CURRICULUM VITAE

SAULO ROCHA FERREIRA

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Rilem member since: 2019

CNPq researcher of productivity: Level 1D

SHORT RESUME:

Bachelor's in Environmental Engineering in the Instituto Federal De Educação, Ciência e Tecnologia do Ceará (IFCE), Brazil (2010); Master's in Environmental and Civil Engineering in the Universidade Estadual de Feira de Santana, Brazil (2012); Doctorate in Material Science and Civil Engineering in the Universidade Federal do Rio de Janeiro UFRJ/COPPE, Brazil (2016); He has 37 publications in scientific journals, 2 book chapters, 1 patents submitted, and nowadays advising/supervising 3 PhD candidates and 3 Master candidates in progress. He has administrative experience, had organized conferences on his subject, and coordinated more than six funded scientific projects. He has working on different methodologies for natural vegetable fibers treatment to improve fiber-matrix bonding for high performance materials, such as cement and polymer-based materials to construction and packaging materials.

DESCRIPTION OF RESEARCH:

Since 2006 i have been working with natural fibers and its use as reinforcement materials. Between 2006 and 2010 I focused on the use of coir fibers to stabilize and reinforce soil bricks (adobe). On 2010 I start to use the same fibers on cement-based composites, aiming the development of ECC with sisal fibers. To reach such goal, several campaigns focused on improve sisal fibers bonding were performed. The objective of my master thesis was reached in the end of 2012, presenting to research community an ECC composite with strain-hardening behavior reinforced with natural sisal fibers. During my PhD thesis (2012-2016) the analysis of natural fiber adhesion to cement based systems were improved. The influence of several other treatments and humidity condition on three different fibers were investigated. Nowadays this studies still ongoing, been carried out in collaboration with to several institutes on Brazil and Germany. Since 2016 an approach on micro structure and mathematical modeling are showing in another perspective the interactions between natural fibers and its components with cement.

PROFESSIONAL POSITIONS:

- *2004 – 2006: Master in Environmental and Civil Engineering*. Universidade Estadual de Feira de Santana, Brasil. *Advisor:* Paulo Roberto Lopes Lima. Scholarship*:* CNPq;

- *2012 – 2016: Doctorate in Materials Science and Civil Engineering.* Universidade Federal do Rio de Janeiro (UFRJ), Brasil. Advisor*:* Romildo Dias Toledo Filho. *Scholarship:* CNPq.;
- 2013 – 2014: 6 month. The EnCoRe project - "Environmentally-friendly solutions for Concrete with Recycled and natural components". Project: Use of natural fibers to improve self-healing properties on concrete. Politecnico di Milano (POLIMI). Italy;
- 2016: Associate Professor Undergraduation course (Civil Engineering. Class subjects: Construction materials, Civil construction) and Graduation (Wood Science and Technology) courses in the Universidade Federal de Lavras – UFLA. Lavras/MG, Brazil;
- 2019: Adjunct Professor Undergraduation course (Civil Engineering. Class subjects: Construction materials, Civil construction) and Graduation (Wood Science and Technology) courses in the Universidade Federal de Lavras – UFLA. Lavras/MG, Brazil;
- 2019-2020: Postdoctoral researcher at Technische Universität Darmstadt Institute of Construction and Building Materials.

LANGUAGES:

- Oral and written proficiency in Portuguese (BRA) and English.

INTERNATIONAL PROJECTS:

ENCORE PROJECT (2013-2014)

Position: Collaborator Researcher, Working hours (weekly): 40, Schemes of job: Full-time

The EnCoRe project ("Environmentally-friendly solutions for Concrete with Recycled and natural components") has been conceived to bring together a number of research groups working on the topic of sustainability for the concrete industry. Particularly, it is intended at stimulating the exchange of ideas and experiences on using recycled and renewable constituents to obtain a greener structural concrete. The relevance of this topic for emerging countries recently characterized by a booming construction market was the key motivation for gathering both European and non-European Partners within this research consortium supported by the IRSES-PEOPLE section of the 7th Framework Programme. Therefore, European Research Institutions from Italy and Portugal (namely, UniSA, PoliMI and UMinho) are currently implementing a staff-exchange programme with non-European counterparts from Argentina and Brazil (namely, UBA, UNT, UFRJ). Although several possible solutions have been already proposed by the scientific community to improve both environmental compatibility and sustainability of concrete production in building industry, further research efforts are still needed to address various issues related to the actual potential of such materials to be employed as prime constituents in the production of structural concrete. In particular, the EnCoRe project focuses on the three following OBJECTIVES: O1) investigating the physical and mechanical behaviour of structural concrete made with recycled aggregates and cement replacements obtained with industrial by-products characterized by pozzolanic properties; O2) investigating the physical and mechanical behavior of concrete reinforced with steel fibers obtained by waste tires and possibly made with rubber scraps derived by the same waste; O3) investigating the feasibility of using natural fiber as a dispersed reinforcement in mortars and other cementitious matrices. The three aforementioned objectives are pursued through three.

NACIONAL PROJECTS:

CNPq PROJECT code 433514/2018-3 (2019-2022)

Position: Coordinator Researcher, Working hours (weekly): 40, Schemes of job: Full-time

A utilização de resíduos agroindustriais como matéria prima na produção de materiais de construção tem despertado interesse devido as suas excelentes propriedades mecânicas e a crescente demanda por desenvolvimento de materiais de baixo impacto ambiental. O presente projeto tem como objetivo o ensino e a pesquisa através de técnicas experimentais e analíticas do comportamento mecânico em níveis micro, meso e macroestruturais de materiais alternativos sustentáveis que podem reduzir as emissões de gases de aquecimento global. Serão estudados resíduos agrícolas e industriais como substitutos parciais do cimento, como material de reforço e como substituintes aos agregados miúdos e graúdos naturais de matrizes a base de cimento Portland. O presente projeto se divide em duas etapas. Na etapa 1 resíduos agroindustriais da indústria de café e macaúba serão caracterizados fisica, quimica e mecanicamente. Ensaios de densidade, composição química, termogravimetria (TG) e difração de raios-x (DRX) serão realizados. Tratamentos para os resíduos visando sua melhor compatibilidade coma matriz a base de cimento também serão avaliados. Na etapa 2, os materiais já caracterizados serão utilizados para produção de compósitos a base de cimento (pastas, argamassas e concretos). Esses materiais serão desenvolvidos através de uma dosagem científica de forma a otimizar sua aplicação. Os materiais desenvolvidos serão avaliados através de testes de porosidade, densidade, absorção de água e uma completa caracterização mecânica através dos ensaios de compressão, flexão e tração direta. Espera-se que a pesquisa proposta contribua para o desenvolvimento de materiais de baixo impacto ambiental, reaproveitando resíduos locais e propiciando o desenvolvimento de novas tecnologias.

FAPEMIG PROJECT code 0131118 (2018-2023)

Position: Coordinator Researcher, Working hours (weekly): 40, Schemes of job: Full-time

Desenvolvimento de materiais não-convencionais e sustentáveis para a construção civil através da utilização de resíduos agroindustriais da região sul do Estado de Minhas Gerais.

KLABIN MATRIX (2017-2023)

Position: Collaborator Researcher, Working hours (weekly): 40, Schemes of job: Full-time

O principal objetivo deste projeto é avaliar diversos pré-tratamentos químicos e enzimáticos como facilita-dores na desfibrilação de polpas celulósicas para obtenção de micro/nanofibrilas celulósicas (ou celulose microfibrilada – CMF ou microfibrillated celulose – MFC). Espera-se, com os resultados obtidos, o estabelecimento de rotas mais eficientes para a obtenção das micro/nanofibrilas celulósicas e a abertura de novas possibilidades para sua mais fácil obtenção. Trata-se de um trabalho em parceria, no qual a participação desses atores (UFLA e Klabin) é condição necessária e fundamental para atingir o objetivo, que vai ao encontro das expectativas tanto do meio produtivo, como das instituições de pesquisa.

PUBLICATIONS IN JOURNALS:

1. GUIMARAES, T. C. ; GOMES, O. F. M. ; ARAUJO, O. M. O. ; LOPES, R. T. ; GLORIA, M. Y. R. ; TOLEDO FILHO, R.D. ; KOENDERS, E. A. B. ; CAGGIANO, A. ; SAM, M. N. ; ANDRADE, R. G. M. ; FERREIRA, SAULO R. . STORING PHASE CHANGE MATERIALS IN JUTE NATURAL FIBER TEXTILE FOR THERMO-ENERGY AND MECHANICAL RETROFITTING IN THE CONTEXT OF LOW CARBON BUILDINGS: PART 1 - PRODUCTION AND BASIC CHARACTERIZATION. Textiles, v. 3, p. 1, 2023. http://dx.doi.org/10.3390/textiles3010008

2. DIAS, M. C. ; TONOLI, GUSTAVO HENRIQUE DENZIN ; ZIDANES, U. L. ; MORI, F. A. ; FERREIRA, SAULO R. . MANDACARU CACTUS AS A SOURCE OF NANOFIBRILLATED CELLULOSE FOR NANOPAPER PRODUCTION. INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, v. 1, p. 1, 2023. http://dx.doi.org/10.1016/j.ijbiomac.2023.123850

3. LORENZO, N. D. ; KUHN, L. S. ; GUIMARAES, T. C. ; SAM, M. N. ; MANKEL, C. ; CAGGIANO, A. ; KOENDERS, E. A. B. ; NUNES, C. A. ; FERREIRA, SAULO R. . Potential Use of Bio-Oleogel as Phase Change Material. Sustainability, v. 15, p. 2534, 2023. http://dx.doi.org/10.3390/su15032534

4. BELGACEM, M. N. ; RESENDE, J. V. ; MARTINS, MARIA ALICE ; DAMASIO, R. A. P. ; TONOLI, GUSTAVO HENRIQUE DENZIN ; FERREIRA, SAULO ROCHA ; DIAS, M. C. . Eco-friendly laccase and cellulase enzymes pretreatment for optimized production of high content lignin-cellulose nanofibrils. INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, v. 1, p. 1, 2022. http://dx.doi.org/10.1016/j.ijbiomac.2022.04.005

5. MOREIRA, T. ; TOLEDO FILHO, R. D. ; FERREIRA, SAULO R. ; KRELANI, V. ; Ferrara, Liberato . Self-healing of slag-cement ultra-high performance steel fiber reinforced concrete (UHPFRC) containing sisal fibers as healing conveyor. JOURNAL OF BUILDING ENGINEERING, v. 54, p. 104638, 2022. http://dx.doi.org/10.1016/j.jobe.2022.104638

6. DIAS, M. C. ; ZIDANES, U. L. ; TONOLI, GUSTAVO HENRIQUE DENZIN ; VILAS BOAS, E. V. B. ; BELGACEM, M. N. ; FERREIRA, SAULO R. . Influence of hemicellulose content and cellulose crystal change on cellulose nanofibers properties. INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES JCR, v. 213, p. 780-790, 2022. http://dx.doi.org/10.1016/j.ijbiomac.2022.06.012

7. FERREIRA, S.R.; ANDRADE, R. G. M. ; ANDRADE, G. M. ; ARAUJO, O. M. O. ; LOPES, R. T. ; DE MORAES REGO FAIRBAIRN, EDUARDO ; GRABOIS, T. M. ; UKRAINCZYK, N. . Bond Behavior of a Bio-Aggregate Embedded in Cement-Based Matrix. Materials, v. 1, p. 1, 2022. http://dx.doi.org/10.3390/ma15176151

8. HUGEN, L. N. ; AMORIM, A. ; SILVA, L. E. ; TONOLI, GUSTAVO HENRIQUE DENZIN ; TOLEDO FILHO, R.D. ; GOMES, O. F. M. ; FERREIRA, SAULO R. . Addition of carboxylated styrene-butadiene rubber in cellulose nanofibrils composite films: effect on film production and its performance. IRANIAN POLYMER JOURNAL, v. 1, p. 1, 2022. http://dx.doi.org/10.1007/s13726-022-01115-y

9. MIRANDA, E. H. N. ; SILVA, G. ; GOMES, D. ; SILVEIRA, M. N. L. ; VITORINO, F. C. ; FERREIRA, S.R. . Efeito de diferentes espécies de madeira e bambu na hidratação de matrizes à base de cimento Portland. Materia-Rio de Janeiro, v. 27, p. 1, 2022. http://dx.doi.org/10.1590/1517-7076-rmat-2022-0194

10. THOMAS, S. ; FERREIRA, SAULO R. ; DE SOUZA JR, FERNANDO GOMES ; TOLEDO FILHO, R.D. ; SANTOS, R. D. ; TIRADO, C. ; MONTANEZ, M. ; SILVA, FLÁVIO ANDRADE . Molecular grafted of nanoparticles on Sisal fibers - Adhesion with cementitious matrices and novel functionalities. JOURNAL OF MOLECULAR STRUCTURE, v. 1, p. 1-1, 2021.

11. MCCAFFREY, Z. ; TORRES, L. ; CHIOU, B. ; FERREIRA, SAULO R. ; SILVA, L. E. ; WOOD, D. F. ; ORTS, W. J. . Torrefaction of Almond and Walnut Byproducts. Frontiers in Energy Research, section Bioenergy and Biofuels, v. 1, p. 1, 2021. http://dx.doi.org/10.3389/fenrg.2021.643306

12. FERREIRA, SAULO R.; UKRAINCZYK, N. ; SILVA, K. D. C. E. ; SILVA, L. E. ; KOENDERS, E. . Effect of microcrystalline cellulose on geopolymer and Portland cement pastes mechanical performance. CONSTRUCTION AND BUILDING MATERIALS, v. 288, p. 123053, 2021. http://dx.doi.org/10.1016/j.conbuildmat.2021.123053

13. FERREIRA, S. R.; ANDRADE, R. G. M. ; KOENDERS, E. ; SILVA, FLÁVIO ANDRADE ; DE MORAES REGO FAIRBAIRN, EDUARDO ; FILHO, ROMILDO DIAS TOLEDO . Pull-out behavior and tensile response of natural fibers under different relative humidity levels. CONSTRUCTION AND BUILDING MATERIALS, v. 308, p. 124823, 2021. http://dx.doi.org/10.1016/j.conbuildmat.2021.124823

14. GUIMARÃES, BARBARA MARIA RIBEIRO ; SCATOLINO, MÁRIO VANOLI ; MARTINS, MARIA ALICE ; FERREIRA, SAULO ROCHA ; MENDES, LOURIVAL MARIN ; LIMA, JOSÉ TARCÍSIO ; JUNIOR, MARIO GUIMARÃES ; TONOLI, GUSTAVO HENRIQUE DENZIN . Bio-based films/nanopapers from lignocellulosic wastes for production of added-value micro-/nanomaterials. Environmental Science and Pollution Research, v. 1, p. 1, 2021. http://dx.doi.org/10.1007/s11356-021-16203-4

15. ZIDANES, U. L. ; DIAS, M. C. ; TONOLI, G. H. D. ; MORI, F. A. ; BIANCHI, M. L ; UGUCIONI, J. C ; FERREIRA, SAULO ROCHA ; SOUSA, T. B. . Preparation and characterization of tannin-based adhesives reinforced with cellulose nanofibrils for wood bonding. Holzforschung, v. 1, p. 1, 2020. http://dx.doi.org/10.1515/hf-2020-0033

16. FERREIRA, SAULO R.; TOLEDO FILHO, R.D. ; NICODEMO, D. ; TONOLI, G. H. D. ; SANTOS, R. D. ; GOMES, O. F. M. ; SILVA, L. E. . Effect of pyraclostrobin on mulberry leaves nutrients, silkworm co-coon production and silk fiber performance. Materia-Rio de Janeiro, v. 26, p. 1/1, 2020. http://dx.doi.org/10.1590/S1517-707620210001.1239

17. FERREIRA, SAULO R.; SENA NETO, A. R. ; Silva, F. A. ; DE SOUZA JR, FERNANDO GOMES ; TOLEDO FILHO, R.D. . The influence of carboxylated styrene butadiene rubber coating on the mechanical performance of vegetable fibers and on their interface with a cement matrix. CONSTRUCTION AND BUILDING MATERIALS, v. 262, p. 120770, 2020. http://dx.doi.org/10.1016/j.conbuildmat.2020.120770

18. FERREIRA, SAULO R.; SILVA, L. E. ; MCCAFFREY, Z. ; BALLSCHMIEDE, C. ; KOENDERS, E. . Effect of elevated temperature on sisal fibers degradation and its interface to cement based systems. CONSTRUCTION AND BUILDING MATERIALS, v. 1, p. 121613, 2020 http://dx.doi.org/10.1016/j.conbuildmat.2020.121613

19. DOMINGUES, J. M. ; MIRANDA, V. F. L. ; REZENDE, D. C. ; LARES, Y. S. ; FERREIRA, SAULO R. ; OLIVEIRA, I. R. C. . STATISTICAL MODELING OF QUARRYING ACTIVITIES AND THEIR IMPACT ON RESIDENTS' SATISFACTION. JOURNAL OF ENVIRONMENTAL SCIENCE AND SUSTAINABLE DEVELOPMENT, v. 3, p. 416-428, 2020. http://dx.doi.org/10.7454/jessd.v3i2.1062

20. REBELO, V. S. M. ; SILVA, Y. F. ; S.R.Ferreira ; TOLEDO FILHO, R. D. ; GIACON, V. M. . Effects of mercerization in the chemical and morphological properties of amazon piassava. Polímeros: ciência e Tecnologia, v. 29, p. 1, 2019. http://dx.doi.org/10.1590/0104-1428.01717

21. DIAS, M. C. ; S. R. FERREIRA ; TONOLI, G. H. D. . Influence of hemicellulose content of Eucalyptus and Pinus fibers on the grinding process for obtaining cellulose micro/nanofibrils. Holzforschung, v. 0, p. 1, 2019. http://dx.doi.org/10.1515/hf-2018-0230

22. MENDES, S. ; HUGEN, L. N. ; TOLEDO FILHO, R. D. ; S.R.Ferreira . Influence of Water Amount and Immersion Time on the Sisal Fibers Hornification Process. Journal of Natural Fibers, v. 2019, p. 1-10, 2019. http://dx.doi.org/10.1080/15440478.2019.1697990

23. SILVEIRA, M. N. L. ; MENALI, L. O. ; GLORIA, M. Y. R. ; TOLEDO FILHO, ROMILDO DIAS ; FERREIRA, SAULO ROCHA . USE OF ALTERNATIVE AGGREGATE FOR LIGHTWEIGHT CONCRETE PRODUCTION. ACADEMIC JOURNAL OF CIVIL ENGINEERING, v. 37, p. 572-582, 2019. http://dx.doi.org/10.26168/icbbm2019.93

24. SILVEIRA, M.N.L. ; DA GLORIA, M.Y.R. ; TOLEDO FILHO, R. D. ; FERREIRA, S. R. . Use of alternative aggregate for lightweight concrete production. Academic Journal of Civil Engineering, v. 37, p. 576-582, 2019. http://dx.doi.org/10.26168/icbbm2019.84

25. SANTOS, R. D. ; S. R. FERREIRA ; G.E. OLIVEIRA ; Silva, F. A. ; DE SOUZA JR, FERNANDO GOMES ; TOLEDO FILHO, R. D. . Influence of Alkaline Hornification Treatment Cycles on the Mechanical Behavior in Curaua Fibers. MACROMOLECULAR SYMPOSIA (ONLINE), v. 381, p. 1800096, 2018. http://dx.doi.org/10.1002/masy.201800096

26. MESQUITA JUNIOR, L. ; S. R. Ferreira . Compósitos à base de cimento e gesso reforçados com partículas de madeira de Eucalyptus grandis. CIÊNCIA DA MADEIRA, v. 9, p. 191-198, 2018. http://dx.doi.org/10.12953/2177-6830/rcm.v9n3p191-198

27. PEPE, MARCO ; MARTINELLI, ENZO ; S.R.Ferreira ; TOLEDO FILHO, ROMILDO D. . Influence of natural fibers characteristics on the interface mechanics with cement based matrices. COMPOSITES PART B-ENGINEERING, v. 140, p. 183-196, 2018. http://dx.doi.org/10.1016/j.compositesb.2017.12.016

28. JUNIOR, ALEX NEVES ; FERREIRA, SAULO ROCHA ; TOLEDO FILHO, ROMILDO DIAS ; DE MORAES REGO FAIRBAIRN, EDUARDO ; DWECK, JO . Effect of early age curing carbonation on the mechanical properties and durability of high initial strength Portland cement and lime-pozolan composites reinforced with long sisal fibres. COMPOSITES PART B-ENGINEERING, v. 1, p. 1, 2018. http://dx.doi.org/10.1016/j.compositesb.2018.11.006

29. FRAZAO, C. ; BARROS, J.A.O. ; TOLEDO FILHO, ROMILDO D. ; GONCALVES, D. ; S.R.Ferreira . Development of sandwich panels combining Sisal Fiber-Cement Composites and Fiber-Reinforced Lightweight Concrete. CEMENT & CONCRETE COMPOSITES, v. 11, p. 8, 2017. http://dx.doi.org/10.1016/j.cemconcomp.2017.11.008

30. L. P. Icart ; SANTOS, E. R. F. ; DAHER, E. P. ; FERREIRA, S. R. ; SAEZ, V. ; HERNANDEZ, J. R. ; NELE, M. ; PINTO, J. C. ; TOLEDO FILHO, R. D. ; ZALDIVAR, D. ; DE SOUZA JR, FERNANDO GOMES . PLA-b-PEG/magnetite hyperthermic agent prepared by Ugi four component condensation. Express Polymer Letters, v. 10, p. 188-203, 2016. http://dx.doi.org/10.3144/expresspolymlett.2016.18

31. FERREIRA, SAULO ROCHA; MARTINELLI, ENZO ; PEPE, MARCO ; DE ANDRADE SILVA, FLÁVIO ; TOLEDO FILHO, ROMILDO DIAS . Inverse identification of the bond behavior for jute fibers in cementitious matrix. Composites. Part B, Engineering, v. 97, p. 1359-8368-452, 2016. http://dx.doi.org/10.1016/j.compositesb.2016.03.097

32. FERREIRA, SAULO ROCHA; SILVA, FLÁVIO DE ANDRADE ; LIMA, PAULO ROBERTO LOPES ; TOLEDO FILHO, ROMILDO DIAS . Effect of hornification on the structure, tensile behavior and fiber matrix bond of sisal, jute and curauá fiber cement based composite systems. Construction & Building Materials, v. 36, p. 1, 2016. http://dx.doi.org/10.1016/j.conbuildmat.2016.10.004

33. FERREIRA, SAULO ROCHA; DE ANDRADE SILVA, FLÁVIO ; LIMA, PAULO ROBERTO LOPES ; TOLEDO FILHO, ROMILDO DIAS . Effect of Natural Fiber Hornification on the Fiber Matrix Interface in Cement Based Composite Systems. Key Engineering Materials (Online), v. 668, p. 118-125, 2015. http://dx.doi.org/10.4028/www.scientific.net/KEM.668.118

34. FERREIRA, S. R.; Silva, F. A. ; LIMA, PAULO ROBERTO LOPES ; TOLEDO FILHO, R. D. . Effect of fiber treatments on the sisal fiber properties and fiber-matrix bond in cement based systems. Construction & Building Materials, v. 101, p. 730-740, 2015. http://dx.doi.org/10.1016/j.conbuildmat.2015.10.120

35. FERREIRA, SAULO ROCHA; LIMA, PAULO ROBERTO LOPES ; SILVA, FLÁVIO ANDRADE ; TOLEDO FILHO, ROMILDO DIAS . Effect of Sisal Fiber Hornification on the Fiber-Matrix Bonding Characteristics and Bending Behavior of Cement Based Composites. Key Engineering Materials (Online), v. 600, p. 421-432, 2014. http://dx.doi.org/10.4028/www.scientific.net/kem.600.421

36. FERREIRA, SAULO ROCHA; DA SILVA, ANDRÉA MARIA ; DE SOUZA JR, FERNANDO GOMES ; FILHO, ROMILDO DIAS TOLEDO ; DE ANDRADE SILVA, FLÁVIO . Effect of Polyaniline and H2O2 Surface Modification on the Tensile Behavior and Chemical Properties of Coir Fibers. Journal of Biobased Materials and Bioenergy, v. 8, p. 578-586, 2014. http://dx.doi.org/10.1166/jbmb.2014.1478

37. LIMA, PAULO R. L. ; SANTOS, ROGÉRIO J. ; FERREIRA, SAULO R. ; TOLEDO FILHO, ROMILDO D. . Characterization and treatment of sisal fiber residues for cement-based composite application. Engenharia Agrícola (Impresso), v. 34, p. 812-825, 2014. http://dx.doi.org/10.1590/s0100-69162014000500002

38. FERREIRA, S. R.; LIMA, P. R. L. ; Silva, F. A. ; TOLEDO FILHO, R. D. . Influência de ciclos molhagem-secagem em fibras de sisal sobre a aderência com matrizes

de cimento Portland. Matéria (UFRJ), v. 17, p. 1024-1034, 2012. http://dx.doi.org/10.1590/S1517-70762012000200008

BOOK CHAPTERS AND CONFERENCE PAPERS:

- 2 book chapter published
- More than 30 conference papers and abstracts presented elsewhere.
- RILEM CONFERENCES:
    - FERREIRA, S. R.; SILVA, FLÁVIO ANDRADE; LIMA, PAULO R. L. ; TOLEDO FILHO, ROMILDO D. . EFFECT OF WETTING AND DRYING CYCLES ON THE INTERFACE OF NATURAL FIBERS WITH PORTLAND CEMENT MATRIX. In: 1st International Conference on Bio-based Building Materials, 2015, Clermont-Ferrand, France. RILEM Proceedings of 1st International Conference on Bio-based Building Materials - PRO 99. Clermont-Ferrand, France: RILEM, 2015;
    - FERRARA, L. ; FERREIRA, S. R. ; TOLEDO FILHO, R. D. ; Silva, F. A. . Effect of Natural Fibers on the Self-Healing Capacity of High-Performance Fiber Reinforced Cementitious Composites. In: 3rd International RILEM Conference on Strain Hardening Cementitious Composites (SHCC-3), 2014, Dordrecht. Proceedings of the SHCC-3, 2014. v. 1. p. 9-16;
    - Second RILEM International Conference on Strain Hardening Cementitious Composites (SHCC2-RIO) – 2011.

REVIEWER FOR ACADEMIC JOURNALS:

- Ambiente Construído;
- Construction and Building Materials;
- Cement and Concrete Composites;
- CERNE;
- Composites Part B;
- Journal of Composites Materials;
- Journal of Civil Engineering KSCE;
- Revista Matéria UFRJ;
- Materials;
- European Journal of Environmental and Civil Engineering;
- Cellulose.

AWARDS AND DISTINCTIONS:

- JOVEM PESQUISADOR 2014 Award - 15th NOCMAT International Committee on Non-Conventional Materials and Technologies. FZEA – USP, Pirassununga, Brasil;
- Professor Alysson Paolinelli 2019 Award - Recognition of the institution for researchers with publications in high impact factor journals. UFLA – Lavras, Brasil;
- INTERNATIONAL BEST RESEARCHER AWARD – ISSN International Research Awards 2022 (IIRA-2022). Tiruchirappalli, Tamil Nadu, India.

PATTENT:

- PEARL JR., W. C. ; RAVI, K. M. ; TOLEDO FILHO, ROMILDO D. ; SIQUEIRA, I. S. D. ; S. R. Ferreira . IMPROVED HYDRATION PERFORMANCE OF MICROCELLULOSE IN CEMENT. 2016, Estados Unidos (EUA). Patente: Privilégio de Inovação. Número do registro: 1042219, título: "IMPROVED HYDRATION PERFORMANCE OF MICROCELLULOSE IN CEMENT", Instituição de registro: Netherlands Enterprise Agency. Depósito: 04/03/2016; Concessão: 11/01/2018. (GB2561115A);
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ACADEMIC ADVISORY:

- Master dissertation (in progress and/or concluded)

- Victor Candal. Title: Use of Macaúba endocarp as coarse aggregate to produce light weight concretes. in progress 2018. Master dissertation (Master in Wood Science and Technology/ UFLA) - Universidade Federal de Lavras, Scholarship: CAPES.
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- Doctorate thesis (in progress and/or concluded)

- Matheus Cordasso. Title: Fundamental analysis of treatment on cellulosic materials. in progress (Doctorate in Biomaterials Engineering graduation course) – Universidade Federal de Lavras. 2017-2021.
- Lisiane Nunes Hugen. Title: Multilayer papers based on cellulose nanofibrils and SBR coatings. Thesis in progress (Doctorate in Wood Science and Technology graduation course) – Universidade Federal de Lavras. 2016-2020.
- Leonardo Seibert Kuhn. Title: Utillizacao de residuos de madeira como encapsulantes de PCM. Thesis in profess (Doctorate in Wood Science and Technology graduation course) – Universidade Federal de Lavras. 2019-2023.
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