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Student Excellence Conference 2024

11th Interdisciplinary Student Conference

Athens | Thessaloniki

BOOKLET OF ABSTRACTS



GREAT MINDS ACT NOW

“Great Minds Act Now: (Re)searching possibilities.”

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Σύντομο Πρόγραμμα Συνεδρίου Brief Conference Programme

- 10.00 – 10.20 Εγγραφή συμμετεχόντων / Participants' Registration
- 10.20 – 10.25 Χαιρετισμός / Opening Speech
Δρ. Πηνελόπη Λουκά
Associate Provost (Research), Πρόεδρος Επιστημονικής Επιτροπής Συνεδρίου
- 10.30 – 10.45 Πρώτη Κεντρική Ομιλία / First Keynote Speech
Μαρία Παντελή
- 10.45 – 11.00 Δεύτερη Κεντρική Ομιλία / Second Keynote Speech
Αννίτα Προδρόμου
- 11.00 – 11.30 Πρώτη Στρογγυλή Τράπεζα / First Round Table
- 11.45 – 13.30 1^ο μέρος Παράλληλων Παρουσιάσεων / 1st part of Parallel Presentations
- 13.45 – 14.00 Τρίτη Κεντρική Ομιλία / Third Keynote Speech
Πενθεσίλεια Ρικάρντα Καβαλλιεράτου
- 14.00 – 14.15 Τέταρτη Κεντρική Ομιλία / Fourth Keynote Speech
Αγγελική Φράγκου
- 14.15 – 14.45 Δεύτερη Στρογγυλή Τράπεζα / Second Round Table
- 15.00 – 16.45 2^ο μέρος Παράλληλων Παρουσιάσεων / 2nd part of Parallel Presentations

Καθ' όλη τη διάρκεια του συνεδρίου θα είναι διαθέσιμη έκθεση ερευνητικών αφισών / Throughout the duration of the conference, a poster display will be available.

**όλες οι κεντρικές ομιλίες και οι στρογγυλές τράπεζες θα διεξαχθούν στην αίθουσα LH2 / all keynote speeches and round table sessions will take place in LH2*

Αναλυτικό Πρόγραμμα Συνεδρίου

Full Conference Programme

10.00 – 10.20 Προσέλευση και εγγραφή συμμετεχόντων / συνέδρων

10.20 – 10.25 Χαιρετισμός
Δρ. Πηνελόπη Λουκά,
Associate Provost (Research), Πρόεδρος Επιστημονικής Επιτροπής Συνεδρίου

10.30 – 10.45 1^η Κεντρική Ομιλία:
«Ερευνητικό ταξίδι»
Μαρία Παντελή, Senior HR Professional
Απόφοιτη Σχολής Διοίκησης Επιχειρήσεων

10.45 – 11.00 2^η Κεντρική Ομιλία:
«Έρευνα: μια σύμμαχος της Ψυχολογίας και της Ψυχοθεραπείας»
Αννίτα Προδρόμου, Ψυχοθεραπεύτρια
Απόφοιτη Σχολής Ψυχολογίας

11.00 – 11.30 Πρώτη Στρογγυλή Τράπεζα
«Students, Researchers, Professionals – discussing common grounds»
Μαρία Παντελή, Αννίτα Προδρόμου, Αξιώτης Κεχαγιάς,
Πηνελόπη Λουκά

11.30 – 11.45 Διάλειμμα (roof garden)

11.45 – 13.30 (Αίθουσα LH2) – Παράλληλη Ενότητα Παρουσιάσεις σε θέματα Διοίκησης Επιχειρήσεων “Start-ups and innovation” Συντονίστρια: Δρ. Ευαγγελία Μαρκάκη
11.45 – 12.00 An Analysis of the critical success factors of Start-ups, with a focus on the role of Accelerators in facilitating rapid growth: the Global case in Greek perspectives. Eleftheriadis Giorgos
12.00 – 12.15 An investigation on the hybrid’s model of agile and waterfall methodologies contribution in projects’ productivity: The case of IT service management industry in Greece Stapa Marilena
12.15 – 12.30 The history and rise of a Start-up Oil Company Salevri Eirini
12.30 – 12.45 Financial Analysis and Strategic Planning for a Start-up Company

Lougridis Andreas
12.45 – 13.00 Investigating consumer preferences of buyers on private label products in the food industry Zervoulakou Hara
13.00 – 13.15 Exploring the Global Impact of AI on Credit Risk Assessment in Investment Banking: Applications and Prospects for Financial Institutions in Greece Stamatopoulos Alexandros
13.15 – 13.30 Advancements in Sustainable Shipping: Addressing Environmental Challenges and Innovative Solutions Konstantinidis Marios

11.45 – 13.30 (Αίθουσα Κ3) – Παράλληλη Ενότητα Παρουσιάσεις σε θέματα Ψυχολογίας “What Lies Beneath” Συντονιστές: Δρ. Πηνελόπη Λουκά, Γεώργιος Πιλαφάς
11.45 – 12.00 A Multiple Regression Analysis About Whether Trait Emotional Intelligence and Self-Esteem Can Predict Trait Anxiety in the Greek Population Papagiannopoulou Penny
12.00 – 12.15 Investigating the predictive role of Self-Determination and Personality Traits on Artificial Intelligence Anxiety Nikolakopoulou Angeliki-Elli
12.15 – 12.30 Johnny Depp and Amber Heard: How language and societal influences shape power and discourses. Marishta Markel
12.30 – 12.45 The Effect of a Ghosting Experience on, Social Safety and Pleasure, Mental Resilience and Loneliness among the Greek Population. Prodromou Anita
12.45 – 13.00 Anxiety (GAD, SAD, MDD) treatment in adults according to CBT and Art Therapy Athanasopoulos Dimitrios
13.00 – 13.15 Hooking up motivations and Dark triad of personality can predict the Motivations of the Dating App Usage. Hoxha Luiz
13.15 – 13.30 Social Media Use, Social Comparison and Self-objectification as predictors of Psychological Well-Being: A multiple regression analysis Konidis Agamemnon

Student Excellence Conference 2024

13.30 – 13.45 *Διάλειμμα (roof garden)*

13.45 – 14.00 **3^η Κεντρική Ομιλία:**

«Χαράσσοντας την προσωπική μου πορεία»

Πενθεσίλεια Ρικάρντα Καβαλλιεράτου, Προπονήτρια ενόργανης γυμναστικής και θαλάσσιων αθλημάτων

Απόφοιτη Σχολής Υγείας & Αθλητισμού

14.00 – 14.15 **4^η Κεντρική Ομιλία:**

«Η υπερδύναμη των soft skills»

Αγγελική Φράγκου, Καθηγήτρια Εικαστικών

Απόφοιτη Σχολής Διοίκησης Επιχειρήσεων

14.15 – 14.45 **Δεύτερη Στρογγυλή Τράπεζα**

«Discussing Soft Skills in Education: reconstructing priorities»

Αγγελική Φράγκου, Πενθεσίλεια Ρικάρντα Καβαλλιεράτου, Αξιώτης Κεχαγιάς,

Πηνελόπη Λουκά

14.45 – 15.00 *Διάλειμμα (roof garden)*

15.00 – 16.30 (Αίθουσα LH2) – Παράλληλη Ενότητα Παρουσιάσεις σε θέματα Διοίκησης Επιχειρήσεων, Πληροφορικής, Μηχανικών “Multidisciplinary research applications” Συντονίστριες: Δρ. Βιργινία Τσουκάτου & Δρ. Αγγελική Καραλή
15.00 – 15.15 The connection between employee satisfaction and the training procedure; a case study in the Greek tourism industry. Bourdoukou Aikaterini
15.15 – 15.30 The impact of organizational culture on job satisfaction and employee engagement within energy sector in Greece Gkania Paraskevi
15.30 – 15.45 Web application & platform for re-selling tickets Ticket Bridger Grigorios Tsakalis, Konstantinos Roulias, Georgios Petrakakis, Fanis Cheiletzaris
15.45 – 16.00 Investigation of Aeroelastic Tailoring in Automotive Industry Sert Mykola
16.00 – 16.15 Design of a Prosthetic Biomimetic hand Vasilakas Themistoklis-Ioannis
16.15 – 16.30 Static Study Analysis for Emergency Diesel Generators Building Manis Achilleas

<p>15.00 – 16.45 (Αίθουσα Κ3) – Παράλληλη Ενότητα Παρουσιάσεις σε θέματα Ψυχολογίας, Παιδαγωγικών και Αθλητισμού “Researching experiences and professional implications” Συντονιστής: Δρ. Αξιώτης Κεχαγιάς</p>
<p>15.00 – 15.15 Optimizing Muscle Hypertrophy: The Impact of Rest Intervals, Intensity, Frequency, and Load in Resistance Training Alafouzou Spyridon</p>
<p>15.15 – 15.30 The Way of the Sojourn: An Interpretive Phenomenological Analysis exploring lived experiences of Long-Term Travelers Papageorgiou Konstantinos</p>
<p>15.30 – 15.45 Humanitarian Professionals’ Experience and Meaning Attached to the Empowering Refugee Women in a Trauma-Informed Practice in Greece; an IPA Feminist Study Hanakova Marketa</p>
<p>15.45 – 16.00 Barbarism emerged by the own fans: A discursive analysis in the spectrum of narrative frame immortalising sports violence; the social motivation and fragile privacy of athletes. Kikivarakis Spyridon</p>
<p>16.00 – 16.15 How do early teachers in Dubai private schools perceive play-based learning (PBL)? Fotopoulou Eva</p>
<p>16.15 – 16.30 The impact of Free Play in Social and Emotional Development of Children aged 2 to 6 years old and the Role of Educators to Promoting it. Eleftheridou Anna</p>
<p>16.30 – 16.45 Education for the city of inclusion and accessibility case study city of Trikala Balla Christina</p>

<p>Αίθουσα Κ4: Έκθεση ερευνητικών αφισών / Poster display</p>
<p>Exploring the advantages of swimming for chronic pain management in arthritis Chanioti Maria</p>
<p>Understanding the Interplay: Addressing Childhood Obesity through Sedentary Lifestyle Interventions Demiraj Gloria</p>
<p>Breast Cancer and the Importance of Self-Examination Intervention Chatzi Erika</p>
<p>CFD analysis and aerodynamic improvement of a new concept car by using a spoiler. Dimitriadis Dimitris</p>
<p>Valuation and reinforcement of a three-story earthquake-damaged house in Tyrnavos, Thessaly Ntanasi Athanasia</p>

Ανακοίνωση “Student Excellence Award”: 09/06/2024

BOOKLET OF ABSTRACTS

Business / Shipping

"An Analysis of the critical success factors of Start-ups, with a focus on the role of Accelerators in facilitating rapid growth: the Global case in Greek perspectives."

Eleftheriadis Giorgos – Mamais Konstantinos

This study critically examines the key success factors for start-ups within a globalized and high-tech world, with a special focus on the role of accelerators in the Greek start-up ecosystem. In an era where economic downturns challenge traditional business paradigms, the literature review traces the evolution of economic growth and start-up culture from Silicon Valley to Greece, highlighting how historical shifts and technological advancements shape entrepreneurial environments. By contextualizing global trends within the Greek context, this study leverages insights from the extensive literature review to analyze how start-ups can navigate the challenging landscape characterized by high failure rates and intense competition. By integrating empirical data from a survey of Greek start-ups and drawing comparisons with global cases, this study identifies the critical success factors—such as innovative capabilities, effective leadership, and strategic market timing. Also delineates the distinct characteristics of accelerators that support start-up success. The successful start-ups often benefit from robust accelerator programs that offer structured support through mentorship, networking, and funding opportunities. Despite the significant impact that accelerators have on fostering start-up success, this study reveals a concerning low awareness and engagement with such programs among Greek entrepreneurs. These programs are pivotal in guiding start-ups through their initial and most vulnerable phases, effectively reducing the odds of failure and setting a foundation for sustainable growth. So, the aim is to provide a comprehensive framework that assists policymakers, investors, and entrepreneurs to enhance the support structures for start-ups, fostering economic stability and innovation both in Greece and worldwide.

An investigation on the hybrid's model of agile and waterfall methodologies contribution in projects' productivity: The case of IT service management industry in Greece

Stapa Marilena – Skordoulis Michalis

It is a fact that several managers have to deal with the difficulties teams face when they do not possess a shared vision. The agility that agile methodology promotes should not be limited solely to tasks and processes but should also extend to individuals' cognitive processes. The inclusion of agility inside the confines of a scrum team should not be disregarded; rather, it should be assessed to effectively demonstrate the ongoing advancement of the project. The use of productivity monitoring methods should not be regarded as a rigid and inflexible approach, but rather as an integral component of the agile team framework. Projects often require the structured nature of a Waterfall model combined with the adaptability and flexibility of an Agile approach. The integration of communication and expectations facilitates favorable outcomes. Hence, it would be intriguing to investigate and evaluate the potential efficacy of integrating Agile and Waterfall methodologies to enhance teams' productivity and enable project managers to adhere to stringent deadlines, which are crucial factors contributing to the successful completion of a project within the designated timeframe and allocated resources. The aim of the present research is to examine the optimal framework that may effectively promote productivity, flexibility, adaptability, improvement, efficiency, and visibility within strategic investments and value streams for both project managers and teams. To do so empirical research was carried out in IT service management industry in Greece. The results showed that the landscape of project management has continued to evolve, and new productivity challenges have emerged. The results lead in useful managerial implications in the context of project management.

The history and upward trajectory of a Start-up Oil Company

Salevi Eirini – Mamais Konstantinos

The business plan has as its object of study the start-up of a start-up company active in the olive oil trading sector. The company's name is OIL SALEVRIS, and it attempts in a modest way to characterize its object and project its name, while at the same time operating via the Internet. The oil start-up company under study was founded in a local village and took advantage of legacy olive roots as well as the upward trend in oil prices.

An idea that takes advantage of the local olive resource and the founder's experience in oil production. Through careful preparation and a strategic approach, the company is developing a business model that capitalizes on rising oil prices in the global market. The oil company, a pioneer in the health food sector, faces challenges such as market competitiveness, production management and customer development. Through analysis of the market environment and the challenges it faces, it recognizes the importance of innovation and flexibility in its operation. The company aims to develop a dynamic and sustainable business model through marketing strategies. The example of the creation and success of this local start-up oil company can be an inspiration, while providing lessons and experiences for entrepreneurs looking for new opportunities at local levels. The company has successfully developed into a growing brand due to strategic production expansion, innovative approaches to marketing and distribution, and a constant commitment to quality.

Right from the start, it took advantage of the advantage that the product itself gave it as a staple item in a balanced Mediterranean diet. It thus entered the market dynamically, significantly reduced its operating expenses until capital recovery and eventually gained market share due to stored product. The vision of OIL SALVERIS is the foundation of a modern production unit of extra virgin olive oil on the basis of a healthy business that exploits and intelligently manages the precious gift of the olive.

Financial Analysis and Strategic Planning for a start-up Company

Lougridis Andreas – Maria Mastrogianni

The coursework provided an in-depth analysis of a start-up company operating within the context of investment financing, pricing policy, strategic planning, and budgeting. The introduction set the stage for understanding the significance of financial analysis in evaluating the company's performance and future prospects.

The description of the company offered insights into the company's operations, market positioning, and key stakeholders. Subsequently, the examination of investment financing shed light on the sources of capital utilized by the company to fund its operations and expansion initiatives.

The pricing policy section delved into the strategies employed by the company to set prices for its products or services, considering factors such as cost structure, market demand, and competitive dynamics.

Strategic planning was explored to understand how the company aligned its objectives with market opportunities and challenges, utilizing tools such as SWOT analysis and strategic frameworks to formulate effective strategies.

The three-year budgeting section outlined the financial projections and allocation of resources over a strategic planning horizon, emphasizing the importance of prudent financial management and resource allocation.

Furthermore, investment analysis evaluated the viability of potential investment opportunities, considering factors such as risk, return, and strategic fit with the company's objectives.

In conclusion, the coursework synthesized key findings and recommendations derived from the analysis, highlighting opportunities for enhancing financial performance, mitigating risks, and achieving sustainable growth for a start-up company.

Investigating consumer preferences of buyers on private label products in the food industry

Zervoulakou Hara – Mamais Konstantinos

The purpose of this research was to examine and analyze consumer behavior regarding private label products in the food sector, focusing on consumer preferences, behaviors and purchasing decisions in the Greek market. The study explored the factors that influence the choice of private label products and the attributes that attract consumers, such as quality of materials, package design, price and local origin. The goal of the research was to help businesses develop tailored strategies targeting specific consumer segments, identifying new emerging trends and opportunities to develop new product categories. A multidimensional approach was used to study purchasing habits, including both the price-quality ratio theory and consumer behavior. Through the collection and analysis of data from questionnaires addressed to a sample of consumers, critical parameters such as consumer perceptions of private label products, factors influencing their preferences and the effect of marketing strategies on changing consumer habits were analyzed.

Research findings showed that private label products have gained popularity, with factors such as quality, price and brand image playing an important role in shaping consumer preferences. It was also found that consumer attitudes are influenced by demographic and psychographic factors. Overall, the study offers important insights into the factors influencing consumer purchasing behavior, thus providing a valuable tool for food businesses and retailers wishing to develop effective strategies.

Exploring the Global Impact of AI on Credit Risk Assessment in Investment Banking: Applications and Prospects for Financial Institutions in Greece

Stamatopoulos Alexandros – Mamais Konstantinos

With the emergence of Artificial Intelligence (AI) and Machine Learning (ML) has emerged in everyday life and has revolutionized various industries, credit risk assessment especially within Investment Banking is no exception. The effect of these advancements has already started to show in the financial market and the future prospects seem almost limitless. Nonetheless, a series of issues legal, ethical and otherwise, related to the usage of AI and ML in finance have also started to emerge. Greece, being on the rise financially and technologically seems a perfect candidate to accommodate for this change. This MBA thesis delves into this transformative impact of AI on Credit Risk assessment within the realm of Investment Banking on a global scale. We investigate the application of AI technologies, in financial institutions, with a particular focus on their utilization and potential benefits in the context of the Greek banking industry. We aim through this research to comprehend how AI-driven credit risk assessment models have revolutionized traditional methods currently utilized in Greece, leading to enhanced risk assessment processes and scalability, and moreover explore the challenges associated with adopting AI solutions, including ethical considerations, algorithmic bias, and regulatory compliance.

Keywords: AI, Credit Risk Assessment, Investment Banking, ML, Financial Institutions, Greece, Global Impact, Transformation, Ethical Considerations, Regulatory Compliance.

Advancements in Sustainable Shipping: Addressing Environmental Challenges and Innovative Solutions

Konstantinidis Marios – Efstathiadis Dimitrios

The maritime industry is undergoing a significant transformation driven by environmental concerns and technological advancements. This presentation aims to explore the latest trends and developments in sustainable shipping practices, focusing on the challenges posed by environmental regulations and the innovative solutions being implemented to address them.

One of the key challenges facing the shipping industry is the need to reduce greenhouse gas emissions and minimize its environmental footprint. Stricter regulations imposed by international bodies such as the International Maritime Organization (IMO) have compelled shipowners and operators to explore alternative propulsion systems and energy sources. The integration of renewable energy technologies, such as wind-assisted propulsion and solar power, is gaining momentum as a means to achieve greater energy efficiency and reduce reliance on fossil fuels.

Furthermore, the adoption of digitalization and artificial intelligence (AI) technologies is revolutionizing various aspects of maritime operations, enhancing safety, efficiency, and sustainability. AI-powered predictive maintenance systems enable proactive monitoring of vessel performance, minimizing

downtime and optimizing fuel consumption. Similarly, advanced navigation systems utilizing AI algorithms enhance route planning and voyage optimization, reducing fuel consumption and emissions. In addition to technological innovations, the concept of circular economy is gaining traction within the maritime sector. Initiatives aimed at reducing waste and promoting recycling and reuse of materials are being implemented throughout the shipping industry. From eco-friendly ship designs to the utilization of biodegradable materials, efforts are being made to minimize the environmental impact of maritime activities.

This presentation will highlight case studies and best practices from leading shipping companies and research institutions, demonstrating the tangible benefits of sustainable shipping practices. By fostering collaboration and knowledge sharing, we can accelerate the transition towards a more environmentally friendly and resilient maritime industry.

Keywords: sustainable shipping, environmental challenges, innovative solutions, renewable energy, digitalization, artificial intelligence, circular economy, maritime industry

The connection between employee satisfaction and the training procedure; a case study in the Greek tourism industry.

Bourdoukou Aikaterini – Markaki Evaggelia

This study investigates a correlation between Employee Satisfaction and Learning and Development and Training in a small-medium sized hotel on a touristic island in Greece. The objectives of this paper are:

- investigating elements of Job Satisfaction
- discussing Learning and Development issues and methods of Training which are applied
- reporting some characteristics that the trainer and the person being trained need to maintain
- exploring features of the service quality in relation with training development, employee satisfaction and customer satisfaction
- analyzing the correlation between employee satisfaction and the training and development procedure
- critically evaluating the material of the research in order to provide conclusions.

This study approaches the subject in a qualitative manner, it is a case study and the semi-structured interview is a significant tool for this research. The findings show that the training and development procedure is linked with employee satisfaction. Plus, the relationship with the colleagues, the employee autonomy and the training process contribute to the job satisfaction. Informal and on the job training are mainly applied in the hotel. Certain characteristics that the trainer and the person being trained need to have, are reported by the interviewees. Training is valuable for trainers and for people being trained, since they gain qualification, they improve their skills and share satisfaction emotions at workplace. This paper is addressed to hospitality students, trainees, hotel employees, hotel managers, hotel owners. It focuses on a small sized business; similar cases usually do not have a particular Human Resources Management or Learning and Development department. Therefore, it can be a source of information for both discussion and practical application in the hospitality sector, particularly in small businesses.

Key words: Learning and Development, Training, Employee Satisfaction, Tourism, Hospitality Business

The impact of organizational culture on job satisfaction and employee engagement within energy sector in Greece

Gkania Paraskevi – Markaki Evaggelia

This study delves into the influence of organizational culture on job satisfaction and employee engagement within the energy sector of Greece. To explore this relationship, online surveys were administered to 140 employees across Greek energy providers.

The research employs a comprehensive methodology, incorporating quantitative data analysis techniques such as multiple regression analysis, to robustly ascertain the degree of influence exerted by organizational culture on job satisfaction and employee engagement. By leveraging SPSS software, this study ensures rigorous data analysis, providing a reliable foundation for interpreting the effects of organizational culture. Moreover, the utilization of Independent T-tests and one-way ANOVA allows for the investigation of differences in job satisfaction and engagement levels across various demographic groups, including age, gender, and job tenure within the sector.

These methodological choices underscore the complexity and multifaceted nature of the impacts that organizational culture has on employees within the energy sector. The findings suggest that a positive and inclusive organizational culture not only enhances job satisfaction but also significantly boosts employee engagement. This is particularly pertinent for energy companies in Greece, where economic fluctuations and regulatory changes have historically impacted business operations and workforce dynamics.

As a practical implication, the study recommends that Greek energy companies invest in cultural assessments and employee feedback mechanisms to continuously adapt and improve their organizational cultures. Such initiatives could involve leadership training, the development of inclusive policies, and the enhancement of communication channels throughout the organization. These strategies aim to cultivate a workplace environment that supports employee well-being and aligns with broader organizational goals, ultimately leading to increased productivity and sustained employee loyalty.

This research contributes to the existing body of knowledge by highlighting the specific cultural attributes that are most influential in enhancing employee engagement and satisfaction within the Greek energy sector. It serves as a critical tool for decision-makers in this industry, providing insights that can lead to more informed strategic planning and policy development aimed at nurturing a resilient and motivated workforce.

Keywords: Organizational Culture, Job Satisfaction, Employee Engagement, Greek Energy Sector

Education

How do early teachers in Dubai private schools perceive play-based learning (PBL)?

Fotopoulou Eva – Dr Natalia Kazouli-Plaitaki

The aim of the study was to explore the perception of PBL amongst early years teachers in private schools in Dubai. This research aimed to :

- identify the perception of PBL.
- identify the perceived benefits and limitations of PBL.
- identify the factors that influence the implementation of PBL practices, considering the different curricula.

Play is an essential part of children's life- it's through play that children develop but also make sense of their world around them (Piaget, 1962; Pyle, DeLuca and Daniels, 2017; Vygotsky, 1978). Due to these benefits, play-based learning has been adopted by various early years curricula (ibid, 2017). PBL is a child-centred process where teachers scaffold and enhance the environment to support children's learning through play (Pyle and DeLuca, 2017). However, research has identified that PBL is inconsistently defined by practitioners, therefore showing insufficient implementation. Some practitioners acknowledge its benefit for social skills whilst others perceive it as a tool for developing emotional, social and cognitive skills (Paterson, 2020). When combined with insufficient teacher training, demanding academic standards, and time constraints, play-based learning has demonstrated a decline (Ashari and Hushairi, 2018; Lynch, 2015).

A total of 7 women working in early years settings in Dubai were recruited via the snowballing method (Bryman, 2016). The primary method of data collection was semi-structured interviews. Prior to the interview teachers were told to draw a picture of how they perceive play based learning and post -

interview the teachers were asked to draw a picture of what play based learning practices they implemented in their class. These pictures were utilised as tools for discussions to enrich answers (Brailas, 2020).

Thematic analysis (Braun and Clarke, 2012) results showed that all, except one teacher, showed a consistent definition of PBL, as the one described above. Consistent with prior research, all 7 teachers acknowledged the importance of PBL as being a fun and engaging tool that fosters holistic development (Zosh, Hassinger-Das and Laurie, 2022). The identified limitations include transition to the national curriculum, need for time and resources, child temperament and difficulty of assessment (Fesseha and Pyle, 2016; Kalutskaya et al., (2015); Lynch, 2015). It should be noted that the curriculum the teachers taught influenced how they implemented PBL. Teachers teaching the UK curriculum were supportive of PBL, but their implementation was a lot more structured than they wished, due to academic pressures, timetabling and management. The American curriculum teachers had great support from management regarding PBL by being provided with training abroad, infinite natural open-ended resources and an age-appropriate curriculum. Consequently, they implemented a very child-led environment facilitated by adults. In contrast to the UK and British curricula, the Indian curriculum teachers described very adult-led environments, with target-led areas, that all children had to access by the end of the week. One Indian teacher described PBL as the definition above but due to management, cultural mentality, timetabling and curriculum demands, set up a very adult-led environment. The other teacher from the Indian curriculum, did not account for children's voices within her definition PBL and her description of project-based learning, a very child-centred approach, was completely adult led, highlighting how her definition of PBL, consequently influenced how she implemented it.

The impact of Free Play in Social and Emotional Development of Children aged 2 to 6 years old and the Role of Educators to Promoting it.

Eleftheridou Anna – Katerina Ravnali

The purpose of this research was to investigate teachers' opinions on the effect of free play on the social and emotional development of children aged two to six years in Greece, as well as their role in promoting it, through the collection of primary data.

More specifically, the individual research questions of the survey were:

- According to teachers' opinions, what are the benefits of free play and its effect on the social development of preschool children?
- According to teachers' opinions, what are the benefits of free play and its effect on the emotional development of preschool children?
- What is the teacher's role in promoting free play?

The starting point of the research was the study of the benefits of free play in the social and emotional development of preschool children, as well as the lack of similar research in Greece. In recent years, play has become the foundation of preschool curricula in many countries around the world (Tassoni, Baker and Burnham, 2014).

To conduct the research, semi-structured interviews were conducted online through the Teams platform and were transcribed. Then, through thematic analysis, the writer proceeded to identify the responses, code them and identify the themes that emerged (Braun and Clarke, 2006; Tsiolis, 2018).

From the collection of data it was found that teachers in Greece spend enough time on free play as they recognize its benefits in the social and emotional development of children. This is probably due to their many years of experience and the fact that all of them were university graduates.

Education for the city of inclusion and accessibility case study city of Trikala

Balla Christina

According to the Universal Convention on the Rights of Persons with Disabilities, specific guidelines were set that lead to the adoption of a new approach based on the right of persons with disabilities to have a high level of quality of life without discrimination and exclusion. In this specific research, we want to study the role of education in the training of children with disabilities, in the adaptation and promotion of their professional training, in their social life and in their daily access, as well as in the way in which the various structures and functions are adapted to they provide equal opportunities to children and later to adults being disabled people in the city of Trikala. The method that will be used is the provision of information through interviews from the competent bodies that take care of issues related to education such as the region, the municipality, the primary and secondary service as well as the parents of children with disabilities in Trikala. Through the results, it is expected to perceive the level that the city and its citizens have towards education and the multicultural and social inclusion of people with disabilities in the local society.

Key words: education, accessibility, inclusion, disability, policy, Trikala

Psychology

Barbarism emerged by the own fans: A discursive analysis in the spectrum of narrative frame immortalising sports violence; the social motivation and fragile privacy of athletes.

Kikivarakis Spyridon – Dr Triantafyllia Iliopoulou

The present research paper aims to explore sports crime and violence, a frequent social phenomenon that happens in many countries of the world with passionate fans as protagonists. The paper centers on the situated action exerted at a Colombian footballer's expense after a tragic mistake he made in the Semi-Finals of the 1994 World Cup against the USA. It was his national fans who assassinated him after making an auto-goal, leading his national team to elimination. The analysis provides an examination of the societal norms schemas, culture, stereotypes, and attitudes, that are raised from the incident, and then a further investigation of actions that are followed up by corresponding morals and dispositions. The emotional language of the collected data was further examined aiming to blame attribution with the assistance of empirical investigation and qualitative research.

Half of the data was collected from people who love the sport and who knew about the tragic incident, while other data involved; newspapers, newsletters, and even samples of videos referring to Andres Escobar's murder, and by extension including social and historical details. The analysis was conducted by utilizing the application of the Discursive Psychology (DP) approach for better comprehension and well-interpreted formulation of ethnomethodology to action orientation. In accordance with the DP approach, discursive devices have been replicated and conducted according to Potter, Wiggins, 2007; Edwards, 1999) by the means of investigating emotion terms and attributing to blame to major aspects that have been identified. The contribution of historical evidence, local morality, and cultural norms are also examined across the deep geographical frame.

The results signify that along with the good interpretation of examined data and cultural and social factors that involved, formulation and conversion of schemas were essential for understanding from where local morality and norms arose having been led to restricted behaviours towards the specific action. These psychological processes resulted to the constructed analysis and interpretation of investigated data.

Keywords: DP, Discursive Psychology, sports violence, crime in sports venue, fragile privacy of athletes, culture.

Title: A Multiple Regression Analysis About Whether Trait Emotional Intelligence and Self-Esteem Can Predict Trait Anxiety in the Greek Population

Papagiannopoulou Penny – Dr Penelope Louka

This study investigated the predictive relationship among Trait Emotional Intelligence (TEI), self-esteem, and trait anxiety within a sample of Greek native individuals (N=136), employing multiple regression analysis. The Trait Emotional Intelligence Questionnaire (TEIQue), The Spielberger State-Trait Anxiety Inventory (STAIT-5), and the Rosenberg Self-Esteem Scale were administered for data collection. Results revealed a robust positive correlation between TEI and self-esteem ($r= 0.61, p<0.001$), with both variables emerging as significant predictors of trait anxiety. Decreases in TEI and self-esteem corresponded to increases in trait anxiety, with the model explaining 33.5% of the variance in trait anxiety. Additionally, the study affirmed TEI's predictive role in trait anxiety and its mediating effect on the association with self-esteem. Moreover, it corroborated the documented negative relationship between TEI and trait anxiety ($r= -0.554, p<0.001$), the positive correlation between TEI and self-esteem, and the negative association between self-esteem and trait anxiety ($r= -0.47, p<0.001$). Despite acknowledged limitations, the findings offer valuable practical and theoretical insights into psychology. Furthermore, the study underscores the importance of TEI in promoting well-being by mitigating trait anxiety, while highlighting self-esteem as a potential risk factor associated with elevated trait anxiety levels. These findings underscore the intricate interplay of psychological attributes and anxiety levels, advocating for the cultivation of emotional intelligence as a preventive measure against anxiety disorders.

Key words: multiple regression, anxiety, self-esteem, emotional intelligence, Greek population

Investigating the predictive role of Self-Determination and Personality Traits on Artificial Intelligence Anxiety

Nikolakopoulou Angeliki-Elli – Georgios Pilafas

The rapid advancement of Artificial Intelligence (AI) has led to significant societal transformations, yet it has also sparked concerns regarding AI Anxiety (AIA) among general population. This study aims to contribute to existing literature by exploring AI Anxiety (AIA) and its predictability through intrinsic factors like personality traits, building on previous research focused on personality's influence on attitudes toward AI. Additionally, it examines AIA from the Self-Determination Theory perspective using the Basic Psychological Needs (BNS) framework, assessing how the fulfillment or hindrance of autonomy, competence, and relatedness predicts AIA in the workplace. Participants (N=200) answered a questionnaire which encompassed a 10-item scale assessing Personality Traits, namely Big Five Inventory-10 (BFI-10), a 21-item scale measuring Basic Psychological Needs Satisfaction at Work, and a 21-item scale assessing AI Anxiety which has a four-factor structure, namely, AI Learning Anxiety, Job Replacement Anxiety, Sociotechnical Blindness, and AI Configuration Anxiety. Expected findings suggest personality traits may serve as predictors of AI anxiety (AIA), with heightened conscientiousness linked to higher AIA. Moreover, basic psychological need satisfaction significantly impacts emotional responses to AI, with greater satisfaction of these needs associated with lower AIA. Last, it is claimed that if AIA stems from broad personality traits, then personality traits would have stronger predictive power than needs satisfaction. Conversely, if the dispositions underlying AIA are more linked to needs satisfaction, then we anticipate needs satisfaction to display greater predictive power. Understanding the factors driving AIA can inform interventions aimed at enhancing individuals' well-being in the era of AI development.

Keywords: AI anxiety, self-determination, personality traits, basic psychological needs, work

Johnny Depp and Amber Heard: How language and societal influences shape power and discourses

Marishta Markel – Dr Penelope Louka

The current paper aims to analyze the case of Johnny Depp and Amber Heard's claims of domestic abuse, in the context of Foucault's concepts of a socially constructed society, power, subject positions and discourses. Foucauldian Discourse Analysis goes against the westernized concept of structures such as gender, sexuality morality and norm, as it disregards the notion that these concepts are immutable and mainly biological, and suggests that society is fluid, placing the wider sociocultural and historical context of a society as the basic foundations of creating discourses, placing individual concepts and groups in hierarchies, with knowledge and power granting access to higher places in the societal hierarchy and therefore facilitating the production of discourses. In light of that, the introduction includes three qualitative studies that depict the fluidity of gender concepts regarding domestic abuse, and analyzing in the analysis section the power dynamics, subject positions and discourses created regarding the two actors, based on theoretical background around FDA analysis and social constructionism, qualitative studies, as well as recordings of the live trial in 2022 and two articles out of the four that were chosen, analyzing themes of gender differences, court environment and the media. The use of 6 analytic tools were used in order to identify the discourses, as well as explain the social constructionist perspective around gender and language.

**The Way of the Sojourn:
An Interpretive Phenomenological Analysis exploring lived experiences of Long-Term Travelers**

Papageorgiou Konstantinos – Dr Triantafyllia Iliopoulou

Since ancient times the matter of identity has perplexed individuals from all cultures. From the Delphic inscriptions instructing worshippers to "Know Thyself", to Joseph Campbell's the "Hero's journey", a quest through the world and ourselves emerges, placing a consolidated individual identity as its prize. Through all these narratives the experience of extended travelling operates as a vehicle of exploration, allowing for the individual to be in state of limbo, immersed into an everchanging mixture of conditions and narratives facilitating a transformative experience. This essay aimed to capture aspects of this experience by examining three phases of travelling focusing on the motivations of people to engage in extended travelling, the transformative effects throughout the experience and finally the journey of reintegration of this new identity. To this end, an Interpretive Phenomenological Analysis was employed, capturing the narratives of 5 semi-structured interviews provided by individuals who have engaged in extended travel for more than 1 year consecutively and have adopted a nomadic lifestyle since. Through the thematic analysis 3 themes emerged: the 1st theme explored the motivations behind long term travelling and highlighted a motivational spectrum ranging from Escapism to a Search for Identity; the 2nd theme examined the two most prominent transformative aspect across all participants in 2 subthemes, with the 1st exploring an internalized sense of self, rooted in overcoming personal challenges and the 2nd examining an expanded personal and cultural perception, a result of immersive and meaningful cultural interaction. Finally, the 3rd theme illustrated the journey towards reintegration and the consequent transformation described by the participants, with its roots in new adopted roles around significant others and the search for a "home". The findings of this study aim at expanding the current view of extended travelling as a vehicle of transformation towards a solidified sense of self, building on previous research in tourist motivation theories and Transformative learning. Aiming to provide a holistic view of these transformative experiences, the findings of this essay shed light into the motives and the effects of the reintegration of this "newfound" perspective gained on the road.

Keywords: Travelling, identity, Transformative learning, intercultural immersion, nomadism

Anxiety (GAD, SAD, MDD) treatment in adults according to CBT and Art Therapy

Athanasopoulos Dimitrios – Ioannis Christopoulos

For a century, scientists have shown a significant interest in anxiety disorders because as Spielberger (2013) states that era is labeled the 'age of anxiety' (Athanasopoulos, 2024). As the World Health Organization (WHO, 2024) warns of an increase in the incidence of anxiety disorders, it becomes imperative and necessary to carry out research and studies like this one, to find the best possible solution to this problem. It is significant because both interventions have their limitations, both contextual and conceptual, advantages, and disadvantages, but in this literature review, we can see where one is lacking, if the other is superior, and if a functional combination of both can emerge in one treatment to support the patients in a better way, or just which one is the best. Further research is necessary.

Methods

A systematic review of three studies on CBT and three studies on AT for Anxiety Disorders in the adult population, to evaluate those treatments on anxiety symptoms and search the characteristics of each intervention. One database for the period of 2015 to today was searched and conducted according to Cochrane's recommendations.

Results

Only 3 publications on CBT treatment for Anxiety out of 18900, and 3 publications on AT treatment for Anxiety out of 193 fulfilled the criteria. The difference in available studies for each intervention shows the power of evidence as a proven method for CBT. The small availability of studies for AT shows the high risk of bias. The study populations were adults with Anxiety disorders such as GAD, SAD, MDD. AT techniques vary and there is evidence of the effectiveness of the treatment of AT such as relaxation, gaining access to unconscious memories, and improved emotion regulation among others.

Conclusions

The effectiveness of AT has not been studied thoroughly in contradistinction to CBT which is evidence-based. This highlights the need for special trials on the effectiveness of AT and also the combination of both treatments.

Humanitarian Professionals' Experience and Meaning Attached to the Empowering Refugee Women in a Trauma-Informed Practice in Greece; an IPA Feminist Study

Hanakova Marketa – Dr Triantafyllia Iliopoulou

The interpretative paradigm of phenomenology analysis explored humanitarian professionals' lived experience when empowering refugee females during trauma-informed practice in Greece. Gender based violence (GBV) is still considered a social burden with higher incidence among female refugees globally. Supporting refugees and listening to their traumatic stories might lead to vicarious traumatization of humanitarian personnel. The aim of the current study, which was conducted within the feminist approach, attempted during the semi-structured interviews to explore humanitarian female professionals' meaning and perspective ascribed to obstacles, resilience and life perception changes experienced during their work with survivors of GBV. The study findings came up with 3 themes: Patriarchy as an omnipresent social features with 2 Subthemes: Female Victimization/ Women as victims or survivors of social violence, and Female Social Inferiority; Perceived personal reform during the humanitarian work and its 2 Subthemes: Self-Empowering Resilience and Coping Strategies; and Empowering humanity with one Subtheme: Personality Change. Much like the refugee women, who showed resilience and personal growth associated with experienced trauma, similarly humanitarian empowerment of females was associated with vicarious resilience, vicarious posttraumatic growth as well as with positive coping strategy within social identity. All female participants experienced personal growth during their work, when identifying themselves with female ingroup. The analysis confirmed gender discrimination as a leading social disability worldwide, and as such, empowering humanity as a whole is a public responsibility. Future feminist research shall examine conceptual features of vicarious resilience and empowerment associated with social identity among wider range humanitarian workers in various contexts.

Hooking up motivations and Dark triad of personality can predict the Motivations of the Dating App Usage.

Hoxha Luiz – Dr Penelope Louka

Since dating through applications is on rising and mostly clarified as a motive that enhance hook up culture at the time being which its side and connected to the dark triad of personality (Petrosyan, 2023 as cited in Adejumobi, 2023 , Hamilton and Armstrong, 2009 & Freyth, & Batinic,2021), the present study tries to investigate as main goal if the hook up motivations (Social-Sexual Motives, Social-Relationship, Seeking Motives, Enhancement Motives, Coping Motives, and Conformity Motives) and the Dark triads of personality (Machiavellianism, Narcissism, and Psychopathy) can predict the Motivations of the Dating app usage (Love, Casual Sex, Ease of Communication, Self-worth Validation, Thrill of Excitement and Trendiness).The age range consisted of the minimum age being 18 and the maximum age being 49, there was a total of 228 participants of who 100 were Female and 128 were Males, the 53.5% were straight and 46.5% were in LGBT+ community. For the conduction of the research participants were asked to complete though a shared link to them 4 Questioners in google forms format (Demographics Questionnaire, Short Dark Triad Questionnaire, Hook-up Motives Questionnaire and Dating App Motivation Questionnaire). The type of test used to analyse the data was from SPSS using Multiple Regression. Results showed that, Love: that the more of Machiavellianism as trait one has the more Social Relationship Seeking motives has and less Psychopathy of trait obtains the more uses dating apps for the search of Love motivations. Casual Sex: the more Social -Sexual motives one has, the more Narcissists one is and the more Enhancement motives for hook up are, the use of dating apps for casual sex goes on. Ease of Communication: the more of Machiavellianism one is , the more of Conformity is forced to , the more of Relationship seeking motives one has , the more Social -Sexual motives one has and less of Narcissist is , the use of dating apps for the easy of communication is likely to go on. Self-Worth Validation: the more of Machiavellianism ones has as trait, the more hook ups for Enhancement, the more hooks up for Coping to feel good and more Conformity one feels, the use of dating apps for Self-worth validation is likely to go on. Thrill of Excitement: the more one is Coping to feel good the more his uses dating apps for the thrill of excitement. Trendiness: the more of Psychopathy as trait one has, the more of Social -Sexual motives are for hook up, the more Conformity feels and the more hook ups for Coping with good emotions, the use of dating apps for trendiness is likely to go on.

Key Words: Dating apps , Hook Up motivations, Motivations, Dark Triad , Multiple Regression

Social Media Use, Social Comparison and Self-objectification as predictors of Psychological Well-Being: A multiple regression analysis

Konidis Agamemnon – Dr Penelope Louka

Social media are an online platform that has become increasingly popular due to its ability to connect, let people communicate and exhibit themselves to a wide range of audiences. However, excessive use can negatively impact psychological well-being, as it can lead to negative emotions such as disappointment, failure, and sadness (Mayfield, 2008; Erfani & Abedin, 2018). Moreover, research has indicated that SNSs can reduce psychological well-being owing to adverse social comparison (Krasnova et al., 2013; Verduyn et al., 2015). According to Festinger's theory of social comparison, people have an innate tendency to evaluate their own talents and beliefs by comparing and contrasting themselves to others. Thus, due to the fact that individuals online tend to present the idealized version of themselves, a great number of users obtain or are exposed to this information about others and are inclined to participate in social comparison which research shows that such behavior can have a detrimental effect on psychological well-being. It is also suggested that gender and culture play a role in these comparisons (Yang, 2016; Ojha et al., 2021; Yue et al., 2022). Furthermore, the attention and comparison to the idealized self especially in regards to physical appearance could be explained via self-objectification theory which suggests that people are stripped of their personhood and view themselves or act as objects. Although this theory focuses on women, it implies that people present themselves as (sexual) objects on social media waiting to be evaluated by others via "likes". Social media use, social comparison and self-objectification altogether, as validated by research, have an intricate relationship with mental well-being (Bell et al., 2018; Hanna et al., 2017). Therefore, it is crucial to understand the link between social media use, social comparison and self-objectification with psychological well-being. In the current research an opportunistic sample of 125 individuals were used. Both men and women participated (52 and 73 respectively) of various educational backgrounds and different places of upbringing (67 grew up in cities, 53 in islands and 5 in province). The age range was from 18 to 35

(mean age 25). In addition, 4 where the main questionnaires they had to complete the Social Media Use Questionnaire (Xanidis & Brignell, 2016), the Social Comparison Scale (Allan & Gillbert, 1995), the Self-Objectification Questionnaire (Noll & Fredrickson, 1998) and the General Well-Being Schedule (Dupuy, 1977). The questionnaires were distributed via the platform of Google Forms, where individuals could enter by clicking the link. This study will use a multiple regression analysis to analyze the data. As this research is still on progress there are no final results yet, however there can only be speculations made which could suggest that social media use and social comparison can predict psychological well-being, the relationship of self-objectification in this equation is not sure yet.

Key words: Social media use, Social Comparison, Self-objectification, Psychological well-being, Multiple regression analysis

The Effect of a Ghosting Experience on, Social Safety and Pleasure, Mental Resilience and Loneliness among the Greek Population. Quantitative research.

Prodromou Anita – Dr Penelope Louka

Introduction: The present study aimed to examine in detail and explore in-depth investigation of the effects of ghosting and ghoster experiences on social safety and pleasure, psychological resilience, and feelings of loneliness.

Method: The Connor-Davidson Resilience Scale (CD-RISK-25), the UCLA-20 Loneliness Scale, and the Social Safety and Please Scale (Gilbert, 2009) were used among a sample size of 179 participants. To test the differences, two groups were formed for each independent variable, participants were assigned to one of each group depending on whether or not they had a ghosting or ghoster experience. Descriptive statistics and the multivariate analysis of variance MANOVA, were used to assess the differences.

Results: Data analysis found non-statistically significant differences between almost all variables apart from having had a ghoster experience and low mental resilience levels.

Conclusion: The findings of having a ghoster experience affects mental resilience clearly show that ghosting is not in no way harmless to mental health and specifically to mental resilience. Future directions for research were also suggested.

Keywords: Ghosting, Ghoster, Social safety and pleasure, mental resilience, loneliness

Health & Sports Sciences

Optimizing Muscle Hypertrophy: The Impact of Rest Intervals, Intensity, Frequency, and Load in Resistance Training

Alafouzou Spyridon – Konstantinos Ntalas

Resistance training is a foundational aspect of fitness regimens, boasting benefits for individuals ranging from athletes to those with clinical conditions. Effective manipulation of resistance training variables is crucial for maximizing both neural and physical adaptations. Muscle hypertrophy, the process of muscle growth, is central to resistance training goals. However, the magnitude of hypertrophy varies among individuals based on factors such as training experience and muscle fiber composition. The augmentation of muscle mass primarily results from the enlargement of pre-existing muscle fibers rather than an increase in their number. Type II muscle fibers, particularly type IIa, are more prone to hypertrophy compared to type I fibers. The synthesis of myofibrillar proteins plays a pivotal role in muscle growth, regulated by molecular pathways such as the AKT-mTOR pathway and influenced by hormones like insulin-like growth factor 1 (IGF-1). Exercise intensity, volume, and frequency are key determinants of muscle hypertrophy. Intensities between 60-90% of one-repetition maximum (1RM) are optimal for hypertrophy, with higher volumes and frequencies generally leading to greater gains. The manipulation of rest intervals between sets also impacts hypertrophic outcomes, with longer rest periods favoring muscle growth. Furthermore, varying training intensities have been studied for their effects on muscle hypertrophy, with eccentric resistance training and blood flow restricted training showing promising results. The proximity to failure during resistance training also influences muscle adaptations, with some studies suggesting that training to failure may not be necessary for optimal hypertrophy. In summary, optimizing resistance training programs involves a nuanced understanding of variables such as intensity, volume, frequency, and rest intervals. Tailoring these variables to individual needs and goals

can maximize muscle hypertrophy and overall strength gains, contributing to improved athletic performance and functional ability.

Computing

Web application & platform for re-selling tickets Ticket Bridger

Grigorios Tsakalis, Konstantinos Roulias, Georgios Petrakakis, Fanis Cheiletzaris

Have you ever found yourself stuck with a ticket to an event you couldn't attend, or desperately sought tickets to a sold-out event? Fear not! With Ticket Bridger, you can effortlessly sell or discover tickets to the events of your choice. Join our platform today and find your perfect event match! Our application offers:

- Swift and secure ticket uploading and selling.
- An extensive collection of tickets spanning various event categories.
- Personalized profiles for securely storing tickets, information, and preferences.
- Our application features a responsive customer support form that immediately alerts our development team upon submission, ensuring prompt and personalized assistance to our users.
- Ticket Bridger is designed to be accessible via all major web browsers, ensuring a seamless experience for users across different platforms and devices.
- To guarantee secure data transmission and guard against security breaches, our application combines a variety of advanced safety protocols and algorithms. We are dedicated to protecting the privacy and accuracy of the data provided by our users.

Key terms: software development, web development, front end, back end, ticket selling, community, security, data transmission.

Engineering

Investigation of Aeroelastic Tailoring in Automotive Industry

Sert Mykola – Dimitrios Kryfos

Aeroelastic tailoring is a procedure applied mostly in the aerospace and renewable sectors, as aeroelastic phenomena such as flutter, divergence, control reversal, and others, not only can they affect the aerodynamic performance of the design but can also lead to catastrophic failures. In the automotive industry however, the research and application of this technology is very lacking, as the vehicles do not require such delicate engineering design procedures due to their low maximum speeds. This thesis aims to apply aeroelastic tailoring principles on a theoretical automotive part and evaluate its aerodynamic performance based on different elasticity parameters of the part's material. A design of the geometry will be created in the environment of ANSYS CAE software and following steps will be performed:

Fluid Flow (Fluent) setup:

This step will include the setup of the fluid domain, type, and velocity. Being more specific, the speed of the fluid will be variable, starting from 0, and increasing up to 100 meters per second. This will increase the amount of information each simulation will provide us, ultimately increasing the efficiency of the simulation procedure.

Transient Structural setup

The forces exerted on the surface of the object due to the fluid flow will generate structural deformation. This setup will calculate the deformation of the object based on those forces, and the material of the object.

Two-Way FSI setup

As the velocity of the fluid increases, the forces on the face of the object will increase, thus increasing the deformation, however, in regular fluid simulations the procedure does not account structural deformations, therefore the total force exerted on the object will not be correctly calculated unless the Fluid Flow simulation will receive an updated, and more specifically deformed, geometry of the object until equilibrium is reached. The Two-Way FSI will create the possibility of coupling the two simulations, so the whole system will be analyzed accounting for the deformation of the object.

After the setup is completed, simulations will be conducted for a variety of elasticity parameter values, and the results will be evaluated as per vertical forces, horizontal forces, and drag coefficient, with the basic rigid component values included in the evaluation.

The final goal of this thesis is to assess the aeroelastic procedure complexity, and compare it to the stability, and aerodynamic efficiency improvements that it can offer when implemented in the automotive industry

Design of a Prosthetic Biomimetic hand

Vasilakas Themistoklis-Ioannis – Dimitrios Kryfos

Humans rely on their upper limbs for the operation and manipulation of objects and mechanisms, thus, the environment around them has been designed and built as such. Loss of these limbs is one of the biggest and most frequent needs for prosthetics due to the monumental impact an individual's quality of life and the ability to perform even basic everyday tasks. While prosthetics with a more simplified form and function have been widely used throughout the years the need for close resemblance to the biological counterpart has always been prevalent. With the advancement of technology, prosthetics that are designed throughout the years have been closing in on replicating the function as well as the form over real hand. Cutting edge advancements in mechanical design and manufacturing make the construction of increasingly intricate and complex designs possible. These advancements, along with the need for more realistic prosthetics, have made biomimetic prosthetics both possible and necessary for restoring human functions. This study aims to design a human prosthetic hand based on the principles of biomimicry by fulfilling 3 objectives. The first one is don't understand the anatomy and bio mechanics of a human hand, the second focuses on the mechanical replication and mechanisms that can be used and the last is the actual design of the mechanism. The design will be focused on the fingers and palm of the hand and will exclude the wrist because of its immense complexity. To achieve the closest function to tendons, strings, that replicate these tendons, will be used to move the bones of the hand. Thus, the most amount of the research and the main part of the design will be based on the bones and tendons. By designing and studying the function of such mechanism, this study will provide aid to future designs. This will be achieved by providing a functional example of a biomimetic hand that has analyzed and evaluated as well as it's design approach and by providing an accumulation of relevant research regarding biomimicry, mechanism designs and evaluation, and hand anatomy

Static Study Analysis for Emergency Diesel Generators Building”

Manis Achilleas – Dr Maria Stratoura

The thesis " Static Study Analysis for an Emergency Diesel Generators Building” focuses on a detailed design and structural integrity assessment of the EDG, emphasizing its role in ensuring continuous power supply during unexpected blackouts. This single-story structure is essential for housing critical electromechanical equipment and emergency generators.

The RAF software, a specialized tool for structural analysis using beam components, plays a significant role in this investigation, providing a thorough evaluation of the building's performance under various stresses.

The thesis aims to offer practical insights into the design complexities of an EDG. It seeks to contribute significantly to the discourse on emergency infrastructure in industrial settings, addressing the specific needs of the metalworking sector.

Key elements considered in the design include structural integrity, environmental conditions, and specific requirements of the supported infrastructure. The design process encompasses integrating advanced technology, ensuring compliance with safety regulations, and the ability to withstand external stresses. The reliability of the emergency diesel generators is crucial, evaluated through metrics such as availability, starting success, load-carrying capacity, and long-term performance during grid interruptions. These indicators help assess the continuous runtime reliability of the generators.

The materials used include reinforced concrete of class C30/37 and steel reinforcement B500C, with slabs ranging from 16cm to 22cm in thickness. Beam dimensions are selected based on strength, economy, and functionality, ensuring ease of reinforcement placement and proper frame function. Both vertical and horizontal loads are supported by an in-situ framing system.

The building's foundation is designed with a bed thickness of 0.40m, ensuring durability and structural stability. The design and dimensioning comply with the Eurocodes, specifically ELOT EN 1990, 1991, 1992, and 1998, ensuring adherence to established standards for structural and seismic design.

Overall, this thesis underscores the meticulous design and advanced technology integration necessary for an effective EDG building, highlighting its critical role in maintaining essential services during emergencies.

POSTER PRESENTATIONS

Exploring the advantages of swimming for chronic pain management in arthritis

Chanioti Maria – Dr Georgios Lyrakos

Rheumatoid arthritis (RA), a chronic autoimmune disease, is characterized by joint pain, inflammation, and functional limitations. Pain management is a cornerstone of RA treatment, and physical activity plays a vital role (Smolen et al., 2016). This essay explores the advantages of swimming as a particularly beneficial exercise modality for chronic pain management in RA patients. The summary reviews the scientific evidence supporting the positive impact of swimming on pain, joint function, and overall health in RA. While the exact etiology of RA remains elusive (Smolen et al., 2016), research suggests a connection between physical inactivity and lipid profiles in individuals with RA (AbouAssi et al., 2017). This highlights the potential benefits of exercise, not only for pain management but also for cardiovascular health in RA patients. It examines the challenges faced by RA patients in initiating and maintaining an exercise program and explore strategies to overcome them. These challenges include pain, stiffness, and fear of worsening symptoms. The Theory of Planned Behavior (Ajzen, 1991) provides a framework for understanding these challenges. It emphasizes the importance of behavioral beliefs (perceived benefits of exercise), normative beliefs (expectations of others), and control beliefs (self-efficacy) in influencing exercise behavior. Strategies to address these factors include starting with low-intensity exercise, focusing on water-based activities like swimming, and emphasizing self-efficacy through goal setting and progress tracking. Additionally, the persuasive communication principles are discussed, employed in an infographic promoting swimming as a pain management strategy for RA patients in Greek population. This analysis emphasizes the potential of swimming as a valuable tool for managing chronic pain and improving overall well-being in individuals with RA, particularly considering the challenges faced by the Greek population due to the recent COVID-19 pandemic.

Understanding the Interplay: Addressing Childhood Obesity through Sedentary Lifestyle Interventions

Demiraj Gloria – Dr Georgios Lyrakos

Childhood obesity is a global public health concern, with prevalence rates on the rise, particularly among children aged 8 to 12 years. Statistics underscore the urgency of this issue, with childhood obesity rates tripling since 1970, affecting nearly 18.5% of US children and adolescents. European countries, like Greece, face significant challenges, ranking fourth globally in childhood obesity rates. Recent data from the Greek Childhood Obesity (GRECO) study reveals alarming prevalence rates, with 29.5% of children overweight and 11.7% obese.

Sedentary behaviour, characterized by prolonged periods of sitting and low physical activity levels, is a significant contributor to this epidemic, leading to adverse health outcomes and increasing the risk of chronic diseases. Psychological constructs and theories offer valuable insights into understanding and addressing health-related behaviors associated with childhood obesity and sedentary lifestyles.

Psychological theories, such as Social Cognitive Theory (SCT) and the Theory of Planned Behavior (TPB), provide insights into behavior change processes with SCT emphasizing self-efficacy, observational learning, and outcome expectancies in shaping health behaviors, and TPB which underscores the role of attitudes, subjective norms, and perceived behavioral control in influencing behavior. Interventions informed by these theories target determinants of behavior change to promote healthier habits.

Furthermore, the design of health promotion materials, such as the infographic in our case can enhance their effectiveness in promoting behavior change. By employing vibrant visuals, persuasive messaging, and relevant statistics, infographics can capture attention and motivate individuals to adopt healthier habits. Integrating theoretical frameworks like the COM-B model into infographic design can address key determinants of behavior change, such as capability, opportunity, and motivation, further empowering individuals to make positive choices for their health and well-being.

In conclusion, addressing childhood obesity and sedentary behavior requires a multifaceted approach that integrates psychological theories, behavior change techniques, and effective communication

strategies. By understanding the underlying mechanisms driving health behaviors and leveraging theoretical frameworks to inform intervention design, health professionals can effectively promote behavior change and improve health outcomes in children and adolescents.

Breast Cancer and the Importance of Self-Examination Intervention

Chatzi Erika – Dr Georgios Lyrakos

Globally, breast cancer is the most common cancer among women; the World Health Organisation (WHO) estimates that there will be 2.3 million new cases of breast cancer in 2020. Because of its complexity, wide range of subtypes, and manifestations, early diagnosis and therapy are essential for improving prognosis. The burden of breast cancer increases by persistent discrepancies in access to screening, diagnosis, and treatment, particularly in low- and middle-income countries (LMICs). Often, survivors struggle with long-term psychological and physical repercussions, which makes their quality of life difficult to manage after treatment.

The high incidence of breast cancer in Greece and Belgium highlights the urgent need for adjustments in health-related behaviours, particularly Breast Self-Examination (BSE), to aid in early diagnosis. BSE gives women the confidence to actively monitor their breast health and may help them spot abnormalities that could be signs of breast cancer. BSE behaviour is shaped by psychological constructs and antecedents, as explained by theories like the Theory of Planned Behaviour (TPB) and the Health Belief Model (HBM). Effective treatments should focus on removing obstacles to BSE, fostering supporting social norms, and increasing perceptions of the severity and susceptibility to breast cancer. Goal-setting and self-monitoring are two effective behaviour change techniques that have been shown to be effective in increasing BSE adherence. Meta-analyses demonstrate how successful programmes utilising these methods are. Promoting health requires effective communication, and infographics are a potent tool for persuading people of knowledge. Infographics can effectively encourage women to prioritise breast health and adopt BSE practices by utilising relatable imagery and persuasive communication tactics.

Encouraging BSE behaviour change requires a multimodal strategy that incorporates behaviour change tactics, psychological theories, and efficient communication mechanisms. Interventions can improve breast health outcomes and aid in the worldwide battle against breast cancer by removing obstacles, increasing motivation, and giving the required knowledge and resources.

CFD analysis and aerodynamic improvement of a new concept car by using a spoiler.

Dimitriadis Dimitris – Alexandros Siasos

The present thesis presents extensive research in the fields of fluid mechanics, computational fluid dynamics (CFD), and aerodynamics, with a focus on the design and analysis of modern supercars. It aims to achieve a balance between improving vertical force and reducing the coefficient of drag to optimize the vehicle's performance. The process of designing a new concept car starts with sketches and ends with advanced 3D modeling in SOLIDWORKS, highlighting the integration of aerodynamic principles in the design phase.

In the second part, the thesis focuses on aerodynamic analysis through CFD simulations, emphasizing the precise measurement of lift and drag forces exerted on the vehicle after installing a spoiler at the rear. Through this approach, the thesis provides valuable insights into optimizing aerodynamics in supercar design by installing a spoiler, offering a combined theoretical and practical perspective to enhance vehicle performance.

The findings from the study align perfectly with expectations based on existing scientific works, indicating that installing a spoiler at the rear significantly enhances the vertical force applied to the car during driving.

Valuation and reinforcement of a three-story earthquake-damaged house in Tyrnavos, Thessaly

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The present thesis titled "Assessment and Retrofitting of a Three-Story Earthquake-Damaged Building in Tyrnavos, Thessaly" was conducted within the framework of the undergraduate program of the Department of Civil Engineering at the University of the Peloponnese during the academic year 2022-2023. The work consists of the theoretical background it was based on, the assessment, and the strengthening of the existing structure, evaluating the results of the respective procedures at each stage. The subject of the study is the assessment of the load-carrying capacity of the existing reinforced concrete structure and its retrofitting according to the Greek Code of Structural Interventions (KAN.EPE). Specifically, a Nonlinear Static Analysis (pushover) was applied according to Eurocode 8 and KAN.EPE. The study was carried out using the software program Fespa C & Fespa R version 8.10.22 by LH Software Company (LH Logistics). The study was conducted for a seismic building of importance class II (ordinary buildings) with performance level B2 ("Life Safety") and C1 ("Collapse Prevention"). Finally, the existing building requires retrofitting. Retrofitting methods are applied to the structural elements, the assessment is performed with the retrofitted members, and the results are evaluated.