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TABLE OF CONTENT

Introduction: The importance of Innovation and Sustainability <i>Cristian Mustata</i>	6
Sustainability Value of Higher Education Institutions – A Quest for Research <i>Amila Omazic</i>	7
Innovation Support through UX Writing <i>Gertrud Grünwied, Ioana Mustață</i>	11
Chances and Challenges of Shaping Sustainable Energy Supply Systems <i>Ildiko Tulbure, Marius Berca</i>	15
Consumer Decision Making and Behaviour <i>Alexandra Ioanid, Cristian Mustață</i>	23
Investigations on Behavioral Modeling – NEW View of the Electronic Circuits <i>Laura-Alexandra Gheorghe, Lidia Dobrescu</i>	27
Digital Darwinism and the importance of companies' adaptability <i>Tania-Mihaela Brezeanu, Elena-Laura Trifan</i>	33
Innovative Training System to Improve the Mobility of the Visually Impaired People <i>Cristian Neagu, Iulia-Cristina Stănică, Maria-Iuliana Dascălu</i>	41
Forms of kinship commonly established among co-workers and their effects <i>Ioana-Valentina Ioniță, Andrei Niculescu</i>	50

Interdisciplinary perspectives of technical communication <i>Ioana Mustață, Voichița Alexandra Ghenghea, Ioan Laurian Soare</i>	55
Analysis of innovative company structures. The new wave in the business world <i>Petru Laurențiu Măntescu, Raul Pacea, Ioana Guică</i>	60
Hierarchy and How Human Perception Has Affected Its Role <i>Isabela Bunescu, Alma Gheorghe, Ana Mitcov, Andrei Niculescu</i>	65
Different types of personality and their role in the job sectors <i>Cristina Vladu, Cristian Mustață</i>	70
Scrum for Organizational Change <i>Alina Elena Răduț, Maria Denisa Toma, Elisabeth Lazarou</i>	75
A methodology proposal for continuous improvement in a graphical industrial company <i>Francisco L. O. Merlo, Helena V. G. Navas, Anabela C. Alves</i>	81
Sustainable education during COVID-19 pandemic. Artistic pedagogy in online environments – limitation or expansion of creativity? <i>Laura Lăzărescu-Thois</i>	90
Formal, Non-formal and Informal Education in the context of the student organization ESTIEM <i>Maria Serôdio</i>	99
Personality traits: analysis and comparison of job ads in the area of sustainability management, innovation management and purchasing and supply management <i>Volker Koch</i>	109



**Innovation and Sustainability 2020
Sustainable Education and Research in Europe**



International Scientific Conference
Bucharest, Romania, 30th October 2020

**Introduction: The importance of Sustainable Education
and Research in Europe**

Cristian Mustață

Chief Editor

University POLITEHNICA of Bucharest

We live in a context in which teaching and research were pushed into an online version in order to protect our health. This process could not be planned and humanity adapted education and research to this new context.

Thus we realize that sustainable education is needed more than ever to help humanity to adapt to unforeseen situations and contexts in the future. Many types of innovations can contribute with sustainable implications.

So both research and education are needed in a sustainable manner hand in hand to ensure a better future in Europe and in the whole world.

I express my gratitude to all our authors, which brought their thoughts about Sustainable Education and Research in Europe in the present volume of the conference.



**Innovation and Sustainability 2020
Sustainable Education and Research in Europe**



International Scientific Conference
Bucharest, Romania, 30th October 2020

**Sustainability Value of Higher Education Institutions –
A Quest for Research**

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ABSTRACT

In this paper, the research proposal on sustainability and its value in the context of higher education institutions¹ is described. Main problems and questions are presented as well as the methods and expected results. Finally, central scientific and practical contributions are revealed.

KEYWORDS: sustainability, higher education institutions (HEIs), sustainability value²

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¹ In the following HEIs.

² Sustainability value is understood as HEIs contributions to sustainability, i.e. sustainability indicators, sustainability impact.

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Innovation Support through UX Writing

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ABSTRACT

The paper analyses the emerging concept of UX Writing at the crossroad between technical communication, content strategy and user experience with electronic interactive systems and software. The rise of its importance is considered from the viewpoint of increasing job offers for UX writers as well as for the rising number of authors dealing with UX writing. The first task is defining the concept through the multitude of definitions embraced by a big number of authors in order to identify the essential characteristics and encompass them in a balanced complete definition. Another step is to identify through a literature review the most important success factors for UX writing and then to analyse different examples and identify the factors emphasized in the literature in a very practical manner.

The findings are synthesized in the conclusions of the paper and possible future research is pointed out.

KEYWORDS: UX Writing, Technical Communication, User Experience (UX), User Assistance (UA).

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**Chances and Challenges of Shaping Sustainable
Energy Supply Systems**

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ABSTRACT

The vision of steadily increasing humanity quality of life has always been driving the innovative thinking way of human beings, also in the field of energy supply systems. Undesired effects of conventional energy technologies are especially perceivable on environment, recently also on society. In this regard chances and challenges of energy supply systems, based on fossil fuels and recently on renewable energy resources, have to be carefully analysed and assessed. By using methods and instruments of Technology Assessment, innovation odds as well as future potentials in this field are enabled.

KEYWORDS: Energy Supply Systems, Sustainable Development, Renewable Energy, Innovative Approaches, Technology Assessment

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Consumer Decision Making and Behaviour

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ABSTRACT

Investigating customer decision making and behaviour is an important topic in marketing research. Managers that want to decrease the product failure and increase at the same time customer satisfaction and business profitability are recommended to analyse what decision customers make and under what conditions.

KEYWORDS: customer behaviour, decision making, marketing research

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Investigations on Behavioral Modeling – NEW View of the Electronic Circuits

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ABSTRACT

Behavioral modeling can be analyzed from different points of view, but in this paper, the approach based on the ideal controlled current or voltage sources is focused. This method is used to emulate and simulate any electronic circuits design faster than the classical manner. In this context, the behavioral model represents an abstraction of the real device. Thus, circuit-level behavioral modeling creates virtual models in order to reduce the simulation time and closely observe the circuits' behavior, generally combining the analog and digital techniques.

KEYWORDS: behavioral modeling; model; simulation time, electronic circuit.

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**Digital Darwinism and the importance of companies'
adaptability**

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ABSTRACT

Today the notion of "business" is ubiquitous in everyday life. Everything in the world economy starts from this term. The present paper risks a comparison between economic entities (or business entities), existing and acting in a complex environment and the biologic entities, which live in the natural environment.

The common element that underlies both economic and biologic entities is the form of organization. Adapting companies to the social and economic evolution of the market can be problematical for companies that have no openness to the new, to digitalization, but perhaps not the economic and intellectual resources needed to direct the promotion and operation of the company. The Digital transformation also represents a change of perception, which requires a high flexibility a new approach for new times. The digital era is a future environment where only integration enables the adaptation to the new technological world and the convergence through connectivity of people, objects and systems.

KEYWORDS: Digital Darwinism, biologic entities, business entities, companies' forms of organization

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**Innovative Training System to Improve the Mobility of the
Visually Impaired People**

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ABSTRACT

Vision loss is a common problem in contemporary society. Statistics show that in the future this disability will become more and more common due to the aging of the world population. People with disabilities face barriers in accessing services that many consider natural, including the ones related to health, education, transportation. For people with visual impairments (VIP), one of the biggest problems is mobility. The society is not yet adapted to succeed in creating a safe environment for these people, noting a significant lack of technological devices to improve their quality of life. In addition, most products which are currently available for facilitating the independent movement of VIP have a common disadvantage, namely the high cost. Our current paper seeks solutions to solve the aforementioned problem and proposes a physical training device, developed at an affordable price, which can help VIP to be able to easily perceive the environment - IMVIP (Improve the mobility of visually impaired people). The training device is based on two sensors that measure distances using ultrasounds, two speakers that use sounds of different frequencies and tones to transmit the distance to objects that can be considered potential hazards, and a NodeMCU development board. We also developed a software application that detects the user's location in real time, as it is very important to know the exact geographical position of VIP to be able to help them as soon as possible. For the device to be useful, training VIP in using it is necessary and we provide insights on how to properly perform it.

KEYWORDS: training, visually impaired people, assistive device

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**Forms of kinship commonly established among
co-workers and their effects**

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ABSTRACT

The purpose of this paper is to outline types of relationships that are maintained throughout every individual's life, to provide a glimpse into the intricate way that these relationships develop. Relationships develop just as any living organism and the first interactions an individual has within the confines of their family relations are later replicated, refined and repeated.

Direct kin being the first group of individuals an emerging person usually first interacts with, it is kinship relations that are most mimicked as one matures. The results of the analysis conducted indicate that the parent-child relationship is most commonly reenacted between superior and subordinate.

KEYWORDS: kinship, mimic, evolution

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Interdisciplinary perspectives of technical communication

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ABSTRACT

The paper is addressing technical communication in the context of its rising presence in enterprises as well as in the scientific area. As technical communication implications are present in multiple areas it also makes sense to address it from multiple perspectives: the perspective of marketing, of communication sciences, of linguistics as well as the technical perspective.

KEYWORDS: Technical Communication, language, communication strategy.

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Analysis of innovative company structures The new wave in the business world

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ABSTRACT

During the last decades, the socio-economic environment has suffered dramatic changes due to the increasing orientation towards the employee's needs and work potential. As a consequence, the entrepreneurs faced the urgent obligation of adapting the "personality" of their business models in order to preserve productivity and increase profits, the ultimate goal of the capitalistic ideology that almost every country in the world currently adheres to. Therefore, numerous companies have developed innovative models that challenge the traditional hierarchical structure. This paper examines the principles of such a model, which was born recently in Berlin, Germany, more specifically in 2009 through the start of the activity of "Dark Horse GmbH"(Web-3); it analyses the concrete measures which thoroughly reflect these concepts and it gives a new perspective to future business models that may be built upon this one and can bring redemption to its flaws. What is more, it gives a fair comparison with the Scaled Agile model, breaking down the similarities and differences.

Keywords: business model, innovation, Dark Horse, employee, Scaled Agile.

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Hierarchy and how human perception has affected its role

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ABSTRACT

The present article focuses on the way in which employee perception has affected one of the most common ways of establishing order since the beginning of civilization: hierarchy. Although its general purpose is to maintain a structured distribution of authority and support optimal labor division, it is now perceived as a way to overexert control and increase social status. Several studies have been conducted in this regard. Such an example is the study conducted by organizational scientist Markus Reizig, which has determined that the steeper the hierarchy, the more exacerbated do the fear of evaluation and sense of lack of control become, leading to the false perception that the only way to escape the pressure is by reaching the top. This false reasoning, based upon the wrong motives actually supports individualism, making the employees lose focus of the organization's common goals, vision and values. In order to emphasize our view, we analyzed two examples reflecting both positive and negative mindsets regarding hierarchical stratification.

KEYWORDS: hierarchy, organization, status, promotion, career ladder.

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**Different types of personality and their role in the job
sectors**

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ABSTRACT

The aim of this study is to establish the relationship between work sectors and personality traits and how it influences the job engagement. In order to determine it, a self-administrative study was performed on 60 people from different companies and also from different domains. The Business Chemistry test was used to determine the personality of each participant. The results of the analysis indicate that there is a strong connection between the four types of personality: pioneer, driver, guardian, integrator and working areas related to exact and social sciences. Depending on their predominant personality, some people are more suited for certain jobs rather than others.

KEYWORDS: Personality, job sector

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Scrum for Organizational Change

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ABSTRACT

This article holds information about the structure of managing the decisions, risks, actions within the Scrum framework. All the processes, roles, events, benefits and challenges are described in order to give the reader an open view over this method of organizational change. Although the information found in this paper suggests that this framework is more suitable for IT developing teams, it is assured that its structure can be adopted by projects from other industries. Once a scrum team is established, it will evolve by adopting their needs in line with the process of this framework.

Keywords: Framework, Scrum, Events, Organization, Roles, Process, Team.

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**A methodology proposal for continuous improvement in a
graphical industrial company**

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ABSTRACT

Nowadays, with the daily changes that occur in society, the growing competition between markets where clients are increasingly demanding, companies are forced to innovate and improve, upgrading their efficiency in each process. As a result, companies are progressively giving more and more attention to the production area with a continuous improvement implementation. The main goal of this work was to identify and reduce existing problems in the production process of a graphical industrial company. To do that, it was developed a methodology designed to identify and analyse, in a systematic way, a wider range of problems comprised in the company and to help in finding solutions. The methodology developed was based on the joint use of analytical tools based on the Lean philosophy, the TRIZ methodology, and other auxiliary tools. The company did not have any methodology to identify and solve their existing problems, so the creation and implementation of it in the company brought to it a new way for the workers to solve some of them. In addition, the methodology can also be easily replicable by other graphical industrial companies, or even by other companies.

KEYWORDS: Lean philosophy, continuous improvement, process improvement, TRIZ methodology, graphical industry

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Sustainable education during COVID-19 pandemic

Artistic pedagogy in online environments – limitation or expansion of creativity?

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ABSTRACT

The following research was conducted among the professors of the Theatre Faculty at UNATC “I. L. Caragiale” Bucharest, regarding the artistic pedagogy in online environments, the biggest challenges, and impediments of teaching online.

KEYWORDS: online education, artistic pedagogy, teaching online, online course, remote.

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**Formal, Non-formal and Informal Education in the context of the student
organization ESTIEM**

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ABSTRACT

European Students of Industrial Engineering and Management (ESTIEM) is a non-profit organization of Industrial Engineering and Management (IEM) students. It was founded in 1990 and currently provides activities for students in 75 universities all over Europe.

With a mission focused on the personal and professional development of students, ESTIEM aims to impact education through several channels and offers.

This paper intends to present ESTIEM, its foundation, progress and organization, and analyze the offers and developments it provides to the education of IEM students in Europe. To do so, three types of education - Formal, Non-formal and Informal - were defined.

Formal education is related to structured learning in schools or training institutions, with typically a more extrinsic motivation to learn. Non-formal education is also structured but it relates more to community and organizations (out of school), with a typically more intrinsic motivation. Lastly, Informal education can happen everywhere and in an unstructured and spontaneous way, and can be connected to friends, family, work and other informal environments.

Following this distinction, it was associated to each of these types the current offers ESTIEM has, to achieve an overview on how this association impacts learning in a formal, non-formal and informal way.

KEYWORDS: education, student organization, Europe

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Personality traits: analysis and comparison of job ads in the area of sustainability management, innovation management and purchasing and supply management

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ABSTRACT

The aim of this paper is to analyse and compare the required personality traits for purchasing and supply management (PSM), sustainability management (SM) and innovation management (IM) job ads in the DACH region (Germany, Austria and Switzerland) and PSM job ads in the Nordics (Denmark, Finland, Norway and Sweden). The personality traits have been gathered using the job ad analysis method. The Big Five personality dimensions' model (Goldberg, 1981) is used as the base framework. This model splits personalities into the five dimensions' openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism.

KEYWORDS: personality traits, purchasing and supply management, sustainability management, innovation management

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