\%$ in recovery). Therefore, the seeds of the studied population of *M. zehntneri* are tolerant to water and salt stress.

Revista Verde de Agroecologia e Desenvolvimento Sustentável 16, 316, 2021. DOI 10.18378/rvads.v16i3.8441

[P40-2021] “Reflexões e Desenvolvimento de Conhecimentos para o Ensino de Medidas de Tendência Central Gerados por Professores Participantes de um Processo Formativo”

Tiago Augusto dos Santos Alves, Angelica da Fontoura Garcia Silva, **Marta Élid Amorim**

Este artigo descreve parte de uma investigação realizada num contexto de formação continuada, da qual participaram professores que lecionam Matemática para os anos finais do Ensino Fundamental e Médio. Buscou-se compreender quais são os conhecimentos explicitados e as reflexões geradas durante uma sessão de formação na qual se propôs discutir e refletir sobre os significados das Medidas de Tendência Central – MTC – a partir da análise de situações contextualizadas. O estudo foi desenvolvido no âmbito do Projeto Observatório da Educação. Para desenvolvê-lo, optou-se pela metodologia qualitativa por meio da qual procurou-se descrever e interpretar a participação de 12 professores a partir dos dados coletados em uma das sessões de formação e das respostas dadas por eles a um questionário inicial de pesquisa. Os dados analisados referem-se à produção escrita dos participantes e a transcrição dos vídeos da formação e se deu à luz de teorias a respeito da base de conhecimentos necessários ao ensino – Ball, Thames & Phelps – e reflexão sobre a prática – Zeichner. A análise das reflexões geradas a

partir das situações apresentadas possibilitou ao grupo refletir em aspectos importantes das MTC, sobretudo da moda. Foi possível notar a ampliação da base de conhecimentos profissionais dos participantes, especialmente o Conhecimento do Conteúdo e do Ensino. Além disso, há indícios da ampliação do nível de Letramento Estatístico dos participantes desta investigação.

Jornal Internacional de Estudos em Educação Matemática 13, 429, 2021. DOI 10.17921/2176-5634.2020v13n4p429-436

[P41-2021] “Dimensão afetiva e epistêmica da idoneidade didática na formação inicial de professores que ensinam Estatística”

Suzi Samá, **Marta Élid Amorim**

This paper aims to analyze a training process using the methodology of projects, on basic notions of statistics, carried out with 26 prospective mathematics teachers. For that, we based the research on the theory of didactical suitability, which underpinned the entire process of planning and analysing the data. The qualitative research is characterized as explanatory, according to its objectives, and followed the precepts of action research. The results show that developing a project based on themes chosen by prospective teachers includes aspects of the affective and epistemic dimension of didactic suitability. Despite the graduates perceiving the importance of statistics, they had difficulty in applying statistical concepts in the practical situations proposed throughout the project. On the other hand, the management of the investigative process allowed the teacher to resume the concepts seen on in the course and show the research participants their contribution to the understanding of the phenomenon under study.

Educação Matemática Pesquisa 23, 303, 2021. DOI 10.23925/983-3156.2021v23i4p303-332

[P42-2021] “O estágio nos cursos de licenciatura em matemática em universidades baianas: recontextualizações e (re)existências”

Mayara Miranda Santos, Flávia Cristina de Macêdo Santana, **Marta Élid Amorim**

Este artigo apresenta resultados de uma investigação que teve por objetivo analisar como foram recontextualizados os textos das Diretrizes Curriculares Nacionais (DCN) para os Projetos Pedagógicos dos Cursos (PPC) de Licenciatura em Matemática em universidades estaduais e federais do estado da Bahia. Nesta investigação, nosso foco recaiu sobre a proposta delineada para a oferta do componente curricular Estágio. Apoiamo-nos em uma abordagem qualitativa, operacionalizada por meio da análise documental. Os dados foram analisados e categorizados à luz do que propõe Basil Bernstein, considerando-se dois eixos: princípios norteadores das resoluções para a pro-

posta de Estágio e princípios estratégicos das resoluções para a organização e operacionalização da proposta de Estágio. Os resultados apontam para convergências e divergências na operacionalização dos projetos, o que permite inferir que os textos encontrados nas DCN foram recontextualizados de forma seletiva nos PPC.

Revemop 3, e202125, 2021. DOI 10.33532/revemop.e202125

[P43-2021] “Conhecimentos Evidenciados Por Futuras Professoras de Matemática Sobre os Números Racionais e Sobre seu Ensino”

Lana Thaís Santos Silva, Thayse de Fátima Oliveira Santos, **Rafael Neves Almeida, Marta Élid Amorim**

The goal of this article is to identify the knowledge that a group of student-teachers has for teaching notions and procedures regarding the concept of fractions and solving equations in \mathbb{Q} in Basic Education. We consider the categories refined by Ball, Thames and Phelps, based on the works of Shulman, with respect to the knowledge necessary for a teacher to teach Mathematics. In this paper, we have chosen to discuss the results of two questionnaires applied to four students in a Mathematics Teaching Degree program at the start of the training program on Rational Numbers and how to teach them, linked to the research project “A study on the knowledge necessary for a Mathematics teacher to teach fractions” (Um estudo sobre os conhecimentos necessários ao professor de matemática para ensinar frações). The participants’ answers to these questionnaires indicated difficulties, such as: locating fractions on a number line; finding a common unit for all fractions to be a whole number and, thus, be able to compare them; and representing a fraction in which the denominator is greater than the numerator. These challenges are frequently present among students in Basic Education and they persisted even after the student-teachers completed 50% of the program. As such, we believe that teacher trainers need to include situations in their classes to discuss with future teachers aspects related to the content, to the causes of mistakes made by students and ways to fix them.

Jornal Internacional de Estudos em Educação Matemática 14, 173, 2021. DOI 10.17921/2176-5634.2021v14n2p173-180

[P44-2021] “Impacto do outlier na média e na mediana: reflexões geradas por professores”

Angelica da Fontoura Garcia Silva, Tiago Augusto Alves, **Marta Élid Amorim**

Este artigo apresenta uma pesquisa desenvolvida em um contexto de formação continuada, vivenciado por professores que lecionam Matemática para os Anos Finais do Ensino Fundamental e Médio. Trata-se de um estudo de

natureza qualitativa por meio do qual procura-se interpretar os conhecimentos profissionais explicitados por um grupo de 12 professores a partir de sua participação em uma das atividades do processo formativo. Os dados coletados são analisados a partir de estudos que discutem os conhecimentos necessários para o ensino da Matemática e refletem sobre a prática docente. A interpretação dos diálogos dos participantes permite inferir a ampliação do nível de letramento concernente à Medidas de Tendência Central (MTD) e o desenvolvimento do conhecimento comum e especializado do conteúdo, sobretudo a partir da reflexão sobre as MTC serem ou não afetadas pelos outliers e sobre sua utilização ou não para a composição dos dados.

Revista Sergipana de Matemática e Educação Matemática 6, 107, 2021. DOI 10.34179/revi-sem.v6i1.14757

[P45-2021] “Combinatorial Interpretations for Identities Using Chromatic Partitions”

textbfMateus Alegri, Wagner Ferreira Santos, and Samuel Brito Silva

We provide combinatorial interpretations for three new classes of partitions, the so-called chromatic partitions. Using only combinatorial arguments, we show that these partition identities resemble well-know ordinary partition identities.

Czech Math J 71, 545, 2021. DOI 10.21136/CMJ.2021.0542-19

[P46-2021] “Descripción y Análisis de un Recorrido de Estudio y Investigación en Geometría”

textbfRicardo Nicasso Benito, Marianna Bosch Casabó

We present an experience of a study and research path (SRP) carried out by the two authors to determine the focus of a parabola, a generating question that arose during the design of a training course for future secondary school teachers of mathematics, in an activity about solar ovens. We will describe the SRP experienced using the elements of the herbartian schema and the various dialectics. We will show that this description provides new rhetorical, symbolic and conceptual resources to carry out and analysis processes of study in the paradigm of questioning the world. Finally, we postulate that these resources could also become epistemic instruments of the inquiry processes, beyond their role as tools of description and analysis.

Caminhos da Educação Matemática em Revista (ON-LINE) 11, 78, 2021. DOI -

[P47-2021] “Complete submanifolds with relative nullity in space forms”

textbfSamuel Canevari, Guilherme Machado de Freitas,

Felippe Guimarães, Fernando Manfio, and João Paulo dos Santos

We use techniques based on the splitting tensor to explicitly integrate the Codazzi equation along the relative nullity distribution and express the second fundamental form in terms of the Jacobi tensor of the ambient space. This approach allows us to easily recover several important results in the literature on complete submanifolds with relative nullity of the sphere as well as derive new strong consequences in hyperbolic and Euclidean spaces. Among the consequences of our main theorem are results on submanifolds with sufficiently high index of relative nullity, submanifolds with nonpositive extrinsic curvature and submanifolds with integrable relative conullity. We show that no complete submanifold of hyperbolic space with sufficiently high index of relative nullity has extrinsic geometry bounded away from zero. As an application of these results, we derive an interesting corollary for complete submanifolds of hyperbolic space with nonpositive extrinsic curvature and discourse on their relation to Milnor’s conjecture about complete surfaces with second fundamental form bounded away from zero. Finally, we also prove that every complete Euclidean submanifold with integrable relative conullity is a cylinder over the relative conullity.

Ann Glob Anal Geom 59, 81, 2021. DOI 10.1007/s10455-020-09742-5

[P48-2021] “(F)Atos De Resistência: Fórum de Educação Escolar Quilombola de Sergipe e os Projetos Políticos Pedagógicos Das Escolas Quilombolas”

textbfEdinéia Tavares Lopes, Ângela Sales Andrade dos Santos, Maria Batista Lima, Evanilson Tavares de França

As primeiras atividades do Fórum de Educação Escolar Quilombola de Sergipe (FEEQS), instituído em 2019, a partir de ações conjuntas entre NEABI-UFS e o Movimento Quilombola de Sergipe (MQSE), desvelam a situação da Educação Escolar Quilombola (EEQ) do estado, elegendo como questão urgente os desafios encontrados para a elaboração dos Projetos Político-Pedagógicos (PPP) das escolas localizadas em comunidades remanescentes de quilombola do estado. Por esta razão, o artigo ora escrito objetiva refletir sobre a maneira como a constituição do FEEQS tem fomentado os debates em torno da elaboração dos PPP dessas escolas, desde a conquista do direito das comunidades, no que se refere à elaboração desses projetos de forma autônoma e coletiva. Defende-se que o FEEQS se constitui como espaço de resistência que tem provocado debates e embates na efetivação da EEQ em Sergipe, exemplificado neste trabalho com as discussões em torno da elaboração dos PPP.

Revista da Associação Brasileira de Pesquisadores(as) Negros(as) (ABPN) 13, 84, 2021. DOI -

[P49-2021] “Bioactive profile of mandacaru fruits and cytotoxicity against the L929 cell line”

Jamiles Francisca dos Santos, Jenisson Linike Costa Goncalves, Raphael Amancio de Jesus, Paulo Cesar de Lima Nogueira, Ricardo Scher, Antonio Martins de Oliveira Junior, textbfJane de Jesus da Silveira Moreira

Mandacaru (*Cereus jamacaru* DC. Subsp. *Jamacaru*) is native to the Brazilian Caatinga and is part of the Cactaceae family. Mandacaru fruits are attractive in taste and flavour, although they are not widely commercialised. However, there is limited scientific literature on the composition of this fruit. Therefore, the present work was aimed at analysing the physicochemical composition, as well as in vitro antioxidant activity, phytochemical profile, and cytotoxicity of mandacaru fruit from three different locations in the Brazilian State of Sergipe. The pulp and peel of mandacaru fruit used in this study presented low Vitamin C concentration, mean values between batches 18.2 mg. 100 g⁻¹ (pulp) and 27.5 mg. 100 g⁻¹ (peel). The pulp of mandacaru fruit from the region of Monte Alegre presented the highest concentration of apparent phenolic compounds (117.2 mg. EAG g⁻¹) and antioxidant activity evaluated by the inhibition of the ABTS radical (22.4 μmol. trolox g⁻¹). The chemical profile of mandacaru fruit consisted of o-coumaric and p-coumaric acids, but they were not considered to be cytotoxic; thus, this native fruit is suitable for consumption, exhibiting relevant amounts of apparent phenolic compounds and antioxidant activity. Further studies are needed to prolong the shelf life of the fruit for commercialisation.

Journal of Medicinal Plant Research 15(5), 215, 2021. DOI 10.5897/JMPR2020.7060

[P50-2021] “Oficina temática: Poluição atmosférica e colheita da cana-deaçúcar, existe relação? Um instrumento para ensinar e aprender sobre reação de combustão”

Tamar Andressa Oliveira da Conceição, Marisa Souza Santos, **Luciano Evangelista Fraga, João Paulo Mendonça Lima**

This article aims to present the analysis of the data obtained in the application of the thematic workshop “Air pollution and sugarcane harvesting, is there a relationship?”, which was applied at the State College Professor Nestor Carvalho Lima, located in the city of Itabaiana/Sergipe. The purpose of the workshop is to problematize the effects caused in atmospheric air from the chemical reactions that occur in the burning of fuels, having as a starting point the combustion of sugarcane straw. The investigation of the students’ understanding of the concepts addressed in the problem was carried out through the use of questionnaires applied during the workshop. Therefore,

it was observed that the students understood the proposed content despite presenting some difficulties, and that the use of the thematic approach facilitated these understandings. However, one of the major obstacles among students is the erroneous writing that was visible in their answers.

Scientia Naturalis 3, 1378, 2021. DOI -

[P51-2021] “Polycyclic Aromatic Hydrocarbons Removal from Aqueous Solution with PABA-MCM-41/Polyethersulfone Mixed Matrix Membranes”

José Arnaldo S. Costa, **Victor H. V. Sarmiento**, Luciane P. C. Romão, Caio M. Paranhos

Polycyclic aromatic hydrocarbons (PAHs) are one of the most recalcitrant pollutant originated from the burning of coal, petroleum, and other fossil fuels. The human exposure to PAHs may contribute to develop several carcinogenesis mechanisms. The aim of the present study was to develop a mixed matrix membrane (MMM) based on polyethersulfone (PES) and functionalized mesoporous material for the remediation of PAHs mixture by adsorption processes. MCM-41-based mesoparticles were obtained from biomass reuse of rice husk ash (RHA) and functionalized with p-aminobenzoic acid (PABA). The hydrothermal and casting methods were effective and sustainable in the preparation of PABA-MCM-41 and PES-based MMMs, respectively. PES-based MMMs presented an excellent distribution of the arrays incorporated and small-angle ordering. The absorption of PAHs was influenced by the incorporation of PABA-MCM-41 within the PES matrix.

Silicon x, xx, 2021. DOI 10.1007/s12633-021-01165-6

[P52-2021] “Industrial and OSS developers’ profiles: a family of experiments to evaluate a pioneering neuro-linguistic method for preferred representational systems automatic detection”

Methanias Colaço Júnior, Breno Santana Santos, Manoel Mendonça, Daniela Corumba, Mario André de F. Farias

Software projects use mailing lists as the primary tool for collaboration and coordination. Mailing lists can be an important source for extracting behavioral patterns in the software development. A new approach for that is the use of Neurolinguistic theory to determine what is the Preferred Representational cognitive System (PRS) of software engineers in that specific context. Different resources and cognitive channels are used by developers in order to achieve software understanding. An important question on this matter is: What types of representational systems are preferred by software engineers? This paper presents a psychometrically based neurolinguistic method to identify the PRS of software developers. Ex-

perimental evaluation of the approach was carried out in three experiments to assess the Preferred Representational System of developers at Industrial and OSS (Apache server and Postgresql) mailing lists. For the OSS projects, the results showed that the PRS scores of the top-committers clearly differ from the general population of the projects. For industry, the experiment showed that the developers indeed have a PRS. Finally, for both scenarios, the qualitative analysis also indicated that the PRS scores obtained are aligned with the developers' profiles, considering that alignment is essential to effective communication within the team and enhances the development process due to a better software comprehension. **Journal of the Brazilian Computer Society 27, 4, 2021. DOI 10.1186/s13173-021-00107-9**

[P53-2021] "Industrial and OSS developers' profiles: a family of experiments to evaluate a pioneering neuro-linguistic method for preferred representational systems automatic detection"

Kleber Henrique de Jesus Prado, **Methanias Colaço Júnior**

Context: The criminality phenomenon affects the quality of life, the economic growth and the reputation of a nation. Each year, governments spend millions of dollars fighting violence, and consequently, crime prevention and control are highly concerning issues to the public safety agencies.

Objective: Applying Data Science fundamentals to analyze open government data on the crimes that occurred in the Brazilian States.

Method: We have conducted a controlled experiment to discover the association rules (AR) between the crimes and the States. Additionally, we have developed a ranking of the most dangerous States.

Results: From a general viewpoint, with weights for all available crimes, Paraná was the most dangerous local during all the assessed years, followed by Rio de Janeiro. From the single perspective of murders, in 2019, the States of Roraima, Rio Grande do Norte, Sergipe, Acre and Pernambuco were ranked as the ten most violent ones, being Pernambuco and Acre among the most dangerous States from the two perspectives (weighted average and murders).

Conclusion: The Data Science enables the execution of more precise diagnoses. The year of 2019 presented a general drop in the crime rates, with special emphasis on Paraíba, Goiás, Rio Grande do Norte and Ceará.

Journal of Applied Security Research 15, 1, 2021. DOI 10.1080/19361610.2020.1848057

[P54-2021] "Caminho se Faz ao Andar": Poema de Chile e los Reinos Dorados"

Christina Ramalho, Gisela Reis de Gois

Estudo comparado das obras Poema de Chile, da chilena Gabriela Mistral, publicado em 1967, e Los Reinos Dorados, de autoria do boliviano Homero Carvalho, publicado em 2007, à luz da teoria épica do discurso, de Silva, e de reflexões sobre o deslocamento histórico-geográfico como forma dual de autoconhecimento e de mapeamento da terra pátria, com destaque para a função do/a guia. A abordagem, dialogando com especialistas, levará em consideração a tradição do expansionismo colonizador, contrapondo-a ao expansionismo nacionalista, evidenciando os traços próprios das duas epopeias latino-americanas e o resgate de um epos que realiza o simbólico apagamento da conquista da terra pela força bélica e aculturadora para colocar em cena o resgate mítico da Mãe Terra e da Mãe Água, que resulta de viagens motivadas pelo encontro simultaneamente amoroso e crítico com a pátria chilena e a pátria boliviana, respectivamente.

Interdisciplinar 35, 141, 2021. DOI 10.47250/intrell.v35i1.15694

[P55-2021] "Os Timbiras (1857), By Gonçalves Dias: Epic Resources, Invocation and Anachronism"

Luana dos Santos Santana, **Christina Bielinski Ramalho**

Our Scientific Initiation study (2019-2020) focuses on the presence of Brazilian literature in the 19th century, with the main objective of investigating the presence of the historical resource known as "invocation", in the epic poems produced in romanticism. In this work, we focus on Os Timbiras (1857), by Gonçalves Dias. We start from the hypothesis that it is possible to find, in the invocation resource used, a specific form of "anachronism", as defined by Aravamudan (2001). Assumptions of SILVA (1984 and 2009 and 2015) and RAMALHO (2004, 2009, 2015 and 2017) configured as the main basis for our research, given the rescue of the epic genre they performed. From the analysis, which also involved the recognition of other epic aspects in the work, it was possible to verify that the epic inventiveness of Gonçalves Dias wasn't only observed in the invocation, but also in the whole work, making anachronism a resource to achieve his own aesthetic identity.

Cadernos da Fucamp 20, 46, 2021. DOI -

[P56-2021] "A Presença Épica na Obra de João Cabral de Melo Neto"

Christina Ramalho, Éverton de Jesus Santos

Abordagem à poesia e ao teatro de João Cabral de Melo Neto a partir do olhar épico, de modo a reconhecer, em Morte e vida severina (1955) e no Auto do frade (1984), matérias épicas que sustentam a afirmação do caráter híbrido dos dois autos, sem, no entanto, ter qualquer intenção de fixar ou categorizar as obras, mas, ao contrário, pretendendo colocar em prática o instigante exercício de

contemplá-las à luz do hibridismo na literatura. Para isso, será destacada a presença dos dois planos que integram obras épicas (o histórico e o maravilhoso), configurando a matéria épica; a representação do heroísmo e as especificidades estéticas que desenham esse hibridismo. Além disso, a abordagem pretende ser uma homenagem ao centenário de João Cabral de Melo Neto, que, em 2020, teria completado 100 anos de idade.

Itinerários (Unesp. Araraquara) 52, 241, 2021. DOI -

[P57-2021] “Como reatar a conversa com corpos desiguais?”

Beto Vianna

Neste artigo, discuto ambiente, percepção e comunicação a partir de uma visão sistêmica do organismo e de seus processos relacionais, em particular seu espaço de encontros coontogênicos, seguindo as coerências da Biologia do Conhecer. Para tanto, examino pressupostos das ciências cognitivas, em que concebemos a linguagem como capacidade específica do humano. Na abordagem da biologia que uso aqui, a linguagem é um fenômeno relacional e pertence ao domínio do comportamento, a história das relações que o organismo estabelece em um meio. No mesmo caminho explicativo, a percepção é gerada na observação dessa dinâmica de ações do organismo. Assumir esse ponto de partida biológico para falar de ambiente, percepção e comunicação (ou linguagem) pode nos ajudar, acredito, a refletir sobre as certezas ontológicas de nosso afazer científico, e suas consequências ao lidarmos com outros modos de vida, geradores de outros domínios de ação e de outros domínios explicativos, humanos ou não.

Ilha - Revista de Antropologia 23, 50, 2021. DOI 10.5007/2175-8034.2021.e75209

[P58-2021] “O vírus é um animal político (e nós, estamos preparados para negociar?)”

Nelson Vaz, Luiz Antonio Botelho Andrade, **Beto Vianna**

Política Democrática, v. 1, p. 89-99, 2021. DOI -

textbf[P59-2021] “Definition and Comparison in the Construction of the Ethos of the MAT at the Headlines of the Veja Magazine”

Glenda Vieira Silva, **Marcia Regina Curado Pereira Mariano**

This paper aims to analyze how Veja magazine builds the ethos of the Movimento Sem Terra (MST) in its headlines. Based on aristotelian studies on rhetoric and its modern developments with Neo-rhetoric, this paper emphasizes the concepts of ethos and the construction of

a discourse through quasi-logical arguments. The motivation of the present work arises from the rhetorical conflict about opinions about the MST. The analysis carried out reveals that the magazine’s vision has not changed over the years.

Claraboia 1, 97, 2021. DOI -

[P61-2021] “O ornitorrinco é mamífero como nós: por que e para que se ensinar Literatura?”

Fábio José Santos de Oliveira

Este ensaio tem por objetivo discutir a importância e a necessidade do ensino e do estudo de Literatura no ambiente escolar. O ensaio foi escrito para demonstrar a fragilidade de certas opiniões negativas contra a Literatura, muitas das quais pautadas numa visão altamente utilitarista do conhecimento. Reforçam teoricamente a discussão do ensaio as obras e autores seguintes: Candido (2011) e (2002), Cascudo (2012), Compagnon (2006), La-jolo (1993), entre outros.

AFLUENTE 6, 371, 2021. DOI -

[P62-2021] “Vozes individuais e sociais no discurso de divulgação científica da Universidade Federal de Sergipe”

Luiz Rosalvo Costa, H. R. Nascimento

Com base em proposições do Círculo de Bakhtin, no presente artigo focalizamos o discurso de divulgação científica da UFS postulando a ideia de que os enunciados em que esse discurso se materializa não se constituem em torno de centros de proferição unívocos e homogêneos, mas, diferentemente, por uma articulação de vozes individuais e sociais que, organizadas por procedimentos linguístico-textuais, refletem e refratam posições ideológicas em circulação no fluxo interdiscursivo da sociedade. Em acordo com essa proposição, buscamos mostrar como o discurso de divulgação científica da UFS, efetivado em diferentes gêneros e sistemas de gêneros, se constroi por meio de relações dialógicas nas quais a heterogeneidade opera como um dos elementos fundamentais. **Missangas - Estudos de Literatura e Linguística 2, 145, 2021. DOI 10.53500/missangas.v2i3.12550**

[P63-2021] “Carta de D. Maria I nomeando o professor régio Luiz dos Santos Vilhena para a cadeira de língua grega na Bahia (1787)”

Luciene Lages Silva

Master letter from Queen Maria I appointing Luiz dos Santos Vilhena as royal professor of Greek language in the city of Salvador, Bahia. For 13 years, the professor remained in Brazil, returned to Portugal around 1800 to restore his health and subsequently retired. In 1808,

however, he returned to the Brazilian colony and died in 1814; he was buried in the convent of Nossa Senhora de Santa Tereza in the city of Salvador, Bahia.

Revista do Centro de Estudos da Universidade Nova de Lisboa 9, 273, 2021. DOI -

[P64-2021] “Crítica da leitura haesbaertiana ao materialismo (dialético)”

Pedro Paulo de Lavor, **Ana Rocha dos Santos**

The main purpose of this article is to describe and critique the components (epistemological/ontological) that support Rogério Haesbaert’s defenses regarding the understanding of matter ([existence of] the real), materiality (quality/character/state/situation of material) and materialism (method of analysis/thought/research of the real), based on his writings from the 1990s on modernity and postmodernity. In this text, we divided our reflection into two moments. In the first, a criticism will be made of the article Philosophy, geography and crisis of modernity, published by Terra Livre magazine, in 1990, by Haesbaert having introduced his understanding in depth with regard to matter/materiality/materialism. In a second step, a criticism will be made of the combination of materiality and immateriality, made by Haesbaert in the course of producing his thought until the present moment. And, finally, exhortations from Haesbaert’s criticism of dialectical materialism and Marxism will be extracted.

Revista de Geografia (Recife) 38, 461, 2021. DOI 10.51359/2238-6211.2021.249130

[P65-2021] “Rural and Urban Space: ‘Minha Casa Minha Vida’ Program (Pmcmv) and Sociospatial Segregation at Aracaju’s (SE) Metropolitan Region”

Mário Jorge Silva Santos, **Ana Rocha dos Santos**

The present essay aims to discuss the impacts of urban growth produced by the real state expansion of ‘Minha Casa Minha Vida’ program (2009-2014) at Aracaju’s (SE) metropolitan region. Thus, we sought to employ the historical dialectic method to reconstitute the habitational policy developed in the region in the last decades, especially after 2009, when there was a significative growth of habitational units constructed at the peripheral and rural areas of the RMA. ‘Minha Casa Minha Vida’ Program is the object of analysis of this essay and it was possible to investigate the sociospatial transformations that occurred on urban and rural spaces of the immediate and distant peripheries of the region through the study of the program contradictions. These transformations can be analyzed in consideration of the territorial ordering policy, which uses Directive Plans of Urban Development (PDDU) to attribute functions to spaces that still have rural characteristics, which consequently produces sociospatial segregation and conflicts in these areas.

Revista Rural e Urbano - UFPE 6, 97, 2021. DOI -

[P66-2021] “Seasonality analysis in the series of the average prices of banana and tomato constant in the basic basket of the municipality of Vitória da Conquista, BA”

Delza Rodrigues de Carvalho, **Josefa de Lisboa Santos**, Marcelo Santos Amaral, Gildásio Santana Júnior,

This article aims to study the seasonal behavior of the series of average prices for silver tomatoes and bananas, as well as their impacts on the expenditures of the Basic Basket of the Municipality of Vitória da Conquista, using the Time Series Analysis, through the models additive and multiplicative classic, in an Excel spreadsheet. The data were provided by the extension project registered at UESB, “Economic Indicators: Basic Basket of Vitória da Conquista”, and comprise the average monthly prices collected between October 2014 and July 2019. In the results presented by the models, there was influence of seasonality, showing decreases in average prices for the months of September, October, November and December, and increases in prices for the months of February, March, April and May. The variation in the average prices of some of the products that make up the basic food basket is influenced by climate change that determines the best times for planting and harvesting in Brazil. It concludes, highlighting the importance of making a seasonal analysis, not only for the series of products that impact the cost of the basic food basket, but also for all other similar economic series.

Revista Extensão & Cidadania 9, 7, 2021. DOI 10.22481/recuesb.v9i15.8445

[P67-2021] “La vivienda de interés social y el mercado inmobiliario: Agentes y dinámicas del programa Minha Casa Minha Vida en la ciudad de Pelotas (2009-2016)”

Natalia Daniela Soares Sá Britto, **Oscar Alfredo Sobarzo Miño**

In this article, housing production in the Brazilian city of Pelotas is analyzed, within the Minha Casa Minha Vida Program (MCMV), between 2009 and 2016. The analyses begin by placing the program’s creation in the political-economic context of the first decade of the 21st century, characterized by a resurgence of the state’s regulatory and auxiliary role in the process of capital accumulation. The general characteristics of the MCMV are addressed and their impact on the city is analyzed according to the main housing production modalities for different income groups. The article shows that the action of different agents, establishing partnerships when necessary, and the dynamics of housing production, generated an expansion of the urbanized area, with significant peripheral expansion, and the increase in land values and in

the value of firms themselves, due to the financialization, without, however, addressing the housing deficit.

Revista de Geografia Norte Grande 78, 193, 2021. DOI 10.4067/S0718-34022021000100193

[P68-2021] “Sources for the history of secondary education the class reports of the “history subjects” at the Ginásio Estadual de Itabaiana/SE (1951-1968)”

João Paulo Gama Oliveira, Roselusia Teresa de Moraes Oliveira, Rosemeire Marcedo Costa, Simone Paixão Rodrigues

The purpose of this article is analyzing class reports as a source for the history of secondary education, more precisely, for the History of the “subjects of History”, namely: History of Brazil, America and General, from the Ginásio Estadual de Itabaiana, between 1951 to 1968. To achieve this goal, at first, we present a brief discussion on the history of school subjects. Following that, we deal with aspects of the History of secondary education in Sergipe and the Ginásio Estadual de Itabaiana, later, we present elements of the materiality of the class reports located in the School Archive of the current Colégio Estadual Murilo Braga, as well as some problematizations for working with such sources in the studies of the History of Education.

Revista Fontes Documentais 4, 56, 2021. DOI -

[P69-2021] “A busca pela popularidade e a disputa entre neoliberalismo e neodesenvolvimentismo no governo Bolsonaro”

Marco Aurélio Dias de Souza

This paper analyzes contradictions in the clash between the neoliberal and (neo)development theory, has long dominated the country’s politics landscape, and understand how the inability to create alternatives the difficulty of proposing ways out beyond them, made possible the victory of a movement to radicalize the neoliberal project. In this sense, the question is to demonstrate how this ultraliberal project is once again built in an ungovernable way and based on a profound contempt for life and as the Bolsonaro government, seeking to build an electoral base for 2022, attempts are being made to appropriate income transfer programs that are deeply antagonistic to the project underway.

Sinais (UFES) 1, 41, 2021. DOI -

[P70-2021] “De Lupa na mão: Uma Lente Sobre Pesquisas Acadêmicas que Abordam a Educação Escolar Quilombola em Sergipe”

Evanilson Tavares de França, **Maria Batista Lima**, Josenilson Felizardo Santos

Quilombola School Education (QSE), whose curricular

guidelines were granted in 2012, through CNE/CEB Resolution No. 8/2012, seems to flow through territories in which forgetfulness prevails, without fear of any force (legislation, for example) that is able to take it out of its inertia. And when we are encountered with the revelation that a certain teaching unit operates according to the precepts of the EEQ, a landslide of academic research proves Freire’s assertion (1996): every advertisement is tied to a complaint and this one to that one. For this reason, we have consulted researches welcome by two graduate programs of the Federal University of Sergipe, aiming to understand the situation in which the enlightened modality of teaching is found in the state of Sergipe. Although collected researches in the Digital Library of Theses and Dissertations do not include all quilombola schools, they reveal the distances between curricular practices and the QSE.

Revista ABPN 13, 680, 2021. DOI 10.31418/2177-2770.2021

[P71-2021] “Itinerâncias formativas: estágio e práticas em contextos de aprendizagens colaborativas”

Marilene Batista da Cruz Nascimento, Mateus Henrique Silva Santos, Josevânia Teixeira Guedes

Este estudo apresenta as ações relacionadas ao estágio e às práticas em contextos profissionais na formação universitária das licenciandas do curso de Pedagogia, da Universidade Federal de Sergipe/Campus Professor Alberto Carvalho, inserindo-se no componente curricular Estágio Supervisionado IV, com vistas a discutir sobre as itinerâncias e a apropriação de aprendizagens em redes colaborativas para a atuação no campo da gestão e dos diferentes espaços e tempos pedagógicos da escola básica numa abordagem inter e transdisciplinar. A trilha metodológica seguiu os princípios da intervenção, baseada em problemáticas do cotidiano de cinco unidades de ensino públicas das redes estadual e municipal, envolvendo a participação de 23 estagiárias e o apoio de membros do PET Educação – Conexão de Saberes, do Grupo de Aprendizagem e Ensino de Física (GAEF) e do Grupo de Pesquisa Relicário. Os resultados sinalizaram que as itinerâncias formativas (re)construídas pelos envolvidos promoveram impactos no campo do desenvolvimento humano e social das escolas e da própria UFS, haja vista aproximar as diversas realidades, potencializar o trabalho colaborativo, criar espaços de diálogos e autonomia entre os atores.

Revista Ibero-Americana de Estudos Em Educação 16, 1807, 2021. DOI -

[P72-2021] “Educação do Campo: alguns indicadores”

Marilene Santos

The following article, whose nature is descriptive and bibliographic, aims, based on Goal eight of the National

Education Plan 2014-2024 (PNE), to identify some indicators for the Countryside Education. For such purpose, we consider the educational reality of the countryside based on: the low schooling of the population; in the negative evolution of the enrollments number in the last few years; and in the circumstances through which the quality benchmark, provided by the Basic Education Development Index (Ideb), has been unproductive to the define public policies aimed for the Countryside Education. Despite the operational difficulties of the educational system to obtain the necessary information for its composition, the results of the last two Ideb, however, already show progress. Based on these indicators, we conclude that some actions aimed at increasing the schooling of the countryside population were undertaken, however, the unequal educational condition among young people living in the countryside and those who live in the urban areas still persists. There is a possibility of fulfilling the goal eight of PNE by 2024, however, this may not mean progress in guaranteeing the countryside population's rights to an education of quality, but, on the contrary, its reduction.

Revista Brasileira de Educação do Campo 6, 1, 2021. DOI 10.20873/uft.rbec.e10791

[P73-2021] “Continued Formation of teachers from rural schools in Sergipe”

Marilene Santos, Joelma Carvalho Vilar

This article presents the preliminary results of a research on continuing education linked to the project Escola da Terra/Sergipe, developed in the period 2018-2019, with educational professionals from 14 municipalities in Sergipe. It aims to reflect on the contributions of continuing education for teachers in rural multi-grade schools in Sergipe. The investigation is based on the historical-cultural theoretical approach and uses as a research instrument the field reports of 14 professionals involved in the project. It is concluded that the formative experience in Sergipe promoted qualitative changes in teaching practices; in the students' learning and in the community's involvement with the school, also showing the feasibility of making the formation of teachers directly linked to the reality and to the educational dynamics of the multi-grade schools in the countryside.

Revista Fórum Identidades 33, 143, 2021. DOI -

textbf[P74-2021] “A BNCC e o Currículo da Educação Infantil e do Ensino Fundamental em Sergipe”

Paulo Marchelli

A implementação da Base Nacional Comum Curricular (BNCC) em curso no sistema brasileiro da Educação Básica apresenta características regionais específicas, que dependem de opções políticas e estratégias de gestão assumidas pelas diversas instituições envolvidas direta

ou indiretamente com o processo. Nesse sentido, o objeto de estudo do presente trabalho consiste no levantamento e análise de documentos e discursos produzidos por instituições e seus agentes atrelados ao processo de implementação da BNCC no estado de Sergipe, compreendendo especialmente a Secretaria Estadual de Educação, a Secretaria Municipal de Educação de Aracaju e a Universidade Federal de Sergipe. A investigação fundamenta-se, assim, na pesquisa documental e na apresentação de narrativas que exprimem vivências e emitem opiniões sobre o objeto de estudo contemplado. Com isso, por meio do enfoque metodológico da análise de documentos e de narrativas é apresentado um quadro geral dos aspectos mais importantes observados nesse momento sobre questões curriculares no sistema educacional deste Estado. Priorizou-se a Educação Infantil e o Ensino Fundamental, desde que o Currículo de Sergipe voltado para estas etapas da Educação Básica em suas diversas modalidades encontra-se no momento aprovado pelo Conselho Estadual de Educação e homologado pelas instâncias políticas locais. A pesquisa mostra como os documentos e as narrativas produzidos sobre o currículo são formados a partir do embate entre propostas centralizadas, como é o caso da BNCC e o equacionamento necessário para a formulação de políticas públicas voltadas à superação de dificuldades regionais e contingentes da Educação Básica.

Roteiro (UNOESC) 46, 1-25, 2021. DOI 10.18593/r.v46i.23976

[P75-2021] “Curriculum Acts and Network Education in the Community Service and Strengthening of Bonds”

Simone de Lucena Ferreira, Everton de Almeida Nunes, Bruna Santana de Oliveira

The sociocultural scenarios of the interactions of social actors are forged in the acts of curricula amid the experiences and experiences of the subjects causing ruptures that multi-referenze in the midst of pluralities. These performances show learning processes, presuppose transgressions of the elected formative knowledge and go beyond the walls of the school. This paper aims to present glances at the curricular scenes developed from two Social Assistance Reference Centers (CRAS) located in Aracaju-SE that serve children and adolescents from the Coexistence and Strengthening Service of Bonds (SCFV) using educational practices with digital mobile technologies. From a multi-referential perspective, it is perceived that the methodologies used in CRAS break with the logic of formal teaching, thus opening the possibility of charting a new path in the process of elucidating social phenomena in contemporaneity.

Educação 10(3), 186-199 2021. DOI 10.17564/2316-3828.2021v10n3p186-199

[P76-2021] “Produzir e compartilhar: a produção de professores da educação básica no YouTube”

Simone de Lucena Ferreira, Gersivalda Mendonça da Mota, Sandra Virginia Correia de Andrade Santos

Este artigo é resultado de uma pesquisa que buscou compreender as possibilidades de utilização do Youtube na educação, envolvendo uma proposta de criação e cocriação de vídeos, junto aos professores da educação básica. A metodologia utilizada foi a pesquisa-formação, a qual requer do pesquisador uma implicação com os sujeitos e com os dispositivos da investigação. Nesse sentido, foi criado um dispositivo autoral de formação continuada docente, a oficina “Possibilidades do uso da rede social Youtube na educação”. A pesquisa-formação tem como aporte teórico Josso (2010), Macedo (2009, 2010) e Santos (2014). Os dispositivos para levantamento de dados foram: observação, diálogo com os participantes e diários de campo. Como resultado, verificou-se que nem todos os professores se apropriaram da dinâmica de criação e/ou cocriação de vídeos, bem como do compartilhamento de suas produções. Alguns demonstraram insegurança e resistência. Desta forma, concluímos que a ausência de práticas autorais e dinâmicas, por parte dos professores envolvidos, está relacionada principalmente a dois fatores: dificuldade de imersão na cibercultura e de disponibilidade para a realização de atividades de formação continuada, pois as políticas educacionais, seja no nível municipal, estadual ou federal, não têm possibilitado para que os professores tenham disponibilidade para realizar sua formação continuada.

Revista Espaço Pedagógico 28, 321, 2021. DOI 10.5335/rep.v28i1.11466

[P77-2021] “Development of computational thinking with on-line practices in times of pandemic: a possible road?”

Gilson Pereira dos Santos Júnior, **Simone de Lucena Ferreira**

We live in a society in which mobile and digital technologies are increasingly present in our daily lives and we cannot limit ourselves to knowing how to use them. It is important to know how to adapt them, personalize them and program them, if necessary, to solve our problems. Computational thinking is understood as the human ability to teach, humans or machines, to solve problems with the fundamentals of computing. Its development has gained space in education, formal and non-formal, through face-to-face practices. With the pandemic, the challenge arises to develop this skill with young people from high school in a public educational institution through online practices. In this article, we discuss the didactic design, based on the principles of online education, created for the development of computational thinking with online practices. The preliminary results indicate the feasibility of developing computational thinking from the perspective of online education.

Journal of Research and Knowledge Spreading 2, e12479, 2021. DOI 10.20952/jrks2112479

[P78-2021] “Online education, notes on the experience in the Licentiate Degree in Mathematics at the Federal University of Campina Grande”

Rosinângela Cavalcanti da Silva Benedito, **Simone de Lucena Ferreira**

We live in a time of cyberculture, in the constant presence of digital network, social networks, the constant use of applications and devices of Information and Communication Technology and it is important that education is engaged in this reality. The experience in graduate education has presented researchers with different perspectives and who have been studying online education and its devices and interfaces for a long time. Online education has become, since 2020, a reality at all levels of education, and teachers at universities have also had to adapt their practice so that teaching takes place, respecting the rules of physical distance, due to the situation of pandemic that we experience. Thus, this article aims to present and analyze the results of the use of resources and interfaces in the development of the Mathematics Teaching Practice course in the Elementary School of the Mathematics Degree Course at the Teacher Training Center of the Federal University of Campina Grande (UFCG), Cajazeiras campus, in Paraíba. And in this way, reflect on the influence of learning developed in the Doctorate in Education by the Federal University of Sergipe (UFS) and in the Research Group on Education and Digital Cultures (ECult) in teaching practice. For the development of this work, questionnaires made to students at the beginning and at the end of the academic period were used as an evaluation, identification of the studies carried out in the preparation and of the interfaces used, as well as reports of the activities and presentation of the results of the discipline. When analyzing the use of technologies in the teaching of Mathematics Teaching Practice, what is observed is that it was necessary to adapt the actions provided for in the curriculum component’s menu, but it was possible to introduce interfaces never used before in the course and develop activities in an innovative way. and with learning that will remain in the next periods, even in person and that this practice was directly influenced by the guidance and experiences in the doctorate and in the Research Group.

Journal of Research and Knowledge Spreading 2, e12481, 2021. DOI 10.20952/jrks2112481

[P79-2021] “Youtubers mirins on the networks: children claiming their place in digital cultures”

Bruna Santana de Oliveira, **Simone de Lucena Ferreira**

The contemporary scenario gradually points out how

children are occupying the virtual space. Among the busy environments, there is YouTube, where the little ones claim to listen your voices through the experiences shared on the platform, whether about games, toys, school activities, games and indication of films. Therefore, in this article, we seek to understand how children's video productions on YouTube contribute to childhood learning and protagonism. Therefore, we interviewed a young youtuber and her father/responsible Family member, in order to approach them that could assist in a deep understanding about listening to the child's perception /interlocutor in audiovisual production and access to digital technologies. Hence, the results show that the video platform has become a space for children to teach, create and learn in order to share with their peers the playful experiences of their dynamics that permeate digital.

Journal of Research and Knowledge Spreading 2, e12483, 2021. DOI 10.20952/jrks2112483

[P80-2021] "Gestão e Prática de Ações Socioambientais: institucionalização da TI Verde em organizações públicas federais"

Jefferson David Araujo Sales, **Alessandra C Nogueira Lima, Mai-Ly Vanessa Almeida Saucedo Faro**

The adoption of an environmental agenda for public administration (A3P), created a gap in the field of socio-environmental management, with regard to the process of institutionalizing these actions in specifically federal institutions; Thus, the main objective of this study to identify and describe how the process of institutionalization of Green IT is in public organizations in this way, we sought to identify characteristic aspects of the stages of the institutionalization process, specified in the model of Tolbert and Zucker (1999). The methodological strategy used was the study of multiple cases, with the application of interviews, and data treatment by content analysis. It was found that the socioenvironmental actions implemented by the institutions are fairly disseminated in the daily lives of employees, thus making the phenomenon significantly present in public management, suggesting that it is in the sedimentation phase in these institutions.

Revista dos Mestrados Profissionais 9, 171, 2021. DOI -

[P81-2021] "Organizational Information Security and seniors: Aspects for Risk Mitigation"

Filipe Valença e Silva, Jefferson David de Araújo Sales, **Alessandra C Nogueira Lima**

The research aimed to identify risk factors for information security (IS) arising from habits and characteristics of elderly employees in organizations, since the IS pillars confidentiality, integrity and availability need to be balanced. The quantitative characteristics work was car-

ried out at EMDAGRO-SE, organization that has more than 60% of its employees aged over 55 years old. The data was collected through a questionnaire, consultations to the organization's internal records related to information security incidents and through the participant observation strategy. Thus, the data was treated by descriptive statistics, and was verified that the older users of the organization presented insecure behaviors more often than younger people, such as less frequent search for knowledge about IS, ignorance about phishing, reduced use of backup, difficulties in password management and less practice in the use of devices connected to the internet.

Revista dos Mestrados Profissionais 9, 227, 2021. DOI -

[P82-2021] "Use of Social Media in Elections and its Impact on Voters: a bibliometric study"

Davi Pinheiro Santana, Jefferson David Araujo Sales, **Alessandra C Nogueira Lima**

The increasing use of technological tools, have gained significant importance, including social media. In the field of politics is no different, since after the 2008 U.S. elections the use of these tools became crucial in campaigns. Several studies have turned to this theme, however, many of them investigate how politicians used them, whether to mobilize voters, generate more participation and/or engagement. In addition, field researchers say that recent investigations are only turning to the context of political agents, deprecating the reality of voters. In view of this movement found in the literature, this study aimed to present and discuss scientific production, during the period from 2008 to 2020, on the themes: social media, elections and voters. The survey points to a difference in the number of surveys conducted between the scenarios, as well as indicates different ways for surveys to be developed in the context of voters.

Gest@o.Org 18, 240, 2021. DOI -

[P83-2021] "Os efeitos da Covid-19 sobre os desempenhos das ações dos setores da B3"

Antonio Vinicius Silva Caldas, Emerson de Sousa Silva, Antonio Francisco de Almeida Silva Júnior, Ulysses de Brito Cruz

Este trabalho teve como objetivo verificar o comportamento dos setores produtivos da B3 durante a pandemia de Covid-19, considerando o período de 2 de janeiro a 12 de maio de 2020. Esta pesquisa descritiva e quantitativa analisou o retorno médio mensal e o volume negociado de 55 setores. As técnicas utilizadas na análise dos dados foram: análise de clusters, diferença em diferenças e os testes de randomicidade, normalidade e correlação serial. Concluiu-se que a Covid-19 afetou os grupos de maneira diversa, sendo que um deles se comportou como um mercado de eficiência fraca. O estudo traz como con-

tribuição a constatação empírica de que os setores que compõem a B3 apresentaram comportamentos distintos diante da pandemia no novo coronavírus.

Contextus - Revista Contemporânea de Economia e Gestão 19, 15, 2021. DOI 10.19094/contextus.2021.60146

[P84-2021] “Comparative Evaluation of Investment Analysis Methods: An Application in Renewable Energy Auctions Between 2011 and 2015”

Antonio Vinicius Silva Caldas, Antônio Francisco de Almeida da Silva Júnior

Purpose - This work aims to analyze the assertiveness of net present value (NPV) and real options theory (ROT), at the moment of decision making for investments in renewable energy projects, considering the 244 winning projects in the auctions of reserve energy that occurred between 2011 and 2015.

Design/methodology/approach - This is a quantitative study that used real data from 150 wind power and 94 photovoltaic projects available on ANEEL’s website. For data analysis, the confusion matrix, the area under the ROC Curve and the Kappa Index were used.

Findings - It was concluded that NPV is more effective for recommendations to invest in projects with chances to be successful, while ROT is more accurate in suggesting against investing in projects with propensity for failure. It was also found that the degree of agreement between the two techniques is substantial and determined by the level of volatility of real options.

Research limitations/implications - The limitations of this study refer to the difficulties of identifying the reasons that motivated failures in the projects.

Originality/value - Theoretically, this work contributes to identify the characteristics that effectively differentiate ROT from NPV at the time of decision making. Empirically, this work contributes to doing an ex-post analysis of the projects.

Revista de administração da UFSM 14, 693, 2021. DOI 10.5902/1983465955255

[P85-2021] “Fatores determinantes de sucesso: uma análise dos projetos eólicos dos leilões de energia de reserva da ANEEL”

Antonio Vinicius Silva Caldas, Antônio Francisco de Almeida da Silva Júnior

Este estudo estimou os fatores característicos de projetos de usinas eólicas bem-sucedidos, considerando exclusivamente os dados finais dos leilões de energia de reserva. Assim, foram analisados os resultados de 150 empreendimentos ganhadores dos certames ocorridos entre 2011 e 2015. Utilizou-se a ACP para identificação dos fatores que diferenciaram os projetos que se transformaram em usinas daqueles que fracassaram neste intento. Fo-

ram calculados os escores para cada projeto analisado, tendo como data de corte o mês de agosto de 2019. Dentre os projetos que tiveram maiores investimentos e se propuseram a gerar mais energia elétrica, 90,91% foram bem-sucedidos. Constatou-se ainda que os percentuais de deságios não tiveram uma relação significativa com o sucesso ou fracasso na transformação dos projetos em usinas.

Contextus (Fortaleza) 18, 1, 2020. DOI 10.19094/contextus.2020.42457

[P86-2021] “Innovation and Small Truck Bodywork Enterprises: The Case of the National Capital of Truck”

Maria Andrea Rocha Escobar, **Gracyanne Freire de Araujo**, Márcio Nannini da Silva Florêncio, Amanda Greff Escobar

Micro and small enterprises have a large share in the participation of the national business market, promoting economic growth with generation of jobs and income. Despite the relevant importance of these companies, they face an environment of great threat and challenges. In this context, an innovation appears as an alternative to gain and stay in the market, showing as one of the main strategies of sustainability and market positioning. Given this importance, the present work aims to measure, consolidate and discuss the degree of innovation of the truck bodywork enterprises of the municipality of Itabaiana/SE, considered a national truck capital. Methodologically, the work is supported by a quantitative and descriptive approach. A survey was conducted in which the managers answered the Innovation Radar questionnaire, a model developed by Sawhney, Wolcott and Aroniz (2006) and adapted by Bachmann and Destefani (2008). The results of the research show that the innovation processes in the bodywork factories in the municipality of Itabaiana are still in an initial stage, showing a weakness in the management process and justifying the participation of external agents to foster innovative initiatives.

Revista Interdisciplinar Científica Aplicada 15, 36, 2021. DOI -

[P87-2021] “The role of emotion in sensemaking: reports of transforming experiences from students of junior enterprises at the Federal University of Sergipe”

Adrienne Garcia, **Ludmilla Meyer Montenegro**, **Gracyanne Freire de Araujo**,

This paper aims to substantiate the importance of emotion in sensemaking. This substantiate is theoretically based on the notion of sensemaking and emotions, understanding emotion as an active element in the process of sensemaking, that has influence on the interpretation of events and on the new creations of sense. This relation

will be consolidated and discussed on an empirical study. The research methodology is based on a qualitative approach to investigate the reports of the transformative experiences of the students from junior enterprises at the Federal University of Sergipe. The results show that emotion is recognized on the explanation of the main cognitive and social processes of the students and that the states of transitory feelings that are expressed verbally have meaning and sense of belonging. As a theoretical contribution, a deep comprehension about emotion and sensemaking will be presented, in order to broaden the theoretical axis of the themes, in addition to offering a reflection of the role of emotions as a trigger generating significant attitudes and behaviours on sensemaking.

Revista de Gestão e Secretariado 12, 203, 2021. DOI 10.7769/gesec.v12i2.1186

[P88-2021] “Reflexividade e a Aprendizagem No Processo De Sensemaking: Estudo De Casos Múltiplos Em Empresas Juniores De Sergipe”

Adriane Garcia, Ludmilla Meyer Montenegro, **Gracyanne Freire de Araujo**

Este estudo visou entender como ocorrem a reflexividade e a aprendizagem na construção de sentido (sensemaking) de práticas estratégicas em empresas juniores vinculadas à Universidade Federal de Sergipe. A pesquisa é de natureza qualitativa, do tipo descritiva e exploratória. Os dados foram coletados por meio de entrevistas semiestruturadas, focus groups, observações não-participantes e análise documental. Em seguida, esses dados foram triangulados e analisados por meio da análise de conteúdo e narrativa. Concluiu-se que reflexão faz parte do processo de aprendizagem. Quando surgem os elementos-surpresa que desestabilizam esses quadros, ocorre o processo de reflexão. Então, novos sentidos são gerados e postos em prática, até que esses novos estímulos sejam compreendidos e padronizados. Nesse ponto, surgem as novas práticas estratégicas e o ciclo é novamente iniciado.

Farol - Revista de Estudos Organizacionais e Sociedade 8, 122, 2021. DOI 10.25113/farol.v8i21.6121

[P89-2021] “Corrupção e as Rodas do Desempenho no Mercosul”

Lauro Vinício de Almeida Lima, **Maria Audenora Rufino**, Paulo Amilton Maia Leite Filho, Márcia Reis Machado

Com base na Teoria da Graxa sobre as Rodas, o estudo defende a possibilidade de a corrupção favorecer o desempenho econômico das empresas à medida que desate as amarras da burocracia e reduza os custos transacionais das empresas. Assim, a pesquisa teve como escopo investigar o reflexo da percepção da sociedade acerca da corrupção do setor público no desempenho econômico das

empresas nos países do Mercosul. A amostra da pesquisa foi composta por 8 países integrantes do Mercosul, entre os anos de 2010 a 2017, com um total de 667 empresas e 4.812 observações. Os dados foram estimados usando modelo de regressão em painel de efeitos fixos. A variável dependente foi a percepção de corrupção no setor público (IPC) e as variáveis independentes foram as medidas de desempenho ROE, ROA e EBIT. Os resultados encontrados conduzem ao entendimento que uma maior percepção da corrupção nos países do Mercosul aumenta o desempenho econômico das empresas naqueles países. As evidências empíricas encontradas acrescentam novas centelhas para o constructo argumentativo no qual se pauta a Teoria da Graxa sobre Rodas, com isto, fomenta-se fortes embates éticos, impondo uma ampla discussão sobre as políticas públicas de combate à corrupção no mundo e o prejuízo da corrupção para a sociedade, de forma sistêmica, sendo possível que estas consequências atinjam outros países ou blocos econômicos além do Mercosul.

Contabilidade Vista & Revista 32, 247, 2021. DOI 10.22561/cvr.v32i1.5984

[P90-2021] “Análise da eficiência dos municípios sergipanos: comparação entre notas da prova Brasil e recursos destinados à educação”

Nadielli Maria dos Santos Galvão

Objetivo: O objetivo deste estudo foi identificar o nível de eficiência dos municípios sergipanos em promover bons índices educacionais com os recursos destinados a esse setor.

Método: Para tal, realizou-se uma pesquisa com metodologia quantitativa aplicando a Análise Envoltória de Dados como técnica para mensuração do desempenho das cidades investigadas.

Resultados: Os resultados apontaram para o fato de que gastar mais não garante um bom desempenho educacional, pois municípios com orçamentos mais enxutos conseguem alcançar melhores resultados no setor discutido. Com os alvos traçados pela análise, a proposta para os municípios ineficientes foi manter os recursos ou até diminuir, mas sempre aumentar as notas no Prova Brasil.

Contribuições do estudo: O estudo pode ser considerado uma ferramenta de consulta para que os gestores municipais tracem estratégias visando a eficiência no consumo de recursos e também a entrega de melhores serviços à comunidade. Adicionalmente serve de apoio para que a sociedade perceba como tem sido o desempenho de sua localidade e assim ter subsídios para cobrar das autoridades uma maior transparência.

Revista Ambiente Contábil 13, 181, 2021. DOI 10.21680/2176-9036.2021v13n1ID19245

[P91-2021] “Regalías en los municipios de Sergipanos: un estudio sobre el impacto en la inversión en educación y seguridad pública”

Nadielli Maria dos Santos Galvão

O objetivo do estudo foi averiguar o reflexo nos valores dos investimentos em educação e segurança pública que os municípios de Sergipe teriam com a aprovação do Projeto de Lei 7.321 de 2014. Para o alcance do desiderato realizou-se uma pesquisa descritiva com abordagem quantitativa, utilizando-se do teste de diferença entre médias Wilcoxon. As simulações foram realizadas com base nos relatórios financeiros de 2015 a 2019. Os resultados apontaram que quanto à educação não haveria uma diminuição estatisticamente significativa dos recursos para o setor, enquanto que na área da segurança pública o incremento orçamentário seria relevante, garantindo recursos para boa parte dos municípios que não têm investido nenhum valor neste aspecto. O estudo trouxe uma ampliação da discussão sobre aplicação dos royalties de petróleo além da saúde e da educação permitindo a reflexão do corpo legislativo acerca da possibilidade de ajuste visando garantir investimento em outras áreas. Além disso, permite verificar a possibilidade de um melhor ajustamento orçamentário para tais áreas, visando uma alocação mais apropriada dos recursos não permitindo que áreas essenciais sejam esquecidas ou deixadas de lado na gestão local.

Revista Escritos Contables y de Administración 12, 4, 2021. DOI 10.52292/j.eca.2021.2034

II. DISSERTAÇÕES E TESES DEFENDIDAS EM 2021

A. Teses

[T01-2021] “Hidrocondicionamento de sementes da Caatinga”

Aluno: Joana Paula Bispo Nascimento

Orientador: Prof. Dr. **Marcos Vinicius Meiado**

[T02-2021] “Crítica dos Estudos do Território: Para Além de Antinomias e Metáforas”

Aluno: Pedro Paulo De Lavôr Nunes

Orientadora: Profa. Dra. **Ana Rocha dos Santos**

[T03-2021] “O Fechamento Das Escolas Rurais Como Corolório Da Questão Agrária Brasileira á Questão Agrária”

Aluno: Tereza Simone Santos de Carvalho

Orientadora: Profa. Dra. **Josefa de Lisboa Santos**

[T04-2021] “A poética de Dona Caçula: autoria feminina e universo temático do Romancelheiro sergipano”

Aluno: Antonio Marcos dos Santos Trindade

Orientadora: Profa. Dra. **Christina Bielinski Ramalho**

[T05-2021] “Canto General e Latinomérica: Da Geografia à História, das Pátrias à Transnação”

Aluno: Éverton de Jesus Santos

Orientadora: Profa. Dra. **Christina Bielinski Ramalho**

[T06-2021] “Col@B Formacional com as Culturas Digitais: tecendo redes docentes interativas e colaborativas”

Aluno: Sandra Virginia Correia de Andrade Santos

Orientadora: Profa. Dra. **Simone de Lucena Ferreira**

B. Dissertações

[D01-2021] “Expressão de c-fos em áreas corticais do cérebro do lagarto *Tropidurus hipidus* durante os processos de formação de memória aversiva”

Aluno: Rodolfo dos Santos da Silva

Orientador: Prof. Dr. **Jose Ronaldo dos Santos**

[D02-2021] “Uma Análise do Projeto Político-Pedagógico do Colégio Estadual Quilombola 27 de Maio: O (Não) Lugar das Especificidades Étnico-Raciais e Histórico-cultural”

Aluna: Ângela Sales Andrade dos Santos

Orientadora: Profa. Dra. **Edinéia Tavares Lopes**

[D03-2021] “Ofício da Carpintaria de Móveis em Itabaiana/Se: Trabalho, Movimento e Permanência”

Aluno: João Pedro Celestino dos Santos

Orientadora: Profa. Dra. **Ana Rocha dos Santos**

[D04-2021] “O trabalho na indústria têxtil de Itabuna-Ba, no contexto da reestruturação produtiva”

Aluna: Andressa Araújo Souza

Orientadora: Profa. Dra. **Josefa de Lisboa Santos**

[D05-2021] “A Multiplicação do Fenômeno das Chácaras na Bacia do Rio Piauí: novos des-usos da terra e da água”

Aluna: Camila Silva Santos

Orientadora: Profa. Dra. **Josefa de Lisboa Santos**

[D06-2021] “O trabalho na Indústria têxtil em Itabuna, na Bahia, no contexto de reestruturação produtiva”

Aluno(a): Andressa Araújo Souza

Orientadora: Profa. Dra. **Josefa de Lisboa Santos**

[D07-2021] “Aqui em Casa, com o Tablet e Videogame, eu Sempre Aprendo um Montão de Coisas”

Aluna: Bruna Santana de Oliveira

Orientadora: Profa. Dra. **Simone de Lucena Ferreira**

[D08-2021] “Sapatão, lésbica, caminhoneira, lady, butch: o que você quer? Uma análise da (des)construção do

ethos da mulher lésbica em canais do YouTube” Aluna: Andréa Mendonça Cunha
Orientadora: Profa. Dra. **Marcia Regina Curado Pereira Mariano**

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