

FONDO DE RECONOCIMIENTO Y SOPORTE A LAS PUBLICACIONES CIENTÍFICAS EN SCOPUS

PUBLICACIONES RECONOCIDAS

FACULTAD DE INGENIERÍA

Adaptive EWMA-S2 control charts with adaptive smoothing parameter

Memory charts like EWMA-S2 or CUSUM-S2 are designed to detect a particular change in the process variance efficiently. However, the charts could be inefficient to detect some other shifts. To overcome this constraint, control charts with adaptive schemes that are efficient for a wide range of shifts can be used. This work proposes new adaptive EWMA charts for the dispersion (AEWMA-S2) based on an adaptive smoothing parameter that relates its value to the potential shift of the process. A Markov chain approach is used to optimize its design. A simulation experiment shows the advantage of the proposed charts.

Quality Engineering

<https://doi.org/10.1080/08982112.2020.1776326>

SJR Engineering

Primero (Q1)

Willy Ugaz Sánchez, Andrés M. Alonso, Ismael Sánchez Rodríguez Morcillo

Challenges and experiences of online evaluation in courses of civil engineering during the lockdown learning due to the covid-19 pandemic

As a consequence of the global health emergency in early 2020, universities had to tackle a sudden shift in their teaching-learning strategies so that the preset competences could be fulfilled. This study presents the learning outcomes of the implemented tasks, student experiences, and feedback, as well as some reflections from the instructors with a holistic perspective of the courses due to the adopted measures and adaptations. Six courses taught at civil engineering degrees of three universities, two from Spain and one from Peru, were analyzed. The teaching and evaluation strategies are described, and some reflections are made by comparing the student's performance with the previous course. Though the shift to online learning had to be made from day to day, with no time for preparation, the experience has proved that online learning can be beneficial in some aspects and has probably come to stay, although some other aspects are difficult to replace with

respect to face-to-face learning, especially students' engagement and motivation. The significance of this study relies on a description of the challenges that arose due to the global public health and an assessment of the results of the implemented strategies to account for both teaching and evaluation in modules of civil engineering. After the acquired experience, new questions have arisen, e.g., what type of content is (and what is not) adequate or suitable for online exams? What features have come to stay? Has higher education taken a step forward to tomorrow's education?

Education Sciences

<https://doi.org/10.3390/educsci11020059>

SJR Computer Science, Health Professions, Psychology, Social Sciences

Segundo (Q2)

Marcos García-Alberti, Fernando Suárez, Isabel Chiyón Carrasco, Juan Carlos Mosquera Feijoo

Regionalizing innovation strategies in Peru based on smart specialization: implications and challenges

The article builds on the case study of Piura (Peru) to analyse the implications of developing an innovation policy strategy based on decentralization and the concept of smart specialization strategy in emerging economies with limited institutional capacity and low rates of innovation activity. Two main conclusions from the case are derived: regional innovation policy can usefully serve as a catalyst to foster dynamism among stakeholders, enlarging the potential for research and innovation, but it requires a capacity-building process; and specialization must be understood as an inclusive concept where agents undertake inclusive innovation projects based on their territorial challenges and comparative advantages.

Regional Studies

<https://doi.org/10.1080/00343404.2020.1869202>

SJR Environmental Science, Social Sciences

Primero (Q1)

Ricard Esparza Masana, William Ipanaqué Alama

FACULTAD DE INGENIERÍA

Some web-based experiences from flipped classroom techniques in aec modules during the covid-19 lockdown

The classroom closure during the first semester of 2020 entailed decisive changes in higher education. Universities have become more digital in both the availability of e-resources and pervasive devices and how students communicate with lecturers and classmates. Learners adapted their study habits with a growing role of self-paced, internet-based strategies. Some flipped learning approaches have proven their efficacy under the remote-teaching physical constraints. This study aimed to appraise the outcomes from the implementation of various web-based, learning-aid tools on flipped teaching approaches in engineering modules. The open educational resources (OER) performed satisfactorily during the lockdown period in three universities from two countries with similar higher education models. Such resources encompassed classroom response systems and web-based exercise repositories, designed for diverse purposes such as autonomous learning, self-correction, flipped classroom, peer assessment, and guided study. The acquired experiences reveal that OER helped students to enhance their engagement, reach the deeper levels of the cone of learning, and widen their range of learning abilities. This procedure is easily attainable for architecture, engineering, and construction (AEC) courses and lifelong learning settings. Feedback from students, instructors' perceptions, and learning outcomes show the suitability and effectiveness of the web-based learning assistant procedure presented here.

Education Sciences

<https://doi.org/10.3390/educsci11050211>

SJR Computer Science, Health Professions, Psychology, Social Sciences

Segundo (Q2)

Juan Carlos Mosquera Feijoo, Fernando Suárez, Isabel Chiyón Carrasco, Marcos García-Alberti

Use of bim-fm to transform large conventional public buildings into efficient and smart sustainable buildings

New technologies regarding construction, materials and facility management have led to the successful implementation of smart and more sustainable buildings. This is of special interest for the management of large and complex public buildings. However, most of these types of buildings were built in Europe during the previous century, when those technologies were still a matter of research. The appearance of Building Information Modelling (BIM) and the combined use

of it with other advances in Facility Management (FM) as well as Internet of Things (IoT), Big Data and others, has opened the door to the possible transformation of such type of buildings into more efficient smart buildings without very large investments. In this study, this was studied thoroughly. In addition, the advantages and possibilities were assessed on a case study performed in the Civil Engineering School at Universidad Politécnica de Madrid built in 1969. The main objective of the paper was to show the details and possibilities to transform the building into a smart and more sustainable building by using BIM-FM techniques and self-designed sensors. The conclusions showed that using a three-dimensional model as the center of the management together with the connection with other applications, databases and facility management tools can transform the building into a Smart Building. In addition, the management of the system can be done from the web, nearing the information to the management staff and to the user. All advances were self-developed in order to satisfy the specific needs of the building.

Energy

<https://doi.org/10.3390/en14113127>

SJR Energy, Engineering, Mathematics

Segundo (Q2)

Pavon R.M, Alberti M.G., Alvarez A.A.A., Isabel del Rosario Chiyón Carrasco

Within batch non-linear profile monitoring applied to shrimp farming: A case study

The operation of many batch processes involves critical characteristics that follow specific patterns over time. Sometimes the batch time is long enough that the operator can take corrective actions within it. This paper explores how to develop appropriate monitoring procedures for such situations within the context of a shrimp farming process. It uses a Gompertz non-linear model to describe the basic shrimp growth and defines the control limits through the prediction band around the estimated model. It proposes a method to generate a control chart soon enough within the batch so management can prioritize which ponds require the most attention.

Quality Engineering

<https://doi.org/10.1080/08982112.2020.1844894>

Engineering

SJR Primero (Q1)

Ana Valeria Quevedo Candela, Susana Vegas Chiyón, Loda J., Cedillo G., Vining G.G.

FACULTAD DE CIENCIAS ECONÓMICAS Y EMPRESARIALES

Financial Flexibility: At What Cost?

- ▣ Firms strategically borrow in different locations. Approximately one-quarter of Peruvian companies with operations in multiple areas source their financing from more than one province. Mining windfalls generate finance supply shocks, leading to the provision of more credit at lower average rates, and we show that firms exploit geographic financial flexibility by concentrating their borrowing in booming locations. Firms are less likely to initiate borrowing in new markets when their current borrowing provinces are thriving. The pursuit of

flexibility in borrowing markets, however, degrades a firm's relationships with its existing lenders, thereby heightening its risk of future financial distress.

- ▣ Journal of Financial and Quantitative Analysis
- 🔗 <https://doi.org/10.1017/S0022109020000010>
- SJR Business, Management and Accounting, Economics, Econometrics and Finance
- 📍 Primero (Q1)
- © Mark J. Garmaise, Gabriel Natividad Carpio

FACULTAD DE COMUNICACIÓN

Study of the photographic practice in Cusco in the period from 1897 to 1920

- ▣ A study of Cusco photography between 1897 and 1920 is proposed, a period of which there is partial knowledge of the photographic activity in this Andean city. Even though the archives of the photographers of this period are lost or have not appeared to date, and even given the limited bibliography, an attempt will be made to specify about their commercial and creative dynamics and the relationship they may have had between them and with the sociocultural context in limited years. A qualitative methodology has been used with an interpretive approach to period documents and narrative design to be able to string together the information collected, with the aim of knowing how the development of

photography was in Cusco until 1920, the year of the arrival of the photographer Martín Chambi to this city. The study detects the activity of many photographers, the professional scope of their work in the public sphere, the offer of postcards and views for tourism, the relationship between scientific projects and photography, and other aspects.

- ▣ Fotocinema
- 🔗 <https://doi.org/10.24310/Fotocinema.2021.vi22.11659>
- SJR Arts and Humanities, Social Sciences
- 📍 Sin cuartil
- © Andrés Garay Albuja

FACULTAD DE HUMANIDADES

Independence in northern Peru: The Intendency of Trujillo and the patriotic option (1820-1823)

- ▣ Este artículo es una propuesta de análisis del proceso de independencia de Trujillo, es decir del espacio norte peruano, en su conjunto. Los aspectos tratados giran en torno a la existencia de un discurso político previo de afirmación de la localidad; los acontecimientos que condicionaron el cambio a la opción patriota; las proclamaciones de independencia y las contrarrevoluciones; los liderazgos locales; los enfrentamientos políticos entre los partidos de la intendencia de Trujillo en el Perú ya independiente; y las reivindicaciones regionales en la relación entre Trujillo y la capital de la república del Perú. Teniendo en cuenta estas perspectivas, se busca ir más allá de la consideración de una región norte que

fue la primera en proclamar su independencia en el contexto nacional. En el camino tanto a la proclamación como a la consolidación de la independencia nacional, la intendencia de Trujillo no fue una entidad uniforme.

- ▣ Revista de Indias
- 🔗 <https://doi.org/10.3989/revindias.2021.003>
- SJR Arts and Humanities, Social Sciences
- 📍 Segundo (Q2)
- © Elizabeth Hernández García

Lyricism, sensibility and unity in detenimientos (1948) by javier sologuren

- ▣ The poetry of Javier Sologuren (Lima, 1921-2004), a fundamental author of twentieth-century

FACULTAD DE HUMANIDADES

Peruvian letters, is characterized by its constant expressive renewal. His second booklet of poems, *Detenimientos* (1948), is born from the reworking of the principles of his previous writing, and outlines some features that characterizes his later work. However, critics have only touched on it briefly. This article offers a look at the aesthetic proposal of the booklet. Through the stylistic analysis and the interpretation of the poems, the conception of lyricism, the vision of the world and the sensibility of the lyrical speaker and the expressive principles that give *Detenimientos* unity and solidity are investigated. © Este artículo está sujeto a una licencia "Creative Commons Reconocimiento-No Comercial" (CC-BY-NC).

- Castilla Estudios de Literatura
- <https://doi.org/10.24197/CEL.12.2021.371-396>
- SJR Arts and Humanities
- Segundo (Q2)
- Renato Guizado Yampi

The Composition of *El morador* (1944) by Javier Sologuren: Thematic Structure and Stylistic Unity

El morador is the first poetry collection of Javier Sologuren, published in 1944 as a brochure of the journal *Historia* (n°8). Many critics argue that in these poems the author demonstrates his deft skills with language and poetic forms. That rigorous work of Sologuren also operates composing the set as a structure which integrates the poems in a sequence and meaning aligned with the conception of poetry they express; however, the critics do not mention that aspect of the collection. This paper examines that point on the writing of *El morador* (which was conceived with a sequential structure and with stylistic unity) and interprets it on the basis of the analysis of each poem.

- Lexis (Perú)
- <https://doi.org/10.18800/LEXIS.202101.011>
- SJR Arts and Humanities, Social Sciences
- Segundo (Q2)
- Renato Guizado Yampi